THE RIGHT TO CHALLENGE THE ACCURACY OF BREATH TEST RESULTS UNDER ALASKA LAW

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ABSTRACT

Section 28.90.020 of the Alaska Statutes provides that in prosecutions for drunk driving, "if an offense described under this title requires that a chemical test of a person's breath produce a particular result, and the chemical test is administered by a properly calibrated instrument approved by the Department of Public Safety, the result described by statute is not affected by the instrument's working tolerance." This provision appears to prohibit the defense from calling into question the accuracy of a breath test by introducing evidence of uncertainty inherent in the testing procedure. The statute is problematic because due process requires that defendants be permitted to challenge the evidence presented against them. Moreover, there is a strong argument that basing conviction on a single breath sample that is within a known margin of error is a per se violation of due process, as it bases guilt or innocence on a purely fortuitous result. This Article examines the issues with Alaska's statute and proposes using multiple breath tests as a simple, cost-effective solution to this potential abuse of due process.

INTRODUCTION

Consider the following hypothetical trial testimony by a properly qualified expert witness in a drunk-driving case. The uncontested evidence which has been presented from video surveillance in the bar where the defendant was drinking and the testimony of the bar tender and twenty witnesses prove that she drank exactly four bottles of Alaskan Amber beer. Based on the defendant's size and the quantity of alcohol, her blood alcohol level could not possibly have been higher than .070 percent. Even though her breath test sample result was an apparent .080, due to the inherent uncertainty in such testing, the

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apparent result is within the margin of error for the instrument used, and does not contradict a legal blood or breath alcohol level.

Unfortunately for our hypothetical defendant, this defense may not be allowed. While Alaska's driving under the influence ("DUI") statute says that defendants may introduce evidence of the amount of alcohol consumed in order to rebut the apparent results of the breath sample,[1] section 28.90.020 of the Alaska Statutes (the "working tolerance" statute) ostensibly prevents defendants from introducing evidence of inherent uncertainty in the breath testing procedure.[2] Accordingly, our hypothetical defendant could present evidence that she drank only four beers and that she could not have been higher than .070, but could not present the explanation reconciling the discrepancy: namely, that an apparent result of .080 actually represents a range of possible breath alcohol levels.

This paper argues that the Alaska and United States Constitutions guarantee a criminal defendant the right to introduce exculpatory evidence, and therefore a defendant cannot be prevented by statute from presenting a defense based on the margin of error.[3] As one leading scholar has summarized it, "The Court has rigorously enforced the accused's constitutional right and strictly scrutinized exclusionary rules that block the admission of important defense evidence."[4] Moreover, due process likely requires that known uncertainties in the measuring process be assumed in favor of a criminal defendant.

Alaska courts have generally held statutes unconstitutional when

1. *See* ALASKA STAT. § 28.35.030(s) (2012) ("In a prosecution under (a) of this section, a person may introduce evidence on the amount of alcohol consumed before or after operating or driving the motor vehicle, aircraft, or watercraft to rebut or explain the results of a chemical test.").

2. *See* ALASKA STAT. § 28.90.020(a) (2012) ("[I]f an offense described under this title requires that a chemical test of a person's breath produce a particular result, and the chemical test is administered by a properly calibrated instrument approved by the Department of Public Safety, the result described by statute is not affected by the instrument's working tolerance."). The terms "margin of error," "working tolerance," and "inherent uncertainty" are used interchangeably by the courts.

3. Valentine v. State, 215 P.3d 319, 325 (Alaska 2009) ("Under the United States and Alaska Constitutions, a defendant has the right to present relevant exculpatory evidence in a criminal trial."); *see also* Holmes v. South Carolina, 547 U.S. 319, 324 (2006) ("Whether rooted directly in the Due Process Clause of the Fourteenth Amendment or in the Compulsory Process or Confrontation Clauses of the Sixth Amendment, the Constitution guarantees criminal defendants a meaningful opportunity to present a complete defense.") (quoting Crane v. Kentucky, 476 U.S. 683, 690 (1986) (internal quotation marks omitted)). For a complete discussion of the parameters of this right, *see infra* Section VII.

4. EDWARD J. IMWINKELRIED & NORMAN M. GARLAND, EXCULPATORY EVIDENCE: THE ACCUSED'S CONSTITUTIONAL RIGHT TO PRESENT FAVORABLE EVIDENCE 79 (3d. ed. 2004).

they restrict a defendant's ability to present a defense.[5] For example, in *State v. Murtagh*,[6] the Alaska Supreme Court considered the validity of a statute that placed a variety of restrictions on criminal defendants seeking to interview witnesses in sexual offense cases (while not placing the same restrictions on the prosecution).[7] Statements taken without following these procedures were presumptively inadmissible.[8] The court held these provisions to be unconstitutional violations of due process.[9] The court went on to note that "the court's responsibility concerning fair trial rights does not mean that the legislature is powerless to act in the area. But our responsibility requires that statutes that are claimed to infringe fair trial rights be closely scrutinized."[10]

Furthermore, "conclusive presumptions" are forbidden in criminal cases.[11] "Permissive presumptions" are permitted so long as the jury is informed that it may but need not conclude that proof of one fact establishes the proof of the second fact, and that such a "permissive inference" in no way relieves the state of the burden to prove each element of a criminal offense beyond a reasonable doubt.[12] Whatever the "working tolerance" statute may mean, however, it cannot establish a conclusive presumption, nor can it shift the burden of proof to a defendant with respect to an element of the offense.

I. DEFINING THE CRIME OF DRIVING UNDER THE INFLUENCE

In Alaska it is a crime to knowingly operate a vehicle with a breath alcohol level of at least .080 grams of alcohol per 210 liters of breath, or a blood alcohol level of .08% or more.[13] Under the "blood-alcohol-level theory" of drunk driving (sometimes referred to as the per se theory), the state can convict a person of drunk driving regardless of actual impairment as long as it has chemical tests proving excessive blood or breath alcohol content.[14] In addition to the per se theory, a person can be

5. *See, e.g.*, *Valentine*, 215 P.3d at 325 (holding that excluding "delayed-absorption evidence in prosecutions . . . that rely on chemical test results violates the defendant's right to due process").
6. 169 P.3d 602 (Alaska 2007).
7. *Id.* at 605.
8. *Id.* at 606.
9. *Id.* at 624.
10. *Id.* at 609.
11. Sandstrom v. Montana, 442 U.S. 510, 523–24 (1979).
12. *Id.* at 524 ("Because [defendant's] jury may have interpreted the judge's instruction as constituting either a burden-shifting presumption . . . or a conclusive presumption . . . we hold the instruction given in this case unconstitutional.").
13. ALASKA STAT. § 28.35.030(a)(2) (2012).
14. Valentine v. State, 215 P.3d 319, 319 (Alaska 2009). This is referred to as

convicted under the "impairment theory," under which the state can show impairment of driving ability.[15]

The phrase "as determined by a chemical test," which is typically lifted and placed in a jury instruction,[16] is confusing to many jurors (and perhaps even to some courts). For example, in *City of Seattle v. Gellein*,[17] a Washington trial court instructed the jury that the prosecution had to prove that the defendant was driving and that "at the time he had 0.10 percent or more by weight of alcohol in his blood as shown by chemical analysis of his breath."[18] The jury was unsure what to make of this language and sent a note to the judge asking: "Are we to believe that the breathalyzer test is infallible and accurate? So, if the breathalyzer is .16 then the defendant is guilty because the defendant is driving while he has over .10 percent in his blood stream."[19] The judge gave no clarifying instruction, and the jury found the defendant guilty.[20] The Washington Supreme Court overturned the verdict because the jury may have understood the instruction to require them to accept the apparent breath test result as accurate.[21]

In fact, there are many reasons that a breathalyzer reading may be inaccurate, including equipment malfunction or operator error. In June of 2010, *The Washington Post* reported that hundreds of defendants in the District of Columbia were wrongfully convicted of DUI because "[t]he District's badly calibrated equipment would show a driver's blood-alcohol content to be about 20 percent higher than it actually was."[22]

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the "blood-alcohol-level theory" even when it is usually breath alcohol that is tested. *Id.*

15. ALASKA STAT. § 28.35.030(a)(1) (2012). *See* Conrad v. State, 54 P.3d 313 (noting that defendant was tried under the "impairment theory," which is codified in ALASKA STAT. § 28.35.030(a)(1)).

16. *See* CRIMINAL PATTERN JURY INSTRUCTIONS COMMITTEE, ALASKA CRIMINAL PATTERN JURY INSTRUCTIONS (2012), *available at* http://www.courts.alaska.gov/crimins.htm (giving examples of jury instructions).

17. 768 P.2d 470 (Wash. 1989) (en banc).

18. *Id.* at 470. This is the language of WASH. REV. CODE § 46.61.502 (1981), which provided that a person was guilty of drunk driving if he drove while "[h]e ha[d] a 0.10 percent or more by weight of alcohol in his blood as shown by chemical analysis of this breath, blood, or other bodily substance."

19. *Id.* at 471.

20. *Id.*

21. *See id.* at 472 (holding that the instruction was "susceptible to misinterpretation by a reasonable jury as an unconstitutional mandatory presumption").

22. Mary Pat Flaherty, *400 Drunken-Driving Convictions in D.C. Based on Flawed Test, Official Says*, THE WASH. POST (June 10, 2010), http://www.washingtonpost.com/wp-dyn/content/article/2010/06/09/AR2010060906257.html. In March 2011, the *Philadelphia Inquirer* discovered the same problem. *See* Dana Difilippo, *City Fails Breathalyzer Test in 1,100 Cases*, PHILA. INQUIRER (Mar. 24, 2011), http://articles.philly.com/2011-03-

Even when a breathalyzer is properly calibrated, the subject sample may not accurately reflect the person's level of sobriety. Most states require two breath samples,[23] and it is common for a person to blow into the breathalyzer twice and obtain one result above .08 and another result below .08.[24]

These deviations are well-known in the scientific literature on breath testing.[25] But two states (Alaska and Delaware) have statutes that appear to forbid introduction of margin of error evidence.[26] For years, Alaska law required that any inherent uncertainty in the breath or blood reading be applied in favor of the defendant,[27] but in 1996 the legislature passed a statute declaring that margin of error evidence in blood-alcohol theory cases was inadmissible.[28] The court of appeals in *Mangiapane v. Municipality of Anchorage*[29] then held that this statute "effectively declares that a driver violates AS 28.35.030(a)(2) if . . . the driver's *test result* is at least .10 percent blood-alcohol or the equivalent .10 grams of alcohol per 210 liters of breath."[30] In other words, the test result itself was the element of the offense rather than evidence of the offense. The accuracy of the test seems to become irrelevant under this theory.

Within three years, the court of appeals reversed course and clarified that the test only created a presumption of blood or breath alcohol content at the time of offense, and was not itself the element that needed to be proved.[31] However, Alaska courts have not gone back to

24/news/29181749_1_dui-cases-breathalyzer-machines-hundreds-of-drunk-drivers (finding that four breathalyzer machines were improperly calibrated).

23. *See infra* Section VIII.

24. *See, e.g.*, State, Dep't of Motor Vehicles v. Taylor-Caldwell, 229 P.3d 471, 471 (Nev. 2010) (registering consecutive breath tests at 0.073 and 0.083); Jaffray v. State, 702 S.E.2d 742, 744 (Ga. Ct. App. 2010) (registering both a 0.085 and a 0.073); Gillham v. County of Lake, No. A124084, 2010 Cal. App. Unpub. LEXIS 4351, at *1 (Cal. Ct. App. 2010) (registering three tests, the first negative, the second .08, and the third .07).

25. *See generally* R.G. Gullberg, *Duplicate Breath Testing: Some Statistical Analyses*, 36 FORENSIC SCI. INT'L 205 (1988) (encouraging duplicate breath testing to increase sample size and improve accuracy).

26. ALASKA STAT. § 28.35.030(a) (2012); DEL. CODE ANN. tit. 21, § 4177 (2012) ("In any proceeding, the resulting alcohol or drug concentration when a test, as defined in subsection (c)(2) of this section, is performed shall be deemed to be the actual alcohol or drug concentration in the person's blood breath or urine without regard to any margin of error or tolerance factor inherent in such tests.").

27. Barcott v. State, Dep't of Pub. Safety, Div. of Motor Vehicles, 741 P.2d 226, 228 (Alaska 1987) ("[D]ue process requires consideration of the margin of error inherent in the breath testing procedure . . . .").

28. ALASKA STAT. § 28.35.030(a) (1997).

29. 974 P.2d 427 (Alaska Ct. App. 1999).

30. *Id.* at 430.

31. Conrad v. State, 54 P.3d 313, 314–15 (Alaska Ct. App. 2002) ("We find no

the requirement that uncertainty must be assumed to benefit the defendant. A defendant cannot challenge the accuracy of the test "as long as a breath test is administered by a properly calibrated instrument approved by the Department of Public Safety."[32]

This line of cases has resulted in considerable confusion as to the elements of DUI. This Article argues that a breath test result should be *evidence* of a person's breath alcohol concentration rather than an *element* of the offense. The court of appeals in *Mangiapane* held that a positive test result was an element of the offense,[33] but succeeding cases have distinguished *Mangiapane*'s holding.[34] Alaska's courts should recognize that due process permits a defendant to introduce evidence that the breath test is inaccurate, and any margin of error must be credited to a criminal defendant.

