North Dakota Law Review

Volume 59 | Number 3 Article 3

1983

Toward a Coordinated Judicial View of the Accuracy of Breath Testing Devices

Donald H. Nichols

TOWARD A COORDINATED JUDICIAL VIEW OF THE ACCURACY OF BREATH TESTING DEVICES

DONALD H. NICHOLS*

I. INTRODUCTION

Courts have used three primary methods to insure the accuracy of breath testing devices.[1] They have examined these methods independently. This Article, however, advocates judicial examination of these methods in coordination with each other.

---

*J. D., University of Minnesota; Editor-in-Chief of the *Drinking/Driving Law Letter*; author of the books *Drinking Driver in Minnesota* and *Driving While Intoxicated.*

1. *See, e.g.*, Municipality of Anchorage v. Serrano, 649 P.2d 256, 258 (Alaska Ct. App. 1982) (prosecution must make reasonable efforts to preserve breath sample or to allow defendant to verify breath test results); People v. Hitch, 12 Cal. 3d 641, 654, 527 P.2d 361, 371, 117 Cal. Rptr. 9, 19 (1974) (State must save test ampoules); State v. Fuchs, 219 N.W.2d 842, 847 (N.D. 1976) (State must comply with the statutory foundation requirements for the admission of breath alcohol test results).

Understanding the operation of a breathalyzer is essential to evaluating the courts' approaches in determining the admissibility of test results. The Washington Court of Appeals has succinctly described the operation of a breathalyzer as follows:

> The breathalyzer is a machine designed to measure the amount of alcohol in the alveolar breath and is based upon the principle that the ratio between the amount of alcohol in the blood and the amount in the alveolar breath from the lungs is a constant 2100 to 1. In other words, the machine analyzes a sample of breath to determine the alcoholic content of the blood. . . .
>
> To operate the machine, the subject blows into the machine through a mouthpiece until he has emptied his lungs in one breath. The machine is so designed that it traps only the last 52½ cubic centimeters of air that has been blown into it. This air is then forced, by weight of a piston, through a test ampoule containing a solution of sulphuric acid and potassium dichromate. This test solution has a yellow hue to it. As the breath sample bubbles through the test solution, the sulphuric acid extracts the alcohol, if any, therefrom, and the potassium dichromate then changes the alcohol to acetic acid, thereby causing the solution to lose some of its original yellow color. The greater the alcoholic content of the breath sample, the greater will be the loss of color of the test solution. By causing a light to pass through the test ampoule and through a

One method of establishing the accuracy of breath alcohol tests requires the state to lay a foundation for admitting the test results.[2] The purpose of laying an adequate foundation is to demonstrate that the tests have been conducted in a reliable and scientific manner.[3] The second method of insuring accuracy allows the defendant to discover the circumstances, the chemicals used, and other relevant factors surrounding the test.[4] The third method requires a second test.[5] One of the important purposes of the second test is to insure the accuracy of the first test.[6]

Courts should examine and coordinate these three methods. For example, if a court required a very stringent foundation, then perhaps it would not need to employ the second and third methods. On the other hand, if a court only required a cursory foundation, then it should seek the accuracy afforded by the second and third methods. An examination of these approaches reveals the strengths and weaknesses of each approach.

II. FOUNDATION APPROACH

A. RECENT APPROACHES TO FOUNDATION

The state may establish the accuracy of breath testing devices by laying a proper foundation.[7] Generally, the state must establish that the breath testing device was operated according to the manufacturer's recommendations and according to the rules and

> standard ampoule containing the same chemical solution as the test ampoule (but through which no breath sample has passed), the amount of the change in color can be measured by photoelectric cells which are connected to a galvanometer. By balancing the galvanometer, a reading can be obtained from a gauge which has been calibrated in terms of the percentage of alcohol in the blood.

State v. Baker, 56 Wash. 2d 846, ____, 355 P.2d 806, 809 (Ct. App. 1960).

2. *See, e.g.,* State v. Ghylin, 248 N.W.2d 825, 830-31 (N.D. 1976) (breath alcohol test results were admissible because the State laid a proper foundation).