II. THE TESTING PROCEDURE: WHY IS THERE UNCERTAINTY?

The breathalyzer measures the amount of alcohol in the breath. The test results reported by the breathalyzer corresponds to blood-alcohol percentages by assuming a blood-alcohol to breath-alcohol ratio of 2100 to 1.[35] When alcohol passes into the lungs through the bloodstream, it mixes with the inhaled air in the alveoli.[36] The scientific validity of a breathalyzer test result depends on testing this alveolar breath.[37]

The Alaska Court of Appeals addressed the scientific validity of the test by holding that a "breathalyzer result was presumptively admissible if the municipality established, as a foundational matter, that the analysis of [the defendant's] breath was performed according to methods approved by the Alaska Department of Health and Social Services."[38] However, the presumption of admissibility is not

indication that the Alaska Legislature . . . intended to shift the focus away from the defendant's blood alcohol level at the time of driving and to make the test result determinative of the defendant's guilt."), *superseded by statute*, Act effective July 1, 2004, §§ 25, 27, 2004 Alaska Sess. Laws ch. 124, *as recognized in* Valentine v. State, 215 P.3d 319 (Alaska 2009).

32. Hooton v. State, No. A–9435, 2009 WL 1259360, at *4 (Alaska Ct. App. May 6, 2009).

33. 974 P.2d at 430 (basing violation on test result, not "true" blood alcohol level).

34. *See infra* Section VI.

35. Lauderdale v. State, 548 P.2d 376, 378 (Alaska 1976).

36. State v. Chun, 943 A.2d 114, 127 (N.J. 2008).

37. *See id.* ("Breath testing therefore uses an indirect measure of BAC by calculating the alcohol concentration in the breath . . . .").

38. Thayer v. Municipality of Anchorage, 686 P.2d 721, 726 (Alaska Ct. App. 1984).

irrebuttable, and the court must ask whether the procedures for testing breath comply with the manufacturer's specifications for proper use.[39]

The case of *Guerre-Chaley v. State*[40] is a good illustration of this point. When he was arrested, Guerre-Chaley was given a preliminary breath test administered by a handheld device carried by police. The result of the preliminary test showed his breath alcohol content at 0.079 grams per 210 liters of breath.[41] Guerre-Chaley took another breath test at the police station, where the test gave a breath alcohol reading of 0.091.[42] At trial, Guerre-Chaley wished to introduce evidence of the preliminary breath test to contradict the results of the second test.[43] The Court ruled that the preliminary result was inadmissible because Guerre-Chaley had failed to present any evidence that the test was scientifically valid under Alaska procedural standards.[44] The same objection could be leveled against any testing device or testing procedure; a foundation must be laid that the proposed scientific evidence meets procedural standards for admissibility.

A breath test is only scientifically valid if the instrument is functioning properly. Alaska has attempted to assure accuracy by adopting regulations prescribing the method for administering breath tests.[45] For the results of a test to be admissible, the state must show "substantial compliance" with these regulations.[46] With respect to the "Datamaster," one important control is the use of a known quantity of an external source of alcohol (sometimes referred to as an "Alco bottle"), which is tested by the breathalyzer to determine accuracy.[47] Before and

39. *Id.* at 727.
40. 88 P.3d 539 (Alaska Ct. App. 2004).
41. *Id.* at 541.
42. *Id.* Afterward, Guerre-Chaley requested an actual blood test, which put his blood alcohol content at 0.095 percent. *Id.*
43. *Id.*
44. *Id.*
45. ALASKA ADMIN. CODE tit. 13, § 63.040 (2012).
46. Thayer v. Municipality of Anchorage, 686 P.2d 721, 727 (Alaska Ct. App. 1984).
47. *See generally* ALASKA SCIENTIFIC CRIME DETECTION LABORATORY, BREATH ALCOHOL TESTING PROGRAM MANUAL 27 (2013) [hereinafter BREATH ALCOHOL TESTING MANUAL] (describing the process of developing external standards); s*ee also* Ashenfelter v. State, No. 5920, 2013 WL 563182, at *3 (Alaska Ct. App. Feb. 13, 2013) (memorandum opinion) (describing how Alco bottles are used to verify breathalyzer accuracy); James Halpin, *Calibration Error Puts DUI Test in Question*, ANCHORAGE DAILY NEWS (July 29, 2010), http://www.adn.com/2010/07/29/1387533/calibration-error-puts-bac-tests.html ("The tanks contain a known sample of alcohol that the instrument measures before and after every test to ensure it is functioning properly."). The Datamaster is "the only approved evidential breath test instrument in the State of Alaska." BREATH ALCOHOL TESTING MANUAL at 10.

after each person blows into a Datamaster, the instrument takes a sample from the Alco bottle and analyzes it.[48] If the actual results are within a certain range of the target value, the breathalyzer is considered sufficiently accurate.[49]

Assuming the instrument is functioning properly, there are several sources of inaccuracy which may affect any individual reading. First, the measuring instrument itself is subject to a margin of error. According to the Alaska Breath Alcohol Testing Program Manual, "there exists an inherent uncertainty in the Datamaster-Alco breath testing system such that the sample analyzed may be considered to be accurate to within +/- .005 g/210L."[50] If one repeatedly uses a breathalyzer to analyze the exact same homogeneous gas/alcohol mixture in a controlled environment, the instrument will register different results due to the margin of error or inherent uncertainty. Because all measuring devices have a margin of error, this factor is present in every single breath test.

A second source of uncertainty is calibration. Improper calibration can yield further error, and even a properly calibrated instrument will drift away from accuracy over time.

A third source of uncertainty is from the breath sample itself. A particular breath sample may not reflect a person's level of sobriety for a variety of reasons. If a subject gargles alcohol-based mouthwash, then spits it out and blows into a breathalyzer, the instrument may register a high level of alcohol content in the breath. The machine may well indicate the subject is legally drunk, when obviously he is completely sober. Contaminated breath samples are such a well-known problem that Alaska regulations require a fifteen minute waiting period to ensure that the subject can be observed to ensure there is no regurgitation of alcohol into the throat or mouth.[51] As noted above, a breath test is supposed to be testing alveolar air from the lungs; if the instrument is measuring something other than alveolar air (like mouth alcohol), then the test is invalid.

Even without mouth alcohol present, a subject can blow into a functioning breath test instrument ten times and get ten different subject

48. *Ashenfelter*, 2013 WL 563182, at *3.

49. *Id*.

50. SCIENTIFIC CRIME DETECTION LABORATORY, STATE OF ALASKA, ALASKA BREATH ALCOHOL TESTING PROGRAM MANUAL, 3–17 (2008). In 2013, the Department of Public Safety issued a revised, considerably shorter Alaska Breath Alcohol Testing Program Manual which appears to omit discussion of inherent uncertainty in the sample analyzed; however, it does note that "[t]he allowable range for the external standard is +/- 0.005 from the target value adjusted for barometric pressure." BREATH ALCOHOL TESTING MANUAL, *supra* note 47, at 27.

51. ALASKA ADMIN. CODE tit. 13, § 63.040(a)(1) (2012).

readings. The reason for this is that the amount of alcohol absorbed from the lungs varies from breath to breath based on a wide variety of factors. The alcohol concentration varies in the course of even a single exhalation. In fact, over the course of a single exhalation sample, the Datamaster analyzes the alcohol content four times each second (for perhaps as many as 100 individual measurements), and the instrument's software uses this information to estimate a final result.[52] In any event, even assuming a perfectly functioning measuring instrument, a person's breath alcohol content is a constantly fluctuating target. A good example of this variability comes from a recent case before the Minnesota Court of Appeals. Minnesota uses a system of two breath samples with each breath tested twice, and the lowest of the four test results counted as the basis for a charge.[53] The Court explains:

> The reading from the first sample was .131, with a replicate reading of .132, and the reading from the second sample was .119, with a replicate reading of .121. Officer Tamm testified that variation in the readings is common and expected, that no errors occurred in running the test, and that the machine functioned properly.[54]

Variations in the test results of the same breath sample is due to the margin of error of the testing instrument, while the larger difference between the two breath samples is likely the result of the different alcohol content in subsequent breaths. So a person can have a .080 breath alcohol content and soon after have a .070.[55] This is a factor which will be a source of uncertainty in every breath test.

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52. A graph of each individual breath measurement in the course of a single breath will present a curve with an initial steep incline then leveling off or declining. In theory if the instrument is testing mouth alcohol then the curve will be a downward slope instead of a plateau, and the Datamaster should register an error; but frequently the instrument cannot distinguish between mouth and lung alcohol. *See* C. Dennis Simpson et al., *Effects of Mouth Alcohol on Breath Alcohol Results*, 3 INT'L J. OF DRUG TESTING 1, 10 (2004) (showing that in laboratory tests the Datamaster correctly gave an error message for mouth alcohol only 52% of the time).

53. State v. Ards, 816 N.W.2d 679, 681 (Minn. App. Ct. 2012).

54. *Id.* at 688. While the body is constantly absorbing or eliminating alcohol from the blood, these replicate tests occur within a few minutes of each other, so elimination of alcohol could not account for such a large disparity in replicate breath tests. *See* State v. Lowe, 740 A.2d 348, 350 (Vt. 1999) (noting that when two test conducted minutes apart yield different values the source is likely the margin of error in testing rather than elimination of alcohol).

55. *See, e.g.*, State, Dep't of Motor Vehicles v. Taylor-Caldwell, 229 P.3d 471, 471 (Nev. 2010) (registering consecutive breath tests at 0.073 and 0.083); *Lowe*, 740 A.2d at 350 (noting test results of .083 and .079); Thompson v. State, Dep't of Licensing, 960 P.2d 475, 477 (1998) ("The results of the two breath tests revealed concentrations of .08 and .07.").

None of these sources of uncertainty are news. Courts around the country have dealt with these issues for years. Legislatures have often responded by redefining the crime of DUI in a way that avoids the margin of error problem. These redefinitions have often resulted in convoluted DUI statutes, as we will see in the following section.

III. THE ELEMENTS OF DUI—WHAT DOES THE STATE HAVE TO PROVE?

Section 28.35.030 of the Alaska Statutes makes it a crime to be in control of a vehicle "if, as determined by a chemical test taken within four hours after the alleged operating or driving, there is 0.08 percent or more by weight of alcohol in the person's blood or if there is 0.08 grams or more of alcohol per 210 liters of the person's breath."[56] There are two ambiguities present in this formulation. First, when is the test result relevant: at the time of driving, or at the time of testing? And second, does the phrase "as determined by" make the test results unassailable?

The statute provides for an offense when "there is 0.08 percent or more by weight of alcohol in the person's blood" within four hours. This strongly suggests that the State must prove an actual breath or blood alcohol level used as the basis for the offense.

That the test result is not the element of the offense is more obvious from other parts of the statute. Section 28.35.030(s) provides: "In a prosecution under (a) of this section, a person may introduce evidence on the amount of alcohol consumed before or after operating or driving the motor vehicle, aircraft, or watercraft to rebut or explain the results of a chemical test . . . ."[57]

Obviously, if the test itself were an element of the offense there would be no rebuttal. Yet under subsection (s), a person can testify, "I may have had a subject sample of .150, but that can't possibly be accurate because I had only one glass of wine." Thus, subsection (s), when read in conjunction with subsection (a), shows that subsection (a) cannot be read to make the test result the element of the offense. The test result is evidence that can be rebutted by contradictory evidence.

It should also be noted that a number of states use (or at one point used) "as determined by" language in their DUI statutes. Alabama, Arkansas, Minnesota, New York, Ohio, Oregon, Rhode Island, South Dakota, Washington, and Virginia all have similar language to Alaska's "as determined by a chemical test" provision.[58] Each of these states has

56. ALASKA STAT. § 28.35.030(a)(2) (2012).
57. ALASKA STAT. § 28.35.030(s) (2012).
58. ALA. CODE § 32-5A-194 (2012) ("[E]vidence of the amount of alcohol or

held, however, that this language does not make the test result an element of the offense, and that a defendant still has the right to present evidence challenging the apparent test results.[59] As the Virginia Court of

controlled substance in a person's blood at the alleged time, as determined by a chemical analysis of the person's blood, urine, breath, or other bodily substance, shall be admissible."); ARK. STAT. 5-65-103(b) (2000) (making it a crime to drive when "there was one tenth of one percent (0.10%) or more by weight of alcohol in the person's blood as determined by a chemical test"); MINN. STAT. § 169A.20 (2012) ("[It is a crime for a person to operate a vehicle when] the person's alcohol concentration at the time, or as measured within two hours of the time, of driving, operating, or being in physical control of the motor vehicle is 0.08 or more."); N.Y. VEH. & TRAF. LAW § 1195 (McKinney 2013) ("The following effect shall be given to evidence of blood-alcohol content, as determined by such tests, of a person arrested for violation of . . . ."); OHIO REV. CODE 4511.19(D)(1)(b) ("In any criminal prosecution . . .the court may admit evidence on the concentration of alcohol, … at the time of the alleged violation as shown by chemical analysis of the substance"); OR. REV. STAT. ANN. § 813.010 (West 2012) ("[A person is committing a DUI if he h]as 0.08 percent or more by weight of alcohol in the blood of the person as shown by chemical analysis of the breath or blood of the person . . . ."); R.I. GEN. LAW. § 31-27-2(b)(1) ("Any person charged under subsection (a) of this section whose blood alcohol concentration is eight one-hundredths of one percent (.08%) or more by weight as shown by a chemical analysis of a blood, breath, or urine sample shall be guilty of violating subsection (a) of this section."); S.D. CODIFIED LAWS § 32-23-1 (2012) ("No person may drive or be in actual physical control of any vehicle while . . . [t]here is 0.08 percent or more by weight of alcohol in that person's blood as shown by chemical analysis of that person's breath, blood, or other bodily substance."); WASH. REV. CODE § 46.61.502 (2012) ("[A person is guilty of DUI if] the person has, within two hours after driving, an alcohol concentration of 0.08 or higher as shown by analysis of the person's breath . . . ."); VA. CODE ANN. § 18.2-266 (2012) ("It shall be unlawful for any person to drive or operate any motor vehicle, engine or train . . . while such person has a blood alcohol concentration of 0.08 percent or more by weight by volume or 0.08 grams or more per 210 liters of breath as indicated by a chemical test administered as provided in this article . . . .").