3. *See, e.g.,* State v. Goetz, 374 So. 2d 1219, 1220 (La. 1981). In *Goetz* the Louisiana Supreme Court demanded that the State prove the reliability of the testing procedure because "an intoxication test conducted with chemicals of inferior quality could bring to bear a practically conclusive presumption of guilt against an innocent person." *Id.*

4. *See, e.g.,* State v. Booth, 98 Wis. 2d 20, 33, 295 N.W.2d 194, 199 (Ct. App. 1980) ("analysis of used test ampoule would either corroborate or refute the original test results).

5. *See, e.g.,* Municipality of Anchorage v. Serrano, 649 P.2d 256, 258 (Alaska Ct. App. 1982) (prosecution must make reasonable efforts to preserve breath sample or to allow defendant to verify breath test results).

6. *Id.* at 259.

7. *See, e.g.,* State v. Baker, 56 Wash. 2d 846, 852, 355 P.2d 806, 809-10 (Ct. App. 1960). The Washington Court of Appeals in *Baker* described the foundation requirements as follows:

> [F]our basic requirements must be shown by the state before the results of such tests may be admitted in evidence, to wit: (1) That the machine was properly checked and in proper working order at the time of conducting the test; (2) that the chemicals employed were of the correct kind and compounded in the proper proportions; (3) that the subject had nothing in his mouth at the time of the test and that he had taken no food or drink within fifteen minutes prior to taking the test; (4) that the test be given by

regulations promulgated by the authorities within the state.[8] The authority may be the department of health[9] or similar agencies.[10] This approach assumes that the manufacturer and the authorities responsible for promulgating rules and regulations are sufficiently qualified to insure the accuracy of the test.[11]

When examining a foundation, courts, however, are confronted with the practical problems of requiring a foundation that demonstrates more than the simple operational requirements of a testing device.[12] Typically, the state requires that operators of testing devices receive training.[13] Operators usually only understand the operation of the device and not the underlying theories of the device.[14] An understanding of the underlying theories frequently requires a broad knowledge of toxicology,

---

a qualified operator and in the proper manner.

Id. See generally Case Comment, *State v. Gerber — Foundation Requirements for Breathalyzer Test Results,* 14 CREIGHTON L. REV. 334, 338-40 (1980) (establishing the accuracy of testing is essential for a fair trial).

8. *See, e.g.,* State v. Gerber, 206 Neb. 75, 87-88, 291 N.W.2d 403, 410 (1980). The Supreme Court of Nebraska insured accuracy by requiring the State to prove four facts: at the time of the arrest the machine was working properly; the operator was qualified and possessed the statutorily required permit; the operator complied with the testing requirements of the Nebraska Department of Health; and the operator met other statutory requirements. *Id.* at 90-91, 291 N.W.2d at 411-12.

9. Estes v. State, 358 So. 2d 1050, 1056 (Ala. Crim. App. 1978) (State Board of Health approved both the breathalyzer test and its operator).

10. *See, e.g.,* N.D. CENT. CODE § 39-20-07(5)(c) (1980). This section provides for the admissibility of chemical analyses of blood, breath, saliva, or urine when the State demonstrates that the tests complied with the methods or devices approved by the state toxicologist. *Id.* Section 39-20-07(5) states in part:

> The results of . . . chemical analysis shall be received in evidence when it is shown that the test was fairly administered, provided that a test of a person's blood, urine, breath, or other bodily substance and the result thereof is further shown to have been performed according to methods or with devices approved by the state toxicologist, or both, and by an individual possessing a certificate of qualification to administer the test issued by the state toxicologist . . . . Upon approval of the methods or devices, or both, and techniques required to perform such tests and the persons qualified to administer them, the state toxicologist shall prepare and file written record of such approval with the clerk of the district court in each county within the state which shall include:
>
> . . . .
>
> c. The operational check list and forms prescribing the methods and techniques currently approved by the state toxicologist . . . .

Id. (amended by S. 2372, 48th Leg., ____ N.D. Sess. Laws ____ (effective July 1, 1983)).

11. *See generally* Bass, Gesser & Mount, *Notes and Comments: Scientific Statistical Methodology and the Doctrine of "Reasonable Doubt" in Criminal Law,* 5 DALHOUSIE L. J. 350, 362 (1979) (With respect to the use of breathalyzers, "there is the distinct possibility that judges and lawyers have committed the very simple error of confusing probabilities with possibilities.").

12. *See generally* Comment, *Breath Alcohol Analysis: Can It Withstand Modern Scientific Scrutiny?,* 5 N. KY. L. REV. 207, 216 (1978). The author questions the reliability of the breath samples taken by police officers in police stations. *Id.* If officers fail to meet the simple operational requirements, then a more stringent foundation would be necessary.

13. *See, e.g.,* City of Aurora v. Kepley, 60 Ohio St. 2d 73, ____, 397 N.E.2d 400, 402 (1979) (Even though the Director of Health "promulgates a rule that a Breathalyzer test administered by one holding an operator's permit is to be performed under the general direction of a senior operator, the senior operator is not required to be physically present when the operator administers the test.").

14. *See* State v. Entze, 272 N.W.2d 292, 294-95 (N.D. 1978) (operator conceded that he did not know much about the breathalyzer except how to operate it). *See also* State v. Jones, 316 So. 2d 100,

pharmacology, chemistry, electronics, physiology, and other areas of science and medicine,[15] while the training of the operators normally is completed in a relatively short period of time.[16] Thus, operators generally can only testify that the device was operated in accordance with a checklist promulgated by the manufacturer in conjunction with the local governmental agency responsible for testing within the state.[17]

If courts required expert testimony in addition to evidence of the proper operation of the device, they would confront the practical problems associated with requiring an expert in every case.[18] Recent decisions have been reluctant to require testimony beyond the mere operation of the breath testing device.[19]

Requiring an expert would entail either additional extensive training of the operator or the presence of an expert at the trial. Expert testimony would increase the costs of litigation, perhaps substantially. A recent case that typifies judicial response to this problem is *State v. Powell.*[20] In *Powell* the Missouri Court of Appeals held that breath test results were properly admitted even without testimony from the officer or an expert witness that the machine was operating properly.[21] The peace officer was not allowed to testify that the machine was operating properly.[22] He was, however, over the objection of defense counsel, allowed to testify that there were no physical indications of malfunction of the

101-02 (La. 1975). In *Jones* the Supreme Court of Louisiana recognized that the best evidence of the operator's qualifications was the machine operator's permit, not the operator's testimony, because the impermanent character of the permit signifies a need for new knowledge about testing procedures. *Id.*

15. *See, e.g.,* Watts, *Some Observations on Police-Administered Tests for Intoxication,* 45 N.C.L. REV. 34, 80-81 (1966). The relatively inexperienced breathalyzer operator cannot usually testify about the numerous scientific theories related to the proper functioning of a breathalyzer. *Id.* For example, the operator could not explain Charles Law's formula on the expansion of gases, the fact that a reagent oxidizes a breath sample when the breath enters the ampoule, and the relationship of Beer-Lambert Law and the inverse-square law to the principles of the photoelectric system. *See id. See generally* Mason & Dubowski, *Breath-Alcohol Analysis: Uses, Methods and Some Forensic Problems — Review and Opinion,* 21 J. FORENSIC SCI. 9, 30 (1976). Scientists Mason and Dubowski state that law enforcement personnel need scientific competency if regulations require the use of instruments accepted by the scientific community. *Id.*

16. *See* State v. Johnson, 42 N.J. 146, ____, 199 A.2d 809, 823 (1964) (police officer had completed a forty hour course for drunkometer operators).

17. *See, e.g.,* State v. Entze, 272 N.W.2d 292, 294 (N.D. 1978) (certified operator testified that he operated the breathalyzer according to a checklist and that he did not know the principles underlying the operation of the machine).

18. *See, e.g.,* Watts, *supra* note 15, at 78. Watts notes that courts are accustomed to having experts testify and have "come to expect them in every case." *Id.* He adds, however, that scientific methods can remove the requirement of a scientist's expert testimony. *Id.* at 82-83. The legislature may presume the validity of the breath tests, the court may take judicial notice of reliability, and the state may prove at trial that correct operation of the machine by a trained operator signifies scientific validity. *Id.*

19. *See, e.g.,* State v. Powell, 618 S.W.2d 47, 48 (Mo. Ct. App. 1981) (defendant unsuccessfully argued that the trooper who administered the test had testified only to his opinion regarding the proper functioning of the machine).

20. 618 S.W.2d 47 (Mo. Ct. App. 1981).