59. Goodwin v. State, 728 So.2d 662, 668 (Ala. Crim. App. 1998) (explaining that the statute creates no more than a presumption of intoxication); Jones v. State, 2011 Ark. App. 403, 404 n.1 (Ark. App. 2011) (explaining that elimination of the phrase "as determined by a chemical test" in the statute was not a substantive change in the law); State v. Birk, 687 N.W.2d 634, 638 (Minn. App. 2004) (explaining that test result does not create a presumption and jury may refuse to accept test results); People v. Mertz, 497 N.E. 2d 657, 600-63) (N.Y. 1986); State v. West, 279 P.3d 354 (Or. App. 2012) ("[T]he amount of alcohol in a person's blood at the time the person is alleged to have been driving a motor vehicle while under the influence of intoxicants, as shown by chemical analysis of the person's breath or blood, is indirect evidence that may be used at trial, along with other evidence, to determine whether the person was in fact under the influence of intoxicants."); State v. Ensey, 881 A.2d 81, 88 (R.I. 2005) ("Once a trial justice determines that particular breathalyzer test results are admissible and those results are admitted, a defendant may offer competent evidence to rebut the inference that the test result was accurate."); S.D. CODIFIED LAW 32-23-7 specifies that a chemical test gives rise to a presumption ("In any criminal prosecution for . . . a violation of § 22-16-41, the amount of alcohol in the

Appeals explained in *Davis v. Commonwealth*,[60] the testing measurement "is an evidentiary fact which creates a rebuttable presumption that the measurement accurately reflects the blood alcohol concentration at the time of driving."[61]

The Ohio statute is similar to Alaska's in that Ohio defines the offence in 4511.19(A)(1) making it a crime to drive a vehicle "under the influence of alcohol" or with a blood alcohol level of .080 or more. Then in 4511.19(D)(1)(b) the Ohio statute goes on to provide that a court may admit evidence of a violation "as shown by chemical analysis of the substance withdrawn within three hours of the time of the alleged violation." The Ohio Supreme Court has held that 4511.19(D)(1)(b) is a rule of evidence not part of the definition of the offense.[62] Most importantly, putting aside the confusion surrounding the "working tolerance" statute, the Alaska Court of Appeals has since held that the phrase "as determined by a chemical test" does not make the test itself determinative of the offense.[63] For the few years that the court of appeals held that the test was an element of the offense, this interpretation was based on the "working tolerance" statute,[64] not on the "as determined by" language.[65] A careful reading of the Alaska case law shows that a breath test is *evidence* of a defendant's actual breath alcohol level, and this evidence, like any other evidence, is subject to attack. To understand how the evidence-element confusion originated, and the current status of the law in this regard, the next section will summarize the main opinions on DUI law in Alaska over the past three decades.

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defendant's blood at the time alleged as shown by chemical analysis of the defendant's blood, breath, or other bodily substance shall give rise to the following presumptions . . ."); City of Seattle v. Gellein, 768 P.2d 470 (Wash. 1989) (en banc).

60. 381 S.E.2d 11 (Va. Ct. App. 1989).

61. *Id.* at 15.

62. State v. Mayl, 106 Ohio St. 3d 207, 210 (2005) ("Yet no matter under which portion of R.C. 4511.19(A) a person is charged, the state has the opportunity to offer the results of a 'bodily substance' test to show either impairment—under (A)(1)(a)—or to show that the statutory concentrations of alcohol or drugs have been exceeded—under (A)(1)(b) through (i) and (B). R.C. 4511.19(D)(1) discusses when these results may be admitted in a criminal prosecution.")

63. Conrad v. State, 54 P.3d 313, 314–15 (Alaska Ct. App. 2002) ("We find no indication that the Alaska Legislature . . . intended to shift the focus away from the defendant's blood alcohol level at the time of driving and to make the test result determinative of the defendant's guilt.") *superseded by statute*, Act effective July 1, 2004, 2004 Alaska Sess. Laws ch. 124 §§ 25, 27, *as recognized in* Valentine v. State, 215 P.3d 319 (Alaska 2009).

64. ALASKA STAT. § 28.90.020(a) (2012).

65. ALASKA STAT. § 28.35.030 (2012).

IV. THE CONVOLUTED HISTORY OF ALASKA'S DUI CASE LAW

Our story begins in 1976 with *Lauderdale v. State*.[66] At that time, a breath sample was captured in a glass ampoule and tested by passing light through the ampoule.[67] After testing Lauderdale's sample, the State either discarded or lost the ampoule.[68] Lauderdale argued that he had been denied due process because the government had destroyed evidence and had not permitted him a chance to independently verify the alleged results.[69] The Alaska Supreme Court considered this issue so important that it took the unusual step of hearing an appeal on the suppression issue before entry of final judgment at trial, noting that "the matter is of sufficient importance to justify deviation from the normal appellate procedure."[70]

The central holding of *Lauderdale* was that in a criminal prosecution for DUI, a defendant must be able to "cross-examine the results of the [breathalyzer] test."[71] As part of this right to examine the reliability of the test, the supreme court ordered that a fundamental due process right requires the state to preserve a sample of the breath for later testing.[72] One source of a false test was if the ampoule itself had a defect which could affect the testing. In this case, the test used only 10 randomly selected ampoules out of an available lot of 10,000, pursuant to regulatory requirements meant to help ensure quality of the sample.[73] The court noted that testing only one ampoule per thousand for quality was not much assurance of accuracy, and was "an additional argument in favor of Lauderdale's contention that he should be permitted to check the specific ampoules used in his test."[74]

Six years later, in *Municipality of Anchorage v. Serrano*,[75] the court of appeals encountered a similar situation.[76] However, rather than the

66. 548 P.2d 376 (Alaska 1976).
67. *See id.* at 378–79 (describing ampoule breathalyzer process).
68. *Id.* at 381.
69. *Id.* at 380.
70. *Id.* at 378.
71. *Id.* at 381 (internal quotation marks omitted).
72. *Id.* at 382. Subsequently the court held that due process was satisfied if the police at least make a second test available to the defendant, and inform her of the right to an independent test. *See* Gundersen v. Municipality of Anchorage, 792 P.2d 673, 676–77 (Alaska 1990) ("[I]t is not necessary to preserve a breath sample in order to provide a defendant with a reasonable opportunity to obtain an independent test. . . . [The state] also may provide this opportunity by notifying a defendant of his right to an independent test and assisting [him] in obtaining one.").
73. *Lauderdale*, 548 P.2d at 380.
74. *Id.*
75. 649 P.2d 256 (Alaska Ct. App. 1982).
76. *See id.* at 258 ("[T]he due process clause of the Alaska Constitution

general Alaska statute the defendant was prosecuted under the Anchorage statute, which provided:

> A person commits the crime of driving while intoxicated if he operates, drives or is in actual physical control of a motor vehicle . . . when there is 0.10 grams or more of alcohol per 210 liters of his breath *as determined by a chemical test within four hours of his arrest* . . . ."[77]

The phrase "as determined by a chemical test" had recently been added to the statute, so the court was interpreting it for the first time.[78] The *Serrano* court assumed that the phrase "as determined by a chemical test" had not changed the elements of the offense, and that a defendant had a clear right to challenge the accuracy of the test:

> We conclude that due process does require the state and the municipality to take reasonable steps to attempt to preserve breath samples for defendants for their independent analysis or to provide some other alternative check of the breathalyzer results. . . . The ability of the defendant to "cross-examine" these tests is critical to his case and to the integrity of the criminal justice system.[79]

Thus the Court implicitly stated that "operat[ing] a car with a certain level of blood or breath alcohol" was the element of the offense, and the breath test result was critical evidence—but just evidence.[80] In the thirty years since *Serrano*, the Alaska Court of Appeals has never changed its interpretation of the phrase "as determined by a chemical test."

After the Court's order in *Serrano*, the State adopted a system preserving breath samples in tubes.[81] The breath sample was first tested in the breathalyzer in use at the time, the Intoximeter 3000, and then the air was captured in a magnesium perchlorate tube ("MPT").[82]

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requires the prosecution to make reasonable efforts to preserve a breath sample or to take other steps to allow a defendant to verify the results of the breathalyzer test.").

77. *Id.* at 257 n.3 (emphasis added) (quoting ANCHORAGE MUN. CODE 9.28.020(B) (1981)).

78. *See* 649 P.2d at 257 n.3 (noting that the quoted language had been added in 1981—this case came before the court in 1982).

79. *Id.* at 259.

80. *Id.* ("By making it an offense to operate a car with a certain level of blood or breath alcohol, the current state statute and the city ordinance both place great emphasis on the breath tests.").

81. Best v. Municipality of Anchorage, 712 P.2d 892, 898–99 (Alaska Ct. App. 1985).

82. *Id.* at 899.

Because the samples in the MPT could be preserved, it was possible to test each sample repeatedly.[83] The repeated testing, however, revealed a large margin of error in the MPT method. For example, William Walker registered an apparent .13 breath alcohol level on the Intoximeter. The preserved sample was then tested four separate times with apparent results of .071, .064, .094, and .063 (for an average of .073).[84] The preserved sample thus appeared to call into question the Intoximeter result, but the MPT samples themselves were so diverse that one could question how reliable these test results were. This system was only used for about a year before it was abandoned, but during that year dozens of criminal cases were dismissed because the retest results were substantially lower than the Intoximeter results.[85]

In *Best v. Municipality of Anchorage*,[86] Best argued that the entire MPT system denied him due process because retests confirmed the breathalyzer results only half the time, so there was no assurance of accuracy.[87] The trial court in *Anchorage v. Hernandez*, with which Best's case was consolidated,[88] ruled that "to the extent that the [average] results of the re-test are accurate within 15% of the Intoximeter, this Court finds no basis on which to suppress the Intoximeter or re-test results."[89] However, if the retest was off by more than 15% then the trial court ordered the result suppressed as this showed the particular Intoximeter result was unreliable.[90]

Wanting the trial court to go even further, Best argued that the testing procedure was so flawed as to be virtually meaningless so no MPT test results should be admissible.[91] Because Best's sample was never retested, the trial judge refused to suppress Best's Intoximeter result, ruling that by failing to even have his sample retested he lacked standing to make the argument.[92] The court of appeals agreed with Best,

83. *Id.* at 902.
84. *Id.* at app. A (listing Intoximeter results).
85. *See* State v. Kerr, 712 P.2d 400, 404 (Alaska Ct. App. 1985) (explaining that a three judge panel in Fairbanks dismissed forty DUI cases as a result of the retest results).
86. *Best*, 712 P.2d at 892.
87. *See id.* at 893–94 (filing a motion to suppress Intoximeter results based on Judge Andrews' dissenting opinion in Hernandez).
88. *Id.* at 898.
89. *Id.* at 893.
90. *Id.*
91. *Id.* at 894 ("[T]he essence of the [objection] was that there was no need to have the tubes tested, because the procedures were so poor that the results in an individual case were irrelevant."). This seems to have been essentially a due process argument.
92. *Id.* at 894.

however, and vacated the trial court's decision,[93] explaining, "[i]f all MPTs are so flawed that an accurate retest is impossible, it cannot be said that those furnished MPTs have been furnished with a means of either verifying *or* casting doubt upon a breath test result."[94]

Accordingly, the court held that the trial court had erred in not considering Best's argument and remanded for further proceedings clarifying the accuracy of the retesting procedure.[95] Nevertheless, the court's ruling on the legal issue appears to be clear: the average retest was within 15% of the Intoximeter only 50% of time, and whether a particular defendant was guilty or innocent rested on a "purely fortuitous" 50/50 chance.[96] Thus, *Best* affirmed again that due process requires a meaningful opportunity to challenge the accuracy of a breath test result.[97]

To provide people this opportunity, the Alaska Supreme Court addressed breath testing again in *Champion v. Department of Public Safety*.[98] *Champion* was another license revocation case deciding what the state had to prove to revoke a person's license.[99] The language of the civil revocation statute provided for license revocation when a chemical test "produced a result described in AS 28.35.030(a)(2)," the criminal DUI statute.[100] The criminal statute provided that if there was 0.10 grams or more of alcohol per 210 liters of the person's breath, determined "by a chemical test taken within four hours after the alleged operating or driving," then that person was guilty of driving while intoxicated.[101] The license revocation statute was thus ambiguous as to what the "result" was. *Champion* held that revocation had to be based on the actual alcohol level, not just the test result.[102] This was because due process required

93. *Id.* at 896 ("Because we cannot affirm either on grounds of untimeliness or lack of 'standing,' we remand this case to the trial court.").

94. *Id.* at 895; *see also id.* at 896 ("Judge Andrews' findings suggest that the MPT system was at times working so poorly that whether or not a given MPT result was close to the Intoximeter result was almost purely fortuitous.").

95. *Id.* at 898.

96. *Id.* at 896.

97. Such an opportunity, according to the Alaska Supreme Court, has been afforded people in custody through the voluntary drawing of blood. *See* Gundersen v. Municipality of Anchorage, 792 P.2d 673, 687 (Alaska 1990) ("[T]hat Gundersen was not given his choice of reasonable facilities at which to take the test also did not deny him due process.").

98. 721 P.2d 131 (Alaska 1986).

99. *See id.* at 132 ("Champion argues that the due process clause of the Alaska Constitution requires the state to take reasonable steps to preserve the breath sample or to provide some other means for the defendant in a license revocation proceeding to independently verify the breath test results.").

100. *Id.* at 131 n.1.

101. ALASKA STAT. § 28.35.030(a)(2) (2009).

102. *See Champion*, 721 P.2d at 133 ("The ability of the defendant to evaluate

that the civil defendant be given an opportunity to challenge the accuracy of the test.