21. State v. Powell, 618 S.W.2d 47, 49 (Mo. Ct. App. 1981).

22. *Id.* at 48.

breathalyzer.[23] The court reasoned that even without the testimony of the officer the breathalyzer test results would have been admissible.[24]

Some courts have taken a further step, allowing the state to introduce the results of the breath testing device even though there were certain defects in the testing procedure.[25] In *State Department of Public Safety v. Habisch*[26] the Minnesota Supreme Court sustained a license revocation under circumstances that indicated that the simulator solution was potentially defective.[27] The simulator solution is a known solution that is tested by the breath testing device to verify the device's accuracy.[28] At trial it was established that the operator had complied with the breathalyzer checklist by conducting a simulator test following the defendant's test.[29] It was also established that the simulator solution generally was changed every thirty days because of its tendency to deteriorate over time.[30] Despite evidence that the simulator solution used in the test was more than two months old, the Minnesota Supreme Court ruled that sufficient foundation had been laid because the simulator solution test results were within the expected range.[31] Similar cases exist in other jurisdictions.[32]

One recent case, however, tends to indicate that the foundation requirement is not dead. In *State v. Krause*[33] the

23. *Id.*

24. *Id.* at 49.

25. *See* State v. Puhr, 316 N.W.2d 75, 77-78 (N.D. 1982). In *Puhr* the North Dakota Supreme Court stated that the trial court erred in admitting the breathalyzer test results because the State did not comply with the methods approved by the state toxicologist. *Id.* at 77. The State failed to prove that the defendant did not have anything to eat, drink, or smoke within 20 minutes before the test. *Id.* The court found, however, that the expert testimony of the state toxicologist cured the foundational defect. *Id.* at 77-78. The toxicologist testified that a test conducted 10 to 12 minutes after the defendant had something to eat, drink, or smoke would nonetheless be valid. *Id.* at 78.

In addition, the court implied that neither expert testimony nor a proper foundation is required to affirm a finding that a defendant is guilty of driving a motor vehicle while under the influence of intoxicating liquor. *Id.* at 77-78. *See* N.D. CENT. CODE § 39-20-07 (1980) (a blood alcohol reading of 0.10% gives rise to the presumption of legal intoxication). Section 39-20-07 has been amended to provide that a blood alcohol reading of 0.10% is legal intoxication rather than a presumption of intoxication. S. 2373, 48th Leg., ____ N.D. Sess. Laws ____ (effective July 1, 1983). The court maintained that the arresting officers' testimony about the defendant's inability to pass field sobriety tests constituted evidence that raised a question of fact for the jury. 316 N.W.2d at 78. The court, therefore, held that the officers' testimony properly defeated the defendant's motion for an acquittal. *Id.* at 79.

26. 313 N.W.2d 13 (Minn. 1981).

27. State Dep't of Pub. Safety v. Habisch, 313 N.W.2d 13, 16 (Minn. 1981).

28. *See id.* at 14.

29. *Id.*

30. *Id.* at 15.

31. *Id.* at 16.

32. *See, e.g.*, State v. Liuafi, 623 P.2d 1271 (Hawaii Ct. App. 1981); State v. Luckey, 304 N.C. App. 731, 282 S.E.2d 490 (Ct. App. 1981). In *Liuafi* the Hawaii Court of Appeals stated that the police officer's testimony that the simulator test he performed revealed the expected reading established prima facie the proper operation of the breathalyzer and the use of the correct chemicals. 623 P.2d at 1279-80. Similarly, in *Luckey* the North Carolina Court of Appeals held that the State was not required to introduce expert testimony concerning the breathalyzer test. 304 N.C. App. at ____, 282 S.E.2d at 491.

33. 405 So. 2d 832 (La. 1981).

Supreme Court of Louisiana ruled that the State could not avail itself of the statutory presumption of a defendant's intoxication arising from a chemical analysis of his blood through a Photo-Electric Intoximeter (PEI)[34] unless it has properly established the ground work for the presumed reliability of the test result.[35] To do this the State must fulfill two requirements. First, the State must demonstrate that it has officially promulgated detailed methods, procedures, and techniques that insure the integrity and reliability of chemical tests, including the quality of the chemicals used.[36] The State must also prove that it has strictly complied with the officially promulgated methods, procedures, and techniques in the chemical analysis offered as evidence at trial.[37] The court cited its earlier decision in *State v. Goetz*[38] for the following proposition:

> "Because an intoxication test conducted with chemicals of inferior quality could bring to bear a practically conclusive presumption of guilt against an innocent person, it is essential that the officially promulgated methods, procedures and techniques include a thorough analysis of the chemicals by a chemist under laboratory conditions to insure that they are of proper composition, strength and volume at the time a test is conducted. . . ."[39]

Under the rules then promulgated, the Louisiana Department of Public Safety had adopted certain regulations that required a maintenance check of all PEI machines at least once every four months accompanied by a spot check of the lot of ampoules used with each machine.[40]

In recognizing the purpose of the regulations, the court reasoned that the particular circumstances under which this test was taken did not sufficiently meet the requirements to give rise to the statutory presumption.[41] The court did not agree with the trial

34. A Photo-Electric Intoximeter (PEI) "is a semi-automatic console breath analyzer that, like the Breathalyzer, captures a measured quantity of alveolar air and determines the amount of alcohol in the breath sample by a photo-electric comparison technique utilizing ampoules of potassium dichromate in sulfuric acid." Watts, *supra* note 15, at 69. The advantage of using a PEI is that the machine automatically retains an additional sample for a chemist's use in examining the instrument or its operation. *Id.*

35. State v. Krause, 405 So. 2d 832, 834-35 (La. 1981).

36. *Id.* at 834.

37. *Id.*

38. 374 So. 2d 1219 (La. 1979).

39. 405 So. 2d at 834 (quoting State v. Goetz, 374 So. 2d 1219, 1220 (La. 1979)).

40. 405 So. 2d at 834.

41. *Id.* at 835.

court's ruling that a manufacturer's certificate prima facie establishes the required chemical quality.[42] The court therefore found that the trial court erred in admitting the PEI results.[43]

B. PROBLEMS WITH THE FOUNDATION APPROACH

Recent decisions tend to indicate that courts presume that if the operator conformed to testing procedures, the testing device operated properly.[44] The option for the defense at that point is to hire its own expert. The defense, however, may not have the resources to hire an expert witness to challenge the accuracy of the breath testing device. The State's only requirement, therefore, seems to be that it establish a prima facie case. On the other hand, requiring the State to produce expert testimony probably would have substantial economic consequences. Furthermore, establishing an adequate foundation through expert testimony might not even insure accuracy because each breath testing device has an error factor.[45]

The error factor was considered recently as it related to a Breathalyzer Model 1000.[46] The treatment of the error factor also has been discussed in several recent cases.[47] For example, in *State v. Boehmer*[48] the Hawaii Court of Appeals recognized in a consolidated action that the breathalyzer tests had an error factor of 0.0165%.[49] At defendant Gogo's trial, the defense counsel and the prosecutor stipulated that the error factor was exactly 0.0165%; at defendant Boehmer's trial a criminalist with the Honolulu Police Department testified that the margin of error was also 0.0165%.[50] The breathalyzer test results were 0.11% and 0.10% for defendants Boehmer and Gogo, respectively.[51]

In both cases the trial courts ruled that even with the stipulated error factor, the readings were sufficient to give rise to the presumption that the defendant was driving while under the

42. *Id.*

43. *Id.*

44. *See, e.g.*, State v. Entze, 272 N.W.2d 292 (N.D. 1978) (for test results to be admissible, the State must show that the operator possessed a certificate qualifying him to administer the test).

45. *See, e.g.*, State v. Boehmer, 613 P.2d 916, 918 (Hawaii Ct. App. 1980) (breathalyzer had an error factor of 0.0165%).

46. *See infra* text accompanying notes 64-71.

47. *See, e.g.*, State v. Bjornsen, 201 Neb. 709, ____, 271 N.W.2d 839, 840 (1978) (possible inherent testing error of 0.005% suggested that the State failed to prove the statutory presumption of 0.10% because the defendant's test result was 0.10%).

48. 613 P.2d 916 (Hawaii Ct. App. 1980).

49. State v. Boehmer, 613 P.2d 916, 918 (Hawaii Ct. App. 1980). The Hawaii Court of Appeals consolidated on appeal the DWI cases of defendant Boehmer and defendant Gogo. *Id.* at 917.