A year later in *Barcott v. Department of Public Safety, Division of Motor Vehicles*,[103] the Supreme Court again addressed a citizen's right to challenge breath test results. Barcott, after being pulled over, had a breath alcohol content of .10 according to the breathalyzer being used, the Intoximeter 3000.[104] However, just prior to Barcott's breath test, the officer conducted two control tests using a sample with a known target value of .103.[105] The tests produced readings of .104 and .097, respectively.[106]

At the time Barcott's breath test was administered, the legal limit was .10, leaving the test result right on the line.[107] Because the two control tests produced results .007 apart, it was clear that the machine had some margin of error.[108] The Court held that defendants in administrative license revocation proceedings are entitled to challenge the reliability and credibility of breath tests.[109] As the smallest error in his favor would have placed Barcott under .10, the Court held that this margin of error was enough for Barcott to prevail.[110]

Barcott went on to hold that even in a license revocation proceeding, the burden was on the State to prove the person was actually above .10, factoring in potential margin of error.[111] This made clear that having a breath alcohol over .10 (or .08), not the test result itself, was the element of the offense, and that as a matter of law, the State could not prove breath alcohol to be above the legal limit when the test result was within the procedure's margin of error.[112] Even more relevant to the discussion of the "working tolerance" statute, *Barcott* rejected the State's argument that the legislature could prohibit consideration of a margin of error.[113] Thus, the Court seemed to hold

these [breath] tests is critical to his ability to present his case. To deny a driver a reasonable opportunity to test the reliability and credibility of the breath test is to deny him a meaningful and fundamentally fair hearing.").

103. 741 P.2d 226 (Alaska 1987).

104. *Id.* at 227.

105. *Id.*

106. *Id.*

107. *Id.* at 229.

108. *Id.* at 227.

109. *See id.* at 228 ("The reasoning of *Champion* leads inescapably to the conclusion that due process requires consideration of the margin of error inherent in the breath testing procedure used in this case.").

110. *Id.* at 229.

111. *Id.* at 230.

112. *See id.* at 229 (ruling in favor of Barcott when his tests were at the legal limit because this evidence was not sufficient to prove breath alcohol at or over the legal limit.)

113. *See id.* at 230 ("*Champion* mandates that the defendant in a license

quite explicitly that the legislature cannot mandate that the results of a chemical test be conclusively presumed accurate.

In *Haynes v. State, Department of Public Safety*,[114] the Court again addressed the due process right to challenge breath test results.[115] While it upheld the prior rulings guaranteeing that any margin of error must be presumed to favor a defendant,[116] the Court said that this was a due process right the legislature could revoke in the context of a civil license revocation proceeding.[117]

Thus, even though *Haynes* held that the inherent margin of error must be imputed to the defendant in a license revocation proceeding, the Court drew a distinction in dicta that would confuse the DUI discussion for years to come. This distinction was between a statute which makes an element of the offense *testing* above a per se limit as opposed to actually *having a blood alcohol level* above a per se limit.[118]

Nevertheless, the idea that some states had made a test result the element of a criminal offense was largely fictitious.[119] Furthermore, *Haynes*, like many of the cases cited to support the Court's distinction, was a civil license forfeiture case, not a criminal case. In *Nugent v. Iowa*

revocation proceeding has the constitutionally guaranteed right to challenge the accuracy of the breath test independently. We have thus concluded that due process will not allow the results of a chemical test authorized under AS 28.35.031(a) to be conclusively presumed accurate.").

114. 865 P.2d 753 (Alaska 1993).

115. *Id.* at 756.

116. *See id.* ("[W]e hold that a chemical breath test reading or result which may be reduced below the level of .10 grams per 210 liters of the person's breath, by applying the margin of error inherent in the particular test used, cannot serve as the basis for a license revocation . . . .").

117. *See id.* at 755–56 ("The legislature has the power to require *the revocation of a driver's license* on the basis of a particular test result or reading, despite its inherent margin of error, when the legislature expressly considers that margin and deems it sufficiently negligible such that it may be disregarded. . . . Absent express legislative intent to the contrary, we hold that failure to apply the inherent margin of error of a particular testing device in favor of the person subject to *license revocation* violates due process of law as guaranteed by the Alaska Constitution.") (Emphasis added) The Court never explicitly said that the legislature could prohibit margin of error consideration in a criminal case.

118. *See id.* at 755 (citing *Barcott*, 741 P.2d at 229) ("In the course of our analysis, we examined how courts in other jurisdictions interpreted their own DWI statutes with regard to the issue of inherent margin of error in a chemical blood/breath alcohol test."). The court went on to compare states that interpreted DWI statutes to create an offense upon a *test reading* in excess of the statutory limit with states that require the fact finder to consider the inherent margin of error in their decision. *Id.*

119. *See* People v. Mertz, 497 N.E.2d 657, 660–63 (N.Y. 1986) (examining case law from many American jurisdictions and noting that no state in a criminal case made a test result irrebuttable); *see also* State v. Scisney, C.C.A. No. 01C01-9605-CC-00209, 1997 WL 634515 (Tenn. Crim. App. Oct. 16, 1997) (stating the same).

Department of Transportation,[120] cited by the *Haynes* Court,[121] the Court was careful to point out the different concerns between civil and criminal cases considering blood-alcohol evidence.[122]

This difference between civil and criminal proceedings is vital because of the different levels of proof necessary in the two types of proceedings. Yet *Haynes* carelessly extended its holding in a civil case to criminal cases by asserting that "[s]ome courts read their DWI statute . . . to create an offense of registering a blood/breath alcohol *test reading* in excess of the statutory limit."[123] Because *Haynes* was itself a license revocation proceeding, citing those other cases was appropriate, but the Court unfortunately suggested that doing so in a criminal case would also be acceptable, erroneously saying that other states had done so.

Following the Court's decision in *Haynes*, the State was required under the breath alcohol theory of intoxication to submit evidence of a breath test result of at least .110 because the .010 margin of error was imputed in the defendant's favor.[124] In 1996, however, the Alaska legislature adopted a statute stating that the "working tolerance" of an instrument, or its margin of error, should no longer be considered in either criminal or civil proceedings.[125] Thus, while the adopted statute appears to implicitly overrule *Haynes*' central holding, *Haynes'* legacy

120. 390 N.W.2d 125, 128 (Iowa 1986).

121. *Haynes*, 865 P.2d at 755.

122. *See Nugent*, 390 N.W.2d at 128 ("Plaintiff relies on several criminal, not administrative, cases from other jurisdictions. Those decisions hold the state must show a blood-alcohol concentration that takes into account the variance or margin of error in order to support a criminal conviction. Although the issue presented here does arise in the criminal context as shown by the above cases, different concerns are addressed in civil administrative proceedings. Thus, the criminal cases cited by plaintiff are not controlling in this situation."); *see also* Lara v. Tanaka, 924 P.2d 192, 195 (Hawaii 1996) ("[A] statistically significant possibility that a driver's actual BAC is below the legal limit does not overcome the presumption of innocence by proof beyond a reasonable doubt. But we cannot conclude that, because of that possibility, it is impossible to prove by a preponderance of the evidence that a driver's actual BAC exceeded the legal limit.").

123. *Haynes*, 865 P.2d at 758.

124. *See* Mangiapane v. Municipality of Anchorage, 974 P.2d 427, 429 (Alaska Ct. App. 1999) ("In essence, the Haynes decision required the State to introduce an Intoximeter result of .11 percent or higher in order to prove a defendant guilty of driving while intoxicated under [ALASKA STAT. §] 28.35.030(a)(2) or the equivalent Anchorage municipal ordinance, [ANCHORAGE MUN. CODE §] 9.28.020(B)(2).").

125. *See* ALASKA STAT. § 28.40.060 (1996) ("[I]f an offense described under [Title 28] requires that a chemical test of a person's breath produce a particular result, and the chemical test is administered by a properly calibrated instrument approved by the Department of Public Safety, the result described by statute is not affected by the instrument's working tolerance."). This statute is now ALASKA STAT. § 28.90.020 (2012).

would continue because of the aforementioned confusion, conflating civil and criminal cases.

V. *MANGIAPANE* AND *BUSHNELL*: THE COURT UPHOLDS THE "WORKING TOLERANCE" STATUTE

In 1999 the Alaska Court of Appeals construed the "working tolerance" statute for the first time in *Mangiapane v. Municipality of Anchorage*.[126] Mangiapane's apparent breath test result was .112.[127] He requested an independent blood test, drawn 40 minutes later, with a result of .10.[128] Mangiapane's breath sample of .112, even applying the .010 margin of error in his favor, still would have resulted in guilt.[129]

Furthermore, guilt also could have potentially been shown from the blood test result of .100.[130] Relying heavily on the Supreme Court's *Haynes* dicta, the Court of Appeals explained that "[t]he fact that the driver's true blood-alcohol or breath-alcohol level may be slightly lower [than the Intoximeter's reading] (due to the Intoximeter's acknowledged margin of error) is no longer relevant to the driver's guilt under AS 28.35.030(a)(2)."[131] The true alcohol level was irrelevant because the test itself was thought to be the element of the offense; that is, at trial the State only had to prove there was a test result of .100 or more.

This interpretation of the "working tolerance" statute was unusual. On its face the provision that "the result described by statute is not affected by the instrument's working tolerance" seems to state a rule of evidence. It does not appear to modify the elements of the offense in any way which is defined in AS 28.35.030, and which had long been established to make actual blood alcohol level an element of the offense, and not the test result itself. Nor does the legislative history suggest that there was intent to modify the elements of the criminal offense.[132]

126. *Mangiapane*, 974 P.2d at 427.
127. *Id.* at 428.
128. *Id.*
129. *See id.* at 429. Since the result was above the .11 percent *Haynes* threshold required to prove a defendant guilty of DUI, adjusting for the margin of error would still result in a breath test result over the legal limit.
130. *Id.* at 430 ("[ALASKA STAT. §] 28.40.060 effectively declares that a driver violates [ALASKA STAT. §] 28.35.030(a)(2) if, within four hours of driving, the driver is tested on a properly calibrated, properly functioning Intoximeter and the driver's test result is at least .10 percent blood-alcohol or the equivalent .10 grams of alcohol per 210 liters of breath.") (emphasis in original).
131. *Id.*
132. The legislative history indicates that initially, the Working Tolerance provision was not part of the bill, and H.B. 204 was directed at establishing "zero tolerance" for underage drinking and driving, by making it an infraction for an underage person to drive a vehicle with any alcohol whatsoever in her

The "working tolerance" statute was discussed more thoroughly a year after *Mangiapane* in *Bushnell v. State*.[133] Unlike *Mangiapane*, Bushnell's apparent result of .109 put a legal reading within the known margin of error.[134]

In light of *Mangiapane*'s holding, Bushnell did not attack *Mangiapane* head-on but instead argued that the legislature had unconstitutionally delegated too much power to the Department of Public Safety ("DPS") by allowing the DPS to determine the acceptable margin of error.[135] In other words, if the legislature says that the working tolerance or margin of error cannot be considered and then gives the executive branch authority to adopt any instrument or any margin of error it chooses, then the legislature has effectively permitted the executive branch to define the crime.

Bushnell began by quoting *Haynes*, claiming that the Supreme Court had "indicated that the legislature had the power to base the offense of DWI on a particular test result, and that a margin of error that it considered 'tolerably accurate' could be disregarded."[136] The court then concluded that since the legislature had the Intoximeter's long history of use in the State of Alaska as guidance,[137] the legislature, by responding to Haynes with AS 28.40.060, implicitly found that a working tolerance of .01 percent of a properly calibrated instrument was "tolerably inaccurate."[138]

To put *Mangiapane* and *Bushnell* in perspective, it is worthwhile to compare them to a New York case which presented almost exactly the same issue. New York for the past three decades has had a law which is similar to Alaska's "working tolerance" statute. New York's Vehicle and Traffic Law § 1195 [1] provides:

> Upon the trial of any action or proceeding arising out of actions alleged to have been committed by any person arrested for a

system. *See* ALASKA H. JOURNAL, 19th Leg., 2d Sess. 495 (Feb. 27, 1995) *available at* www.legis.state.ak.us/basis/get_jrn_page.asp?session=19&bill=HB204&jrn=0495&hse=H.

133. 5 P.3d 889 (Alaska Ct. App. 2000).

134. *Id.* at 890.

135. *See id.* ("Bushnell argues that [ALASKA STAT. §] 28.40.060 violates his due process rights because it allows the Department of Public Safety to approve any instrument, even one which is very inaccurate, to establish his level of intoxication.")

136. *Id.* at 891. As noted above, the Supreme Court in fact only said that the legislature could base "license revocation" on a test result. *Haynes*, 865 P.2d at 755.

137. *See id.* ("When enacting [ALASKA STAT. §] 28.40.060, the legislature not only had the *Haynes* decision for guidance, it also had the Intoximeter's long history of use in [the State of Alaska].").

138. *Id.* at 892.

> violation of any subdivision of [Vehicle and Traffic Law § 1192], the court shall admit evidence of the amount of alcohol or drugs in the defendant's blood as shown by a test administered pursuant to the provisions of [Vehicle and Traffic Law § 1194].[139]

While this language could be interpreted to require the evidence only be considered "as shown by a test" result, the New York Court of Appeals in *People v. Mertz*[140] ultimately held that such an interpretation would be constitutionally problematic.[141] New York's highest court held that "[e]vidence that a breathalyzer test administered within two hours of arrest showed defendant to have such a BAC is sufficient to establish a prima facie a violation . . . ."[142] However, the Court continued that, it was "error not to permit defendant's attorney to argue on the basis of evidence . . . from which it could be found that defendant's BAC at the time of the vehicle operation was less than .10% . . . ."[143]

Mertz was in an accident at approximately 2 A.M.[144] He was taken to the hospital and submitted two breath test samples to a breathalyzer.[145] The first "taken at 3:25 A.M. yielded a .15 reading. The second, taken at 3:35 A.M., after the instrument had been purged, recorded a reading of .16."[146] These results raised a number of disputes between the prosecution and the defense. The first issue was which, if any, of the tests was most accurate.[147] The defense essentially wanted to argue that the fact that the second test result was .010 higher ten minutes later showed that the blood alcohol was rising rapidly and therefore Mertz was most likely under the legal limit when he had driven the car over an hour earlier.[148] The State's expert witness argued that it was impossible to know if the two tests were both accurate; the variation could have resulted "because not a deep enough sample was obtained at the two different times or because one sample was longer than the other."[149] Most defense attorneys would regard the state's own expert

139. N.Y. VEH. & TRAF. LAW § 1195 (2012).
140. 497 N.E.2d 657 (N.Y. 1986).
141. *See id.* at 662. ("To foreclose a defendant's introduction of evidence seeking to establish that his BAC while operating was less than .10 may raise doubt as to constitutionality.").
142. *Id.* at 658.
143. *Id.*
144. *Id.*
145. *Id.*
146. *Id.*
147. *See id.* at 659 (discussing the presentations by the arresting officer and a professor of physiology about the potential problems of each test).
148. *Id.*
149. *Id.*

witness arguing for the uncertainty of the state's evidence as a godsend. But the trial judge precluded the defense from arguing either that the tests were inaccurate, or that the tests were accurate and showed a rising level of alcohol.[150]

The *Mertz* case raised a number of both statutory and constitutional questions. First, the New York DUI statute provided: "No person shall operate a motor vehicle *while* he has .10 of one per centum or more by weight of alcohol in his blood *as shown by* chemical analysis of his blood, breath, urine or saliva, made pursuant to the provisions of section eleven hundred ninety-four of this chapter."[151] Thus the statute made it an offense to have a blood or breath alcohol level of .100 "while driving" but "as shown by" a later test. Other provisions permitted the chemical test to be made "within two hours after such person has been placed under arrest for any such violation" and further directed that the court shall admit evidence of the amount of alcohol or drugs in the defendant's blood "as shown by" a test administered pursuant to the provisions of Vehicle and Traffic Law § 1194. Thus the initial question of statutory interpretation was simply: what is the element of the offense—did the state need to prove .100 breath alcohol level at the time of driving, at the time of testing, or merely show a test result at any time within two hours?

The Court of Appeals held that the DUI statute defining the crime in § 1192 as a breath alcohol level of .100 "while driving" had to be taken at face value.[152] Thus, the Court concluded that "[t]o foreclose a defendant's introduction of evidence seeking to establish that his BAC while operating was less than .10 may raise doubt as to constitutionality . . . ."[153] As a result, defendant must be allowed to argue the significance of such evidence, if it exists, to a jury.[154]

Obviously the New York Court of Appeals is not infallible and *Mertz* is only persuasive precedent. Nevertheless, *Mertz* is the more persuasive case. When a crime is defined in one section and another section has a provision relating to admissibility of evidence, it is difficult to read the evidentiary provision as anything but an evidentiary

150. *See id.* ("[W]hen defendant's attorney during summation began to argue that it was fair to infer from the fact that defendant's BAC was rising at 3:35 that at the earlier time when he was driving it was much lower, the Trial Judge responded to the prosecutor's objection by stating in the presence of the jury that the only question for the jury was whether the sample was taken within two hours of arrest and showed a BAC in excess of .10.").

151. *Id.* at 664 (quoting N.Y. VEH. & TRAF. LAW § 1192(2) (McKinney 2013)) (emphasis added).

152. *Id.* at 658.

153. *Id.*

154. *Id.*

provision. As an evidentiary provision, it cannot create a non-rebuttable presumption of accuracy and not violate due process.

More importantly, both the Alaska Court of Appeals and the Alaska Supreme Court subsequently rejected the idea that the test result was the element of the offense, but the ghost of *Mangiapane* has continued to haunt Alaska by casting continued confusion over DUI cases.

VI. THE RETREAT FROM *MANGIAPANE*

Three years after *Mangiapane*, the court of appeals again took up the issue in *Conrad v. State*.[155] While not explicitly overruling *Mangiapane*, the court stated, "we did not speak carefully enough" in addressing the issue in *Mangiapane*.[156]

Conrad was stopped by police and was later given a breathalyzer; his sample registered over the per se level.[157] Conrad argued that he had not yet metabolized the alcohol while driving and was perfectly sober at the time of driving; it was only much later that his breath alcohol level had gone over the legal limit.[158] Conrad did not dispute the apparent accuracy of the test at the time it was given—he argued instead that the test did not reflect his level of sobriety at the time he drove.

Obviously, if the element of the offense were simply a test result above .080, then this defense could not work. But the Court in *Conrad* unambiguously rejected the idea that the test result itself was the element of the offense, explaining that they found "no indication that the Alaska Legislature, either when it passed AS 28.35.030(a)(2) or when it later passed AS 28.40.060 [the "working tolerance" statute], intended to shift the focus away from the defendant's blood alcohol level at the time of driving and to make the test result determinative of the defendant's guilt."[159] Thus, the Court acknowledged that it used less than perfect language in *Mangiapane*,[160] and reaffirmed that a defendant's guilt "hinges on the defendant's blood alcohol content at the

155. 54 P.3d 313 (Alaska Ct. App. 2002) (superseded by statute with respect to the time of testing).

156. *Id.* at 314.

157. *See id.* ("[Conrad] submitted to an Intoximeter test; the test result was a blood alcohol level of 0.154 percent.").

158. *See id.* ("Conrad presented what he called the 'big gulp' defense: He claimed that he had quickly consumed two beers just before he drove. Conrad contended that even though his blood alcohol level was illegally high an hour or so later after he was stopped, his blood alcohol level had been within legal limits at the time he was driving.").

159. *Id.* at 315.

160. *See id.* at 314 (stating, after referencing *Mangiapane*, that "[w]e now conclude that we did not speak carefully enough").

time the defendant operated or controlled a motor vehicle."[161] Still, while a breath test result is not conclusive regarding a defendant's guilt, it forms a presumption that a defendant may overcome by relevant evidence.[162] The Court's opinion focused on the issue of "when" the per se level must be proved, not on whether the test itself is an element of the offense.[163] *Conrad* did not solve everything, however—the Alaska courts continued to say that some states made the test result itself an element of the criminal offense.[164]

In 2008, the idea that a test result was an element of the offense was explicitly rejected by *Morris v. Department of Administration, Division of Motor Vehicles*,[165] which noted: "The offense [of DUI] is committed when either the blood alcohol level or the breath alcohol level is at or above .08 percent."[166]

Morris was arrested and the Datamaster breath sample registered .089.[167] Morris requested a blood sample be drawn which was drawn thirty-seven minutes after the breath test.[168] The blood test result was .070.[169] Morris was apparently never criminally prosecuted, but the Department of Motor Vehicles revoked his license anyway.[170] Morris argued at his administrative proceeding that his .070 blood sample proved that his previous breath test result must have been erroneous.[171] The hearing officer ruled that the .070 blood sample did not prove that the .089 result was inaccurate and thus ruled that the state had proved intoxication by a preponderance of the evidence.[172]

While the Supreme Court's language in *Morris* at times used ambiguous descriptions of what the state had to prove, the overall discussion in *Morris* leaves no doubt that the state had to prove an actual

161. *Id.* at 315.
162. *Id.*
163. *Id.* at 313 ("[W]e conclude that the statute requires proof of the defendant's blood alcohol level *at the time* the defendant operated or controlled a motor vehicle.") (emphasis added).
164. *See id.* at 315 n.7 (discussing other states' statutes and their interpretations of the test result, not the alcohol concentration at the time of operating the vehicle).
165. 186 P.3d 575 (Alaska 2008).
166. *Id.* at 581.
167. *Id.* at 576.
168. *Id.*
169. *Id.*
170. *Id.*
171. *Id.* at 578.
172. *See id.* ("The department counters that substantial evidence supports the hearing officer's determination that the breath test result was valid, that the blood test result does not prove that the Datamaster breath test was unreliable or inaccurate, and that Morris's blood test actually supports the hearing officer's finding that Morris's blood alcohol content was over the legal limit.").

breath alcohol level and not just prove that there was a test result. First, the Court reiterated the requirements of due process, stressing the defendant's ability to challenge an initial breath test result with an additional test.[173] If the State only had to prove that Morris had a test result above .080, his other test result would have been completely irrelevant. But the Court explicitly stated that the result was relevant, concluding that "[w]hile an independent blood test result may have significant bearing on the weight afforded a breath test's reliability in a given case, Morris has failed to provide sufficient support for his proposition that in this case the hearing officer's finding is not supported by substantial evidence."[174] Indeed, the Court relied on the blood test to conclude that Morris's actual blood alcohol level was above .080.[175]

The reasoning of the decision leaves no doubt that the trier of fact is free to reject a breath test's apparent result if the trier of fact believes the result is not accurate. Indeed, the Court noted that "the weight given to the breath test is a factual matter properly left to the hearing officer."[176] It stands to reason that the trier of fact in a criminal case has at least the same discretion as the hearing officer.

In 2009, the Alaska Supreme Court returned to the issue of challenging breath test results in *Valentine v. State*.[177] Some of the formulations in *Valentine* suggest that the test result is the element of the offense,[178] but when examined carefully it is clear that the Court did not mean the decision to be read that way.[179]

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173. *See id.* at 577–78 ("[W]hile [ALASKA STAT. §] 28.35.033 creates a presumption of the chemical test's validity . . . [a] driver has the right to challenge the accuracy of a breath alcohol test, which includes the right to obtain evidence of an independent blood test producing an exculpatory result.").

174. *Id.* at 582.

175. *See id.* ("Specifically, had the hearing officer assumed the accuracy of the .070 percent blood test at 5:13 a.m., and extrapolated backwards in time using the average rate of alcohol elimination of .018 percent per hour, Morris's level of intoxication would have been .081 percent at 4:36 a.m., the time of his chemical breath test. Thus, his blood test result supports the conclusion that Morris was in excess of the legal limit at the time of his breath test. . . .").

176. *Id.* at 581.

177. 215 P.3d 319 (Alaska 2009).

178. *See, e.g., id.* at 323 ("Now, a person violates subsection (a)(2) if the person takes a chemical test within four hours of operating or driving a motor vehicle that yields a result of a blood alcohol level of 0.08 percent or higher, regardless of the person's blood alcohol at the time of driving.").

179. *See, e.g., id.* at 323–24 ("But in amending subsection (a)(2)'s blood-alcohol-level theory of the DUI offense, the legislature did not revise subsection (a)(1)'s under-the-influence theory, which makes it a DUI offense *to drive or operate* a motor vehicle while under the influence of alcohol or controlled substances.") (emphasis added).

After being arrested, Valentine submitted to a breath test, "which showed a blood alcohol level of 0.099 percent" and a later blood test which "showed a blood alcohol level of 0.119 percent."[180] Interestingly, it was not specified in a general verdict whether Valentine was convicted under the blood-alcohol-level theory, the under-the-influence theory, or both.[181] The trial court refused to permit Valentine to present evidence of consumption of alcohol before operating or driving because since *Conrad*, the legislature had amended the statute to forbid the introduction of such evidence.[182] Thus, the trial court ultimately ruled that the statute plainly forbade the introduction of such evidence under either the blood-alcohol-level theory or the under-the-influence theory.[183]

The Supreme Court reversed and held that insofar as the state relied on the under-the-influence theory, due process required that Valentine be permitted to present evidence that he was not under the influence because he had not yet absorbed the alcohol into his system.[184] The Court explained that "the legislature amended subsection (a)(2) to redefine the blood-alcohol-level theory of the DUI offense in terms of a defendant's blood alcohol at the time that the defendant took a properly administered chemical test rather than at the time of driving."[185] But the Court also noted that the under-the-influence theory had not changed and that theory required the State to prove the driver was actually intoxicated at the time of driving.[186] Accordingly, delayed absorption evidence was relevant to show that the defendant was not intoxicated.[187]

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180. *Id.* at 321.

181. *Id.* at 320.

182. *See* ALASKA STAT. § 28.35.030(s) (2012) ("In a prosecution under (a) of this section . . . the consumption of alcohol before operating or driving may not be used as a defense that the chemical test did not measure the blood alcohol at the time of the operating or driving.").

183. *Valentine*, 215 P.3d at 321 ("The effect of the district court's ruling was to prohibit Valentine from offering evidence to show that even though his blood alcohol level was above the legal limit at the time of his two chemical tests, he was not guilty of driving while under the influence under either theory because at the time he drove the alcohol he had consumed had not yet been fully absorbed into his bloodstream.").

184. *See id.* at 321 ("[D]efendants are denied due process if they are barred from presenting delayed-absorption evidence in prosecutions relying on chemical test results to prove that they are guilty of a DUI offense under subsection (a)(1)'s under-the-influence theory.").

185. *Id.* at 323.

186. *See id.* at 323–24 ("But in amending subsection (a)(2)'s blood-alcohol-level theory of the DUI offense, the legislature did not revise subsection (a)(1)'s under-the-influence theory . . . .").

187. *See id.* at 324–25 ("But the delayed-absorption defense is still relevant to prosecutions under subsection (a)(1). A defendant's guilt in a DUI prosecution under this subsection turns on whether the defendant was 'under the influence'

Additionally, the court of appeals' decision (which was overturned with respect to this one issue) noted the provision in the law that "defendants may introduce evidence of how much alcohol they consumed before driving to rebut or explain the results of the chemical test—for instance, a defendant may offer evidence that he only had two drinks before driving, and that the chemical test therefore must have been inaccurate . . . . "[188] The court of appeals went on to explain that the statute did not create a conclusive presumption.[189]

Because this was not an issue the Supreme Court needed to address, the Supreme Court did not do so, and this part of the court of appeals' decision was not overruled. The court of appeals' decision is clear that the courts were not reverting to the test itself as an element of the offense.[190]

In September 2012 the Court of Appeals in McCarthy v. State[191] unambiguously stated that Defendants have a broad right to present evidence impeaching the accuracy of breath test results:

> McCarthy was free to present admissible evidence impeaching the accuracy of the breath test. He could have called the

while operating or driving a motor vehicle. If the government offers evidence of the result of a properly administered chemical test after the defendant was stopped, this evidence does not directly prove that the defendant was impaired while driving because the chemical test result shows the percentage of alcohol in the defendant's bloodstream at the time that the test was administered.").