50. *Id.* at 917.

51. *Id.*

influence of an intoxicating liquor at the time of the alleged violation.[52] That presumption was based upon a statute[53] that gives rise to the presumption if there was a reading of 0.10% or more by weight of alcohol in the defendant's blood at the time of the test.[54]

The Hawaii Court of Appeals rejected the trial courts' findings and reversed the convictions.[55] The court recognized the heavy burden of proof that the prosecution has in a criminal case and determined that the prosecution failed to establish a critical fact in the cases before it.[56] The court stated, "The margin of error of the breathalyzer test means that on any given breathalyzer test a defendant's actual blood alcohol content could be 0.0165% more or less than the reading shown by the breathalyzer test."[57] The court therefore perceived that the inherent margin of error could put both defendants' actual blood alcohol levels below the statutory level that gives rise to the presumption of legal intoxication.[58]

In conclusion, the Hawaii court cited with approval[59] the Nebraska Supreme Court's decision in *State v. Bjornsen*.[60] In *Bjornsen* the Nebraska Supreme Court reached the same decision on similar facts.[61] The Nebraska Supreme Court reasoned that for the statutory presumption to arise, the results of such a test, when taken together with its tolerance for error, must equal or exceed the statutory level.[62]

An additional problem with the foundation approach is that manufacturers and governmental agencies may overlook or ignore factors that affect the accuracy of the test results.[63] In 1981 the Dade County Police Department in Miami, Florida, noticed that the Breathalyzer Model 1000 gave an unusually high reading when the testing occurred during a radio transmission.[64] The manufacturer of the Breathalyzer Model 1000, Smith & Wesson,

52. *Id.* at 917-18.

53. *See* HAWAII REV. STAT. § 291-5 (1976) (statutory presumption of legal intoxication arises from a blood alcohol reading of 0.10%).

54. 613 P.2d at 918.

55. *Id.* at 919.

56. *Id.* at 918.

57. *Id.*

58. *Id.*

59. *Id.* at 918-19 (citing State v. Bjornsen, 201 Neb. 709, ____, 271 N.W.2d 839, 840 (1978), for the proposition that test results must equal or exceed the statutory presumption plus the inherent testing error).

60. 201 Neb. 709, 271 N.W.2d 839 (1978).

61. State v. Bjornsen, 201 Neb. 709, ____, 271 N.W.2d 839, 840 (1978). In *Bjornsen* the defendant registered a blood alcohol content of 0.10%. *Id.* On cross-examination a chemist admitted that the blood alcohol test results are accurate within 0.005%. *Id.*

62. *Id.* at ____, 271 N.W.2d at 840.

63. *See* Lauter & Simon, *Breathalyzer Defect Jeopardizes Many Drunk Driving Convictions*, Nat'l L. J., June 7, 1982, at 6, col. 2 (manufacturer of testing devices did not immediately disclose a known defect).

64. *Id.*

tested the Model 1000 and determined that the device was subject to radio frequency interference (RFI).[65]

The defective Breathalyzer Model 1000 acted as a receiver, picking up signals from the transmitter and giving an erroneous reading.[66] The manufacturer discovered the problem in September 1981, but did not notify the device's users until January 1982.[67] After determining that a modification of the Model 1000 could be made, Smith & Wesson issued a customer advisory.[68] Presumably during the interim, many courts relied on erroneous results that met the foundation approach requirements for the admission of breath test results.

Even after it became aware of the problem with the Model 1000, Smith & Wesson did not test its other models.[69] Smith & Wesson manufactures other devices, including the popular Models 900 and 900-A, that are used throughout the United States and in other parts of the world.[70] Subsequently it was discovered that Models 900 and 900-A are also susceptible to RFI.[71] State agencies also overlooked the problem and did not begin testing until late 1982.[72] A court's reliance on the manufacturer's procedures and on the rules and regulations of the states to insure the accurary of breath testing devices is, therefore, arguably misplaced. Relying merely on an adequate foundation for admitting test results may not adequately protect a defendant from being erroneously convicted. A court should therefore consider supplementing, that is coordinating, its foundation requirement with another method. Discovery is a possible supplementary safeguard.