188. Valentine v. State, 155 P.3d 331, 338 (Alaska Ct. App. 2007).

189. *See id.* at 344 ("Under subsection (a)(2), it does not matter how intoxicated the motorist was at the time of driving. What matters is whether the motorist ingested enough alcohol before or while driving *to have a blood alcohol level at or above .08 percent at the time of a chemical test* administered within four hours of driving. *The defendant may attack the accuracy of the chemical test*, or show that alcohol was consumed after driving. What he cannot offer is evidence to show that the test did not measure his blood alcohol level at the time of driving because the alcohol he consumed before or while driving had not been fully absorbed—evidence that is no longer relevant under the amended statutes.") (emphasis added).

190. This is further illustrated by Judge Mannheimer's partial dissent in the Court of Appeals, which the Supreme Court embraced in its decision. As Judge Mannheimer concluded, the prohibition in subsection (s) on delayed-absorption evidence in prosecutions under subsection (a)(1) that rely on chemical test results "unjustifiably prevents defendants from introducing evidence that is both scientifically valid and directly relevant to the question of whether the defendant was impaired by alcohol at the time of driving." *Valentine*, 215 P.3d at 327. The dissenting opinion explained that "now, a person violates subsection (a)(2) if they operate a motor vehicle and if, within four hours of their operation of the vehicle, their blood alcohol level is .08 percent or higher, and if this blood alcohol level is attributable to the person's voluntary consumption of alcoholic beverages either before or during their operation of the vehicle." *Valentine*, 155 P.3d at 349.

191. 285 P.3d 285 (Alaska Ct. App. 2012).

> authors of the calibration reports, or any other witness, to explore the issue of the Datamaster's accuracy. But that evidence would go to the weight of the breath test result, not its admissibility.[192]

The discussion of the issue in McCarthy seems to leave no doubt that the breath test result is evidence of the offense and the defendant is free to challenge the reliability of that evidence, and the jury is free to weigh the value of the test evidence and reject it as inaccurate.

The Court went on to address the "working tolerance" issue, although its ultimate resolution of the issue left open a lot of questions. One of the issues raised by McCarthy was that the particular Datamaster machine that tested his breath had consistently tested high by .004 to .008, compared to the control sample.[193] McCarthy argued that this showed the instrument was unreliable so his apparent breath test result of .214 percent was not reliable.[194]

The Court rejected this argument for a few reasons. First, the Court made reference to the "working tolerance" statute explaining:

> Under AS 28.90.020, a breath test result from a properly calibrated instrument is not affected by the instrument's testing variations, as long as those variations are within the machine's working tolerance. In other words, the fact that the breath test result may be higher or lower than the actual alcohol content of the suspect's blood is irrelevant so long as the machine is functioning within the legally prescribed working tolerance.[195]

The above paragraph cited no authority and did not explain why the "actual alcohol content of the suspect's blood is irrelevant." The court appears to have been paraphrasing *Mangiapane* without citation, in holding that evidence of an instrument consistently testing high was irrelevant.[196] But if the actual alcohol content of the suspect's blood is irrelevant, then why was McCarthy "free to present admissible evidence impeaching the accuracy of the breath test," presumably by showing that his actual alcohol level was lower than the test result indicated?

The Court then went on to give an alternative basis for its holding, raising yet more questions, explaining:

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192. *Id.* at 290.
193. *Id.* at 287.
194. *Id.* at 292.
195. *Id.*
196. *See* Mangiapane v. Municipality of Anchorage, 974 P.2d 427, 430 (Alaska Ct. App. 1999) ("The fact that the driver's true blood-alcohol or breath-alcohol level may be slightly lower (due to the Intoximeter's acknowledged margin of error) is no longer relevant to the driver's guilt under AS 28.35.030(a)(2).") *Mangiapane* was not cited anywhere in *McCarthy*.

> The Datamaster's calibration tests yielded only slight variations from the norm: test results that were between .004-.008 percent higher than the target values of the samples being tested. McCarthy's test result was .214 percent. Even if McCarthy's Datamaster was consistently high by as much as .008 percent, McCarthy's blood alcohol content would still have been significantly over the legal limit (.08 percent).[197]

Clearly, in McCarthy's case his subject sample was so high that an instrument calibrated high by .008 would not have brought him within the legal limit. But what about a defendant in the same circumstances whose test result was .084, rather than .214? The Court's opinion implicitly acknowledges that in some cases a Datamaster that was high by .008 percent would suggest that the person's blood or breath alcohol content is actually below the legal limit. Was the Court suggesting that a defendant with a test result of .080 could present evidence that the instrument "was consistently high by as much as .008 percent."? *McCarthy* gives no clear answer. On the one hand it affirms that a defendant may impeach the accuracy of the breath test and "explore the issue of the Datamaster's accuracy," while on the other hand asserting that "the actual alcohol content of the suspect's blood is irrelevant."

The Court gave yet a third reason for rejecting McCarthy's argument, namely, inadequate briefing.[198] This inadequate briefing is likely one reason that the opinion seems to contradict itself in places.[199] Moreover, McCarthy does not appear to have argued on appeal that the working tolerance statute was unconstitutional, so the Court did not address this issue.

To summarize *McCarthy*, and the current state of the Alaska precedent, a test result is the evidence by which the state proves breath alcohol content, and the breath test evidence may be challenged by any other evidence—except evidence of the instrument's margin of error.

Accordingly, looking at the whole gambit of decisions, it is clear that the central premise of *Mangiapane,* that the test result is an element of the criminal offense, has been rejected. So where does that leave us? Is *Haynes*, which held that the margin of error must be applied in favor of a

197. *McCarthy*, 285 P.3d at 293.
198. *Id.* at 293.
199. Finally, it should be noted that the Court in *McCarty* conflates margin of error with a calibration adjustment. A margin of error is a random deviation plus or minus the true value. The facts in McCarty state that the instrument consistently tested .004 to .008 above the target value. If an instrument consistently tests .004 to .008 above the known target value it can be concluded that it is calibrated approximately .006 too high, with a random deviation of plus or minus .002.

criminal defendant still good law? It would seem so. *Mangiapane* held that *Haynes* had been superseded by statute, but since *Mangiapane* itself has been repudiated, *Haynes* must be binding precedent.[200]

Setting aside whether the *Haynes* requirement that the margin of error must be applied in favor of a defendant, it is very hard to imagine a justification for not permitting a defendant to introduce such evidence. Clearly it is relevant evidence, at least when the apparent breath sample is at or near the legal limit. Given the Alaska Supreme Court's repeated emphasis on the due process right to challenge the accuracy of a breath test how can a court prevent a defendant from contesting the accuracy of a test with relevant, exculpatory evidence? As in *Valentine* where the Supreme Court held that forbidding introduction of delayed absorption evidence violated a defendant's due process right to present a defense, the "working tolerance" statute appears to do the same thing as the delayed absorption statute.

VII. THE RIGHT TO PRESENT A DEFENSE UNDER FEDERAL LAW

In *Taylor v. Illinois*,[201] the Supreme Court asserted that "[f]ew rights are more fundamental than that of an accused to present witnesses in his own defense. Indeed, this right is an essential attribute of the adversary system itself."[202] At other times, however, the Court has emphasized the power of the government to exclude evidence. The Court in *Taylor* went on to note that "[t]he accused does not have an unfettered right to offer testimony that is incompetent, privileged, or otherwise inadmissible under standard rules of evidence."[203] And in 2006, the Court explained: "'[S]tate and federal rulemakers have broad latitude under the Constitution to establish rules excluding evidence from criminal trials.'"[204] While the characterization of the right may have varied, the Supreme Court is generally suspicious of any legislative attempts to limit the admissibility of relevant evidence. The discretion of legislatures

200. *Haynes* clearly remains good law with respect to the "under the influence" theory. ALASKA STAT. 28.90.020 purports to make margin of error inadmissible under the "per se theory." But what happens if the test result is below .08, say .075? Suppose further that the state wants to submit evidence of the apparent sample, along with other evidence, to argue that the person was actually intoxicated. Because ALASKA STAT. 28.90.020 only applies to the per se theory, it seems that a defendant must be permitted under *Haynes* to argue that the margin of error should be assumed in his favor.

201. 484 U.S. 400 (1988)

202. *Id.* at 408 (citing Chambers v. Mississippi, 410 U.S. 284, 302 (1973)).

203. *Id.* at 410.

204. Holmes v. South Carolina, 547 U.S. 319, 324 (2006) (quoting United States v. Scheffer, 523 U.S. 303, 308 (1998) (additional internal citations omitted)).

in this area, the Court explains in *Holmes*, "has limits."[205]

Unfortunately, the Supreme Court has never explicitly set out a general rule to apply in all exculpatory evidence cases. Edward Imwinkelried reads the bulk of Supreme Court cases as effectively relying on a balancing test considering four factors: (1) "the availability of alternative, admissible evidence"; (2) the reliability of the evidence, (3) the probative value of the evidence, and (4) the importance of the evidence to the defense.[206]

There are also a variety of specific limitations on a defendant's ability to present evidence. As the Court explained in *Holmes*:

> While the Constitution thus prohibits the exclusion of defense evidence under rules that serve no legitimate purpose or that are disproportionate to the ends that they are asserted to promote, well-established rules of evidence permit trial judges to exclude evidence if its probative value is outweighed by certain other factors such as unfair prejudice, confusion of the issues, or potential to mislead the jury. Plainly referring to rules of this type, we have stated that the Constitution permits judges "to exclude evidence that is 'repetitive . . ., only marginally relevant' or poses an undue risk of 'harassment, prejudice, [or] confusion of the issues.'"[207]

The first section of this article essentially considered the question of relevancy. If, as discussed above, the state must prove that the DUI defendant actually had a blood or breath alcohol level above a certain point, then evidence calling into question the accuracy of the result is relevant as it raises a doubt about the actual breath alcohol level.

The most common reason for excluding relevant evidence is when it is unreliable. As one leading scholar in this area has put it: "The accused in a criminal proceeding has a constitutional right to introduce any favorable evidence, unless the state can demonstrate that it is so inherently unreliable as to leave the trier of fact no rational basis for evaluating its truth."[208] For example, the hearsay rules are intended to exclude unreliable information. But even with hearsay, the Supreme Court has held that due process takes precedence.[209]

The priority of due process concerns over evidentiary concerns

205. *Id*. at 324.
206. IMWINKELRIED & GARLAND, *supra* note 4, at 54.
207. *Holmes*, 547 U.S. at 326.
208. Peter Westen, *The Compulsory Process Clause*, 73 MICH. L. R. 71, 151–52 (1974–1975).
209. *See, e.g.*, Green v. Georgia, 442 U.S. 95, 97 (1979) (holding that state evidentiary rules cannot deprive criminal defendants of due process rights under the Fourteenth Amendment).

with unreliability is especially important with respect to evidence that is acquired or certified through scientific or quasi-scientific means. Suppose, for example, a witness had no recollection of an event but allegedly was able to recover memories under hypnosis. Courts have struggled with whether such "recovered memory" is admissible, or whether the witness even has "personal knowledge."

The Supreme Court addressed this issue in *Rock v. Arkansas*.[210] The Court noted a variety of problems with hypnotically induced memory, noting that it frequently resulted in erroneous memories.[211] The problem in *Rock*, however, was that Arkansas had a per se rule forbidding all testimony based on hypnotically recovered memory, and the witness who wished to testify was the defendant himself.[212] Thus the defendant's constitutional right to testify in his own defense was limited by the statute. In holding that Rock's constitutional right to present evidence had been violated, the Court explained:

> A State's legitimate interest in barring unreliable evidence does not extend to per se exclusions that may be reliable in an individual case. Wholesale inadmissibility of a defendant's testimony is an arbitrary restriction on the right to testify in the absence of clear evidence by the State repudiating the validity of all post-hypnosis recollections.[213]

So while courts can exclude evidence which is unreliable, especially pseudo-scientific evidence, *Rock* suggests that a defendant cannot be prohibited from offering this evidence as a per se rule, but must be given an opportunity to establish the reliability of the proffered evidence.[214]

More recently, in *United States v. Scheffer*,[215] the Supreme Court considered "whether Military Rule of Evidence 707, which makes polygraph evidence inadmissible in court-martial proceedings, unconstitutionally abridges the right of accused members of the military to present a defense."[216] The Court considered various reasons why polygraph evidence might be excluded as unreliable, but ultimately determined that exclusion was permissible because it did not preclude the defendant from introducing direct factual evidence about the

210. 483 U.S. 44 (1987).
211. *Id.* at 59–60.
212. *See id.* at 49–50.
213. *Id.* at 62.
214. *Id. See also* Patrick v. State, 750 S.W.2d 391 (1988) (holding that a statutory prohibition on admission of portable breath test results could not prevent defendant from using those results to help prove his innocence).
215. 523 U.S. 303 (1998).
216. *Id.* at 305.

offense.[217] The defendant was prevented only from introducing expert testimony to bolster his credibility.[218]

These cases suggest that Alaska's "working tolerance" statute might not survive constitutional scrutiny because it categorically excludes factual evidence bearing directly on the offense. Is it plausible to defend the "working tolerance" statute by claiming that it excludes only speculative evidence? Arguably *speculation* about inaccurate breath testing is not reliable enough to allow into evidence. For example, a breath sample of .080 is equally likely to be too high and too low.[219] This places the fact-finder in the position of speculating, under the influence of both prosecutor and defense counsel, as to the actual percentage.

This is one of the strongest arguments in favor of not admitting the evidence; but while this argument may have force in a civil case, it has much less force in a criminal case. In a civil case, where the burden of proof is a preponderance of the evidence, it is acceptable to claim that a test with a reasonable margin of error does not prevent the fact-finder from rendering judgment with the appropriate level of certainty. But when the burden is on the state to prove intoxication beyond a reasonable doubt, the fact that a breath test might register high or low of the actual mark places the ultimate issue in doubt. Moreover, prior to *Mangiapane*, at least, the Alaska Courts regarded a known margin of error as so well established as to be capable of judicial notice.[220] Courts to have addressed the margin of error seem to regard the fact that breathalyzers have some margin of error as beyond dispute.[221] Of course, with reference to particular models of breathalyzer which do not have a well-known or recognized margin of error, the court might require a party to present evidence as to what the margin of error is.[222] There are also limits to the admissibility of exculpatory evidence placed

217. *See id.* at 318.

218. *Id.*

219. This hypothetical assumes there is no other evidence of the amount of alcohol consumed. And in some cases there may be evidence that the particular machine is consistently registering high or low.

220. In *Haynes* the Court simply declared (without citation) that "[t]he Intoximeter 3000 has a recognized margin of error of .01 grams per 210 liters of breath." 865 P. 2d 753, 754 (1993). *See also Bushnell v. State*, 5 P.3d 889, 891 (2000) ("[T]he Intoximeter's working tolerance (or margin of error) of .01 percent is likewise well-known"). Even *Mangiapane* referred to "the Intoximeter's acknowledged margin of error." 974 P.2d 427, 430 (1999).

221. *See Haynes*, 865 P.2d at 755, and the cases cited there. The cases cited in *Haynes* do not dispute whether there is a margin of error but only the legal significance of this fact.

222. *See, e.g.*, *Borger v. Dep't of Motor Vehicles*, 192 Cal.App.4th 1118, 1121–22 (2011) (holding that an expert's "bald" assertion that the Intoxilyzer 5000 had a margin of error of +/- .020 did not overcome the rebuttable presumption present in a civil case that a test result of 0.08 percent or more establishes intoxication).

on defendants by rules of procedure. For example, *Taylor v. Illinois* ruled that a defendant could not present certain witnesses when defense counsel refused to comply with discovery rules, explaining that "[d]iscovery, like cross-examination, minimizes the risk that a judgment will be predicated on incomplete, misleading, or even deliberately fabricated testimony."[223] For example, the Court noted that it was not a violation of due process to refuse to permit expert testimony when the defense refused to provide the prosecution with a copy of the expert's report.[224] While *Taylor* thus permits the exclusion of certain exculpatory evidence based on procedural violations, this holding affords no protection for the form of exclusion at work in the Alaska "working tolerance" statute. This case is noted because it again shows that the right to present exculpatory evidence is not absolute. It also could come into play in a DUI case, if, for example, the defense attempted to call an expert witness without proper notice. The statute is not designed to impose a procedural requirement. It is more like the per se exclusionary rule deemed unconstitutional in *Rock*.[225]

The existence of a privilege or confidential information is another potential basis for excluding relevant evidence, but the Alaska Supreme Court has been hesitant to allow the prosecution to exclude evidence on the basis of confidentiality.[226]

Courts have frequently found a violation of a defendant's right to due process or to confront witnesses when a state has restricted a defendant's ability to present evidence to the jury based on a state privilege. In *Davis v. Alaska*,[227] Davis wished to impeach a witness with evidence of the witness's juvenile conviction and probationary status.[228] However, the trial court did not permit this line of questioning because of a state law protecting the secrecy of juvenile convictions.[229] The U.S. Supreme Court, while acknowledging an important state interest in maintaining the secrecy of juvenile records, held that restricting defendant's counsel from pursuing this line of questioning violated Davis's Sixth Amendment right to cross examination and a fair trial.[230]

Pennsylvania v. Ritchie[231] also involved a dispute over the extent to which a state could classify certain information as privileged and refuse

223. Taylor v. Illinois, 484 U.S. 400, 411–12 (1988).
224. *Id.* at 412 (citing United States v. Nobles, 422 U.S. 225 (1975)).
225. See Rock v. Arkansas, 483 U.S. 44, 62 (1987).
226. *See* ALASKA R. EVID. 501 (limiting the privilege to refuse testimony only to a limited number of explicitly enumerated cases).
227. 415 U.S. 308 (1974).
228. *Id.* at 309.
229. *Id.* at 311–12.
230. *Id.* at 320.
231. 480 U.S. 39 (1987).

to disclose it to the defense.[232] Ritchie was charged with sexual abuse of his daughter who had been interviewed by state social workers a number of times.[233] These social worker files were classified as privileged under state law and the state refused to provide copies to the defense even though the defense believed they might contain exculpatory information.[234] Again the Court stated that "the public interest in protecting this type of sensitive information is strong," but held that the need for evidence in a criminal case outweighed this interest.[235]

Confidentiality is relevant in the DUI context as well. There has been an ongoing battle in many jurisdictions over whether the prosecution must reveal the source code for breathalyzers to defense counsel. This would enable defense counsel to have an expert analyze the code and attack how the instruments calculate their results.[236] Manufacturers have insisted that the source code is proprietary and cannot be revealed.[237]

Putting that thorny issue aside, however, the argument that *the margin of error* is confidential is dubious. Given that the Supreme Court has held that even clearly confidential information such as the criminal records of minors must give way to the defense right to present evidence, it is unlikely that the Supreme Court would be willing to permit the state to conceal the margin of error on state breath testing instruments.[238] This argument does not appear to have ever been raised, however, so courts have not decided the issue.

In conclusion, while there are a variety of exceptions which permit courts to exclude relevant exculpatory evidence, those exceptions have been narrowly drawn, and it is difficult to fit the "working tolerance"

232. *Id.* at 43–44.
233. *Id.*
234. *Id.* at 44.
235. *Id.* at 57. The Court did note that there were some limits to this access, however, and decreed that the trial court should perform an *in camera* review of the material, preventing the defense from having complete, unfiltered access to the materials. *Id.* at 60.
236. For a helpful overview of this issue, *see* Aurora J. Wilson, Note, *Discovery of Breathalyzer Source Code in DUI Prosecutions*, 7 WASH. J.L. TECH. & ARTS 121 (2011).
237. *See*, *e.g.*, State v. Kuhl, 741 N.W.2d 701, 709 (Neb. Ct. App. 2007) ("[T]he record is clear that the source code is not in the State's possession and that the manufacturer of the machine in question considers the source code to be a trade secret and the proprietary information of the company.").
238. One other theory that should perhaps be mentioned is that relevant evidence can be excluded when its probative value is substantially outweighed by undue prejudice. ALASKA R. EVID. 403. I have not seen this issue raised in any DUI cases, and it is hard to imagine how evidence of margin of error could be unduly prejudicial.

statute into any of those exceptions.

VIII. IS THERE A DUE PROCESS RIGHT TO HAVE A MARGIN OF ERROR APPLIED IN FAVOR OF DEFENDANTS?

The above sections have focused on whether a defendant has a right to introduce evidence of the margin of error or uncertainties in the testing procedure. This last section will address whether due process requires that any margin of error be assumed in her favor.

The standard argument that the margin of error must be applied in a defendant's favor is that a reading within an acknowledged margin of error is enough as a matter of law to create reasonable doubt regarding whether the defendant was above the legal level. This argument gets stronger the closer to the legally required percentage that a subject sample is.[239] This argument is based purely in the presumption of innocence and the requirement that the state prove intoxication level beyond a reasonable doubt.

There is a second argument that a conviction cannot be based on a "purely fortuitous" result. In *Best v. Municipality of Anchorage*,[240] the Court of Appeals noted that the test results were so suspect that conviction was based on the "purely fortuitous" result finding that the MPT and Intoximeter results just happened to be close to each other.[241] This argument has not been explored further in Alaska, however.[242]

Nonetheless, it can hardly be doubted that the right to be free from arbitrary enforcement of the criminal law is even more important than the right to vote. The Alaska Court of Appeals affirmed the fundamental principle, stating that "[t]he due process guarantee protects citizens from the arbitrary or fundamentally unfair use of government power."[243] After all, whether an individual's vote is counted is extremely unlikely to have any effect on that individual, whereas the arbitrary enforcement of criminal law may mean the difference between going free or going to jail.

239. A subject sample at .080 has essentially a 50/50 chance that the next sample will be above or below .080. As the number of subject samples increases, the odds of one of those tests registering above the legal limit also increase.

240. 712 P.2d 892 (Alaska Ct. App. 1985).

241. *Id.* at 896.

242. The United States Supreme Court took up essentially the same issue in Bush v. Gore, 531 U.S. 98 (2000), which turned on whether there were sufficient safeguards to ensure uniformity of vote counting, and held that due process guarantees citizens the right to be free from arbitrary and disparate treatment in the exercise of the fundamental right. *Id.* at 105.

243. Municipality of Anchorage v. Ray, 854 P.2d 740, 748 (Alaska Ct. App. 1993) (citing LAURENCE TRIBE, AMERICAN CONSTITUTIONAL LAW 664 (2d ed. 1988)).

Like the famous dimpled chads of *Bush v. Gore*,[244] conviction and incarceration in DUI cases where the defendant is close to the legal limit depends on some degree of randomness. A person who blows into a Datamaster and obtains a result of .080 might well have blown into the machine a minute later and obtained a .079 result. Moreover, Datamaster machines are only required to be calibrated to within an acceptable working tolerance, which is plus or minus .010 of the known test value.[245] Datamaster machines also experience drift. So even if all of the machines are initially calibrated perfectly, they may lose accuracy over time. This means that a person blowing into several Datamaster devices will have different results. A person blowing into two different instruments one after the other could get subject samples differing by as much as .020 based simply on instruments being calibrated differently.[246]

This means that a person can be guilty of a crime if she blows into one machine but not another. The difference between .079 and .080 is entirely the result of a random fluctuations in 1) the machine's margin of error, 2) the differing breath samples of individuals, and 3) the calibration of the particular machine. Any one of these three factors could cause deviations away from the true measurement. When all three are taken together they can result in large variations in test results (typically assumed to be +/- .020).[247] Thus relying on one simple test is effectively random and arbitrary, because there is no certainty that the single sample is accurate. Obviously, the closer one gets to the legal limit the less confidence one can have in the result, but even apparent test results well over the limit may still be the result of random fluctuations. Most states have adopted a rule requiring duplicate tests to help prevent the introduction of a random fluctuation. Conviction on a test result close to the limit, especially within the acknowledged margin of error is the criminal equivalent of a person's freedom depending on the

244. *Bush v. Gore*, 531 U.S. 98 (2000).

245. *Bushnell* held that calibration to within plus or minus .010 is "tolerably inaccurate." 5 P.3d 889, 891 (Alaska Ct. App. 2000).

246. McCarthy v. State, 285 P.3d 285, 288 (Alaska Ct. App. 2012), held that an instrument that consistently tested .008 higher than the target value of the control sample was "within the acceptable margin of error set by law." One machine could be calibrated .008 high and another .008 low, so a person with an actual breath alcohol level of .080 would have a result of .088 in the first device and .072 in the other. Thus a defendant's guilt or innocence could turn on the purely fortuitous choice to blow into one instrument or the other.

247. *See* State v. Ards, 816 N.W.2d 679, 681 (Minn. App. Ct. 2012) (showing sample readings of .131, .132, .119 and .121 and noting that this "variation in the reading is common and expected"); *see also infra* at n. 269–94 (noting the number of states that require two or more tests to be within .020).

interpretation of a hanging chad.[248]

The only United States Supreme Court case directly to address the due process concerns for breath alcohol testing was *California v. Trombetta*[249] in 1984. Trombetta argued that due process required that the state preserve a breath sample for later testing, as a later test might well be able to call into doubt the initial test results.[250] The Supreme Court rejected this argument, noting that the procedures used by California—two independent measurements closely correlated and bracketed by blank tests—were sufficient to guarantee due process.[251] While the Court did not explicitly say that one test would be insufficient to guarantee due process, the Court's emphasis on the process used in the particular case (that is, two independent measurements which must be closely correlated) at least suggests that two tests might be a requirement of due process.[252]

As a general matter, the Supreme Court requires a balancing of state and private interests to determine if the procedures used to deprive a person of liberty or property are constitutionally adequate. As the Court explained in *Matthews v. Eldridge*:[253]

> [O]ur prior decisions indicate that identification of the specific dictates of due process generally requires consideration of three distinct factors: first, the private interest that will be affected by the official action; second, the risk of an erroneous deprivation of such interest through the procedures used, and the probable value, if any, of additional or substitute procedural safeguards; and, finally, the Government's interest, including the function involved and the fiscal and administrative burdens that the additional or substitute procedural requirement would

248. This argument is different than the claim that a single test is so uncertain as to be inadmissible under the rules of evidence. This latter argument was rejected in State v. Dille, 258 N.W.2d 565, 569 (Minn. 1977). Dille had an apparent blood sample of .226 and argued on simple admissibility grounds "that it was insufficient to make only one analysis of defendant's blood sample because of the chance of error in any single test." *Id.* The Minnesota Supreme Court rejected the argument, explaining that the single test displayed sufficient indicia of reliability to make it a candidate for jury consideration. *See id.* Although it might be a preferred practice to run duplicate tests, the failure to do so in this case was not a sufficient reason to exclude the test results. The argument from *Bush v. Gore* is not about admissibility; it is that the admissible evidence resulting from a single test within the known margin of error is insufficient to support a conviction. *See supra* note 242 and accompanying text.

249. 467 U.S. 479 (1984).

250. *Id.* at 481.

251. *Id.* at 489.

252. *See id.*

253. 424 U.S. 319 (1976).

entail.[254]

This general due process requirement is an additional argument in favor of a duplicate testing. The risk of erroneous deprivation of liberty when a person's first breath test is at or just over the legal limit is substantial. Even when the test result is well above the limit there is still a possibility that the test result is an anomaly. Thus the probative value of additional testing is significant. In contrast, the additional cost to the state in having a subject tested twice—typically a five-minute process—is negligible.[255]

The Colorado Supreme Court relied on this cost-benefit analysis to hold that due process required either a second test or preservation of a sample for independent testing.[256] In 1979, Colorado had a regulation much like Alaska's which permitted a defendant to request a duplicate blood test, but did not require a second test.[257] However, the Colorado Supreme Court held that this was insufficient to guarantee due process and held that a suspect "must be given a separate sample of his breath at the time of the test or the alcoholic content of his breath [must be preserved] in a manner which will permit scientifically reliable independent testing by the defendant."[258] The Court noted how important a duplicate test could be for the defendant and stated that "the cost of preserving and testing a separate sample of a defendant's breath is between three and four dollars."[259]

The principal obstacle to adopting this line of reasoning into Alaska law is the Alaska Supreme Court's decision in *Gunderson v. Municipality of Anchorage*.[260] There, the Alaska Supreme Court did not engage in cost/benefit analysis but held that if no breath sample is preserved, "due process requires that [police] give clear and express notice of a defendant's right to an independent test and offer assistance in obtaining one in order to introduce police-administered test results at

254. *Id.* at 334–35.

255. Garcia v. Dist. Court 21st Judicial Dist., 589 P.2d 924, 929 n.3 (Colo. 1979) (estimating the additional of preserving an additional breath sample to be three to four dollars) *implicitly overruled on other grounds by* California v. Trombetta, 467 U.S. 479 (1984). The Datamaster used by the State of Alaska already has the capacity to do duplicate breath testing simply by selecting "Number of Tests" on the menu and entering "2." BREATH ALCOHOL TESTING MANUAL, *supra* note 47, at 16.

256. *Garcia*, 589 P.2d at 929 n.3 (citing both the Colorado and U.S. Constitutions).

257. *Id.* at 926.

258. *Id.* at 930.

259. *Id.* at 929 n.3.

260. Gunderson v. Municipality of Anchorage, 792 P.2d 673, 677 (Alaska 1990).

trial."[261]

Gunderson is open to several criticisms. First, *Gunderson* relied on the U.S. Supreme Court's decision in *Trombetta* when it stated that "the chances are extremely low that preserved samples would have been exculpatory" and "the high accuracy of the Intoxilyzer would mean that a preserved breath sample would simply confirm the original test result."[262] Yet the Alaska Supreme Court failed to note that this finding was based on the specific procedure at issue in *Trombetta*, *i.e.*, using two independent breath tests within an acceptable range of each other.[263]

The second criticism of the opinion is that offered by Justice Burke in his dissent to the *Gunderson* opinion.[264] The majority noted that while defendants had a right to an independent test, that right could be waived if the police offered them the possibility of a second test.[265] But as Justice Burke pointed out, a waiver is a knowing and voluntary relinquishment of a right.[266] It is difficult to see a decision as a fully-informed waiver when it is made in a split second, by a person in a police station, who has been drinking, is tired, scared, in handcuffs, knows nothing about alcohol testing, has had no chance to consult with counsel, and may suspect that police are trying to trick him.[267]

There are several other reasons why *Gunderson* should be reconsidered. First, the history of offering independent tests seems to support the dissent's case—although there are no published figures on what percentage of suspects requests an independent test, the vast majority end up waiving their rights.[268] The fact that so few suspects request a test suggests that suspects do not know what to make of it.

Another issue to keep in mind is that *Gunderson* was decided in 1990, before the enactment of the "working tolerance" statute. When *Gunderson* was decided, any known margin of error had to be applied in favor of the defendant. When the working tolerance is being credited to the defendant the need for a second test is less important. But when the margin of error is not applied in favor of the defendant, and the

261. *Id*.
262. *Id*. at 675 (quoting California v. Trombetta, 467 U.S. 479, 491 (1984)).
263. *Gunderson*, 792 P.2d at 675.
264. *Id*. at 678–79. (Burke, J., dissenting).
265. *Id*. at 677 ("[W]e do not believe that having to make a choice while in police custody so diminishes the value of the notice of the right to an independent test that it makes it an unreasonable opportunity to challenge the accuracy of the Intoximeter test result.").
266. *Id*. at 678 (Burke, J., dissenting).
267. *Id*. at 678-79 (Burke, J., dissenting).
268. In my own estimate, having handled more than one hundred DUI cases, I would guess the percentage of defendants who request an independent test is less than 10%.

defendant is within the acknowledged margin of error, then a second test is vital to an accurate determination of the breath alcohol level.

A third issue to consider is that a majority of states now require multiple breath tests, and generally use the lower of the two tests. States requiring two tests include Alabama,[269] Arizona,[270] California,[271] Connecticut,[272] Florida,[273] Georgia,[274] Idaho,[275] Maine,[276] Maryland,[277] Massachusetts,[278] Michigan,[279] Nevada,[280] New Mexico,[281] North Carolina,[282] North Dakota,[283] Oklahoma,[284] Pennsylvania,[285] Rhode

269. McDaniel v. State, 706 So.2d 1305, 1307 (Ala. Crim. App. 1997) (noting that Alabama Administrative Code at Rule 370-1-1-.01(4)(a) provides that "Two (2) samples of breath shall be tested. . . . Report the lower test result.")

270. *See* ARIZ. REV. STAT. ANN. § 28-1323(A)(3) (requiring duplicate breath tests within .020 alcohol concentration of each other).

271. *See* People v. Williams, 121 Cal. Rptr. 2d 854, 857 (Cal. 2002) (noting requirement for two tests within .02); CAL. CODE REGS. tit. 17 § 1221.4 (2013).

272. *See* REGS. CONN. STATE AGENCIES. § 14-227a-8b(c) (2013) ("Each time a sample is analyzed by a device or instrument other than a direct breath alcohol testing device or instrument, the analyst shall analyze duplicate samples.").

273. *See* FLA. ADMIN. CODE R. 11D-8.002(12) (2013) (requiring "a minimum of two samples of breath collected within 15 minutes of each other, analyzed using an approved breath test instrument, producing two results within 0.020 g/210L").

274. *See* GA. CODE ANN. § 40-6-392(a)(1)(B) (2012) (providing that "two sequential breath samples shall be requested for the testing" and "the readings shall not differ from each other by an alcohol concentration of greater than 0.020 grams and the lower of the two results shall be determinative for accusation and indictment purposes and administrative license suspension purposes").

275. Idaho procedure provides for two breath samples taken two minutes apart and within .02 of each other. *See* IDAHO STATE POLICE, Idaho Standard Operating Procedure, Breath Alcohol Testing, § 6.2 (Jan. 16, 2013) *available at* http://isp.idaho.gov (prescribing multiple tests).

276. *See* State v. Kennedy, 657 A.2d 773, 774 (Maine 1995) ("[R]egulations provide in part that a complete blood-alcohol test must consist of two separate breath samples, the results of which are within .02% of each other . . . .").

277. *See* Lowry v. State, 768 A.2d 688, 691 (Md. 2001) ("[A] test actually consists of two breath samples in order to compare the samples to ensure that the instrument is in proper working order.").

278. *See* 501 CODE MASS. REGS. § 2.14 (2013) (requiring two breath samples within +/- .020 of each other). The regulation further provides that "the lower of the two breath sample results shall be truncated to two decimal places and reported as the arrestee's BAC." *Id.*

279. *See* People v. Dinardo, 801 N.W.2d 73, 75 (Mich. Ct. App. 2010) (noting collection of two breath samples is standard procedure).

280. *See* NEV. REV. STAT. § 484C.200 (2011) (requiring two tests within .020 of each other).

281. *See* N.M. CODE R. § 7.33.2.15(B)(2) (2011) (requiring a good faith effort to collect at least two breath samples).

282. *See* N.C. GEN. STAT. § 20–139.1(b3) (2011) (requiring testing of duplicate, sequential samples).

283. *See* Koenig v. N.D. Dep't of Trans., 696 N.W.2d 534, 535 (N.D. 2005) (noting the requirement for duplicate breath samples).

284. *See* Childs v. State, Dep't of Pub. Safety, 988 P.2d 898, 899 (Okla. 1999)

Island,[286] Texas,[287] Washington,[288] and Wisconsin.[289] New Jersey and Minnesota have gone so far as to require four separate and independent breath test results.[290] Other states have administered multiple breath tests: Arkansas,[291] Mississippi,[292] New York,[293] and Wyoming.[294] While many states have adopted these measures by statute or regulation, the New Hampshire Supreme Court recently held that due process required the state to collect and preserve a second breath sample when the state collects a single breath sample.[295]

Vermont has a provision that a suspect must be offered a second breath test and may "elect to have a second [breath] test administered immediately after receiving the results of the first test."[296] In *State v. Lowe*,[297] the defendant's first sample registered .083 and the second registered .079. A second breath test may be more valuable to a defendant than a blood test; for example, if a suspect's blood test registers .070 thirty minutes later, the trier of fact might conclude that the difference is due to elimination of alcohol and still find the

("In accordance with the Board's regulations, a suspect driver's breath is tested twice within a short period.").

285. *See* 67 PA. CODE § 77.24(b) (2012) (requiring two breath samples within .020).

286. *See* State v. Ensey, 881 A.2d 81, 85 (R.I. 2005) (describing the "two phase" process by which two breath samples are collected).

287. *See* Texas Breath Alcohol Testing Program Manual, 52–53 (Randall Beatty & Mac Cowen eds., 2001), *available at* www.txdps.state.tx.us/CrimeLaboratory/documents/BATOperatorManual.pdf (providing for duplicate testing); TEXAS TRANSPORTATION CODE § 724.012(a) (providing that an arresting officer may require a suspect to submit "one or more" breath samples).

288. WASH. REV. CODE § 46.61.506(4)(a)(vi) (2012).

289. WISC. ADMIN. CODE § TRANS 311.06(3)(d) (requiring "[c]onsecutive breath alcohol analysis results in a test sequence within .02").

290. State v. Chun, 943 A.2d 114, 131 (N.J. 2008); State v. Ards, 816 N.W.2d 679, 681 (Minn. Ct. App. 2012).

291. *See* Hayden v. State, 286 S.W.3d 177, 179 (Ark. Ct. App. 2008) (noting two tests).

292. *See* Parkman v. State, No. 2011-KM-00723-COA, 2012 Miss. App. LEXIS 364, at *3 (Miss. Ct. App. June 19, 2012) (noting defendant submitted two samples two minutes apart with the lower of the two used for prosecution).

293. People v. Mertz, 497 N.E.2d 657, 658 (N.Y. 1986). In New York some localities appear to use duplicate testing.

294. *See* Peterson v. Wydot, 158 P.3d 706, 708 (Wyo. 2007) (noting the defendant took two tests); Hwang v. State, Dep't of Transp., 247 P.3d 861, 863 (Wyo. 2011) (noting two tests).

295. In re Opinion of Justices (Eliminating Requirement for Additional Breath Samples), 2 A.3d 1102, 1105 (N.H. 2010). *See also* Ex parte Mayo, 652 So.2d 201, 205–06 (Ala. 1994) (holding that due process required the state to adopt measures ensuring the accuracy of testing and stating that "administering two breath tests" was one possible way of accomplishing that goal).

296. 23 VT. STAT. ANN. § 1202(d)(5) (2012).

297. 740 A.2d 348, 350 (Vt. 1999).

defendant guilty.

Multiple test results were less common twenty years ago when *Gunderson* was decided,[298] but the prevalence of multiple testing around the country and the widespread recognition that this is a more accurate method argues that double testing has become a *de facto* due process protection in a wide variety of jurisdictions. Numerous experts and safety organizations, such as the National Safety Council, have called for duplicate testing to ensure accuracy.[299]

The final change calling for a reconsideration of *Gunderson* is the *Bush v. Gore* case, discussed above. As superseding precedent calls *Gunderson* into doubt, the Court should consider the "working tolerance" statute in light of *Bush v. Gore*.[300]

CONCLUSION

Given the fundamental right to introduce exculpatory evidence, Alaska's "working tolerance" statute is hard to justify and is outside the mainstream. The issue of whether due process requires that the margin of error be applied in favor of a defendant is a closer call. Given the older Alaska precedents which held that this was a requirement of due process, and given the decision in *Bush v. Gore*,[301] there is a strong argument that this margin must be assumed to benefit the defendant. What is certain is that the Alaska courts have made a confusing tangle out of this issue since *Mangiapane.* The Alaska Supreme Court has stated that statutes restricting defendants' right to present a defense must be "closely scrutinized."[302] It is past time the Supreme Court reexamined this issue and clarified the right to present exculpatory evidence in DUI cases.

Finally, while this article has been phrased chiefly in terms of the defendant's right to present exculpatory evidence, a second breath test may give the prosecution a stronger case. A person with an initial test result of say, .081, may give a second result beneath .080, thus potentially avoiding convicting an innocent person. But the second

298. While some states such as California have long had duplicate tests, one treatise from 1995 indicates that duplicate testing was the exception in the early 1990s. EDWARD L. FIANDACH, HANDLING DRUNK DRIVING CASES § 13.20 (2nd ed. 1995) ("[A]ctual breath tests are rarely given in duplicate . . . .").

299. *See id.* ("The National Safety Council has endorsed the practice, writing, 'The test result reported in the case of breath analysis should be the mean of the results of at least two separately collected breath specimens providing the results agree with 10 percent of the mean value.'").

300. 531 U.S. 98 (2000).

301. *Id.*

302. State v. Murtagh, 169 P.3d 602, 609 (Alaska 2007).

result may give an even higher result, in which case the state will have a much stronger case.[303] A second test may be exculpatory or it may be inculpatory, but in either case the jury will have better information upon which to base a verdict, the defendant can be afforded due process, and the adversarial system can be confident in a just result.

303. Jeanne Swartz, former head of Alaska's Breath Alcohol Testing Program, wrote in 2004: "Many states require defendants to provide two breath samples within 0.020 of each other. It is very unlikely that an instrument would record two samples within 0.020 or each other if the operator or instrument conducted the test properly." JEANE SWARTZ, BREATH TESTING FOR PROSECUTORS, 14 (APRI, 2004) *available at* http//www.ndaa.org/pdf/breath_testing_for_prosecutors.pdf.