III. DISCOVERY APPROACH

The discovery approach affords a defendant driver access to the chemical used, the testing device, and other factors surrounding the test.[73] A defendant seeks to discover whether the breath testing device performed accurately.[74] The defendant must prove four

65. *Id. See also* Lauter, *Breathalyzer's Maker Discloses New Problem,* Nat'l L. J., Nov. 8, 1982, at 5, col. 1 (microwave ovens, citizen-band radios, and police radios can interfere with Model 900 and 900-A breathalyzers).

66. Lauter & Simon, *Breathalyzer Defect Jeopardizes Many Drunk Driving Convictions,* Nat'l L.J., June 7, 1982, at 6, col. 2.

67. *Id.*

68. *Id.*

69. *Id.*

70. Lauter, *Breathalyzer's Maker Discloses New Problem,* Nat'l L.J., Nov. 8, 1982, at 5, col. 1.

71. *Id.*

72. *See id.*

73. *See, e.g.,* N.D. CENT. CODE § 39-20-02 (1979) (State shall provide upon request full information about the performance of the blood alcohol test).

74. *See, e.g.,* People v. Hitch, 12 Cal. 3d 641, 645, 527 P.2d 361, 364, 117 Cal. Rptr. 9, 12 (1974) (defendant claimed that destruction of the test ampoule deprived him of his constitutional right to due process because he could not determine the accuracy of the breath testing device).

elements to have his right to discovery protected by the due process clause of the Constitution.[75]

The basic theory of criminal discovery arises from the United States Supreme Court case of *Brady v. Maryland.*[76] In *Brady* the Court held that prosecutorial suppression of evidence requested by and favorable to a defendant violates due process.[77] One purpose of discovery is to preclude the state from denying a defendant access to favorable evidence.[78] Several courts have recently applied the *Brady* discovery principles to a drinking driver's attempt to discover information about testing procedures.[79]

The decisions of the Wisconsin Court of Appeals and the Wisconsin Supreme Court in *State v. Humphrey*[80] demonstrate the difficult task of determining the scope of discovery.[81] In *State v. Humphrey* the Wisconsin Court of Appeals relied on an earlier decision[82] that granted the defendant the right to obtain and independently test breathalyzer ampoules.[83] In *Humphrey* the defendant was charged with homicide by intoxicated use of a motor vehicle.[84] The defendant, approximately four months after the administration of a breathalyzer test, made a general discovery request seeking all exculpatory physical evidence in the possession

75. *See* Crothers, *The Constitutional Dimension of Discovery in DWI Cases,* 59 N.D.L. REV. ____, ____ (1983). Crothers states that due process should protect a defendant's right to discovery if he can establish that he requested specific evidence; that the specific evidence is, or has been in the prosecutor's possession; that the requested evidence is favorable; and that the evidence is material to his guilt or punishment. *Id.*

76. 373 U.S. 83 (1963).

77. Brady v. Maryland, 373 U.S. 83, 87 (1963). The Court stated that such suppression "violates due process where the evidence is material either to guilt or to punishment, irrespective of the good faith or bad faith of the prosecution." *Id. See* U.S. CONST. amend. XIV, § 1 ("No state shall. . . deprive any person of life, liberty, or property, without due process of law.").

78. *See, e.g.,* People v. Hitch, 12 Cal. 3d at 649, 527 P.2d at 367, 117 Cal. Rptr. at 15 (State must disclose the nature of the test and reference ampoule if there is "a reasonable possibility that they constitute evidence on the issue of guilt or innocence").

79. *See, e.g.,* State v. Booth, 98 Wis. 2d 20, 20, 295 N.W.2d 194, 195 (Ct. App. 1980) (court suppressed test results because the State failed to preserve the breathalyzer ampoules).

80. 104 Wis. 2d 97, 310 N.W.2d 641 (Ct. App. 1981), *rev'd,* 107 Wis. 2d 107, 318 N.W.2d 386 (1982).

81. *See, e.g.,* State v. Humphrey, 107 Wis. 2d 107, 116, 318 N.W.2d 386, 390 (1982) (Wisconsin Supreme Court held that the court of appeals erred in finding that "a supression motion serves as an amendment to a discovery motion.").

82. *See* State v. Booth, 98 Wis. 2d 20, 295 N.W.2d 194 (Ct. App. 1980). In *Booth* a breathalyzer test indicated that the defendant's blood alcohol level was 0.16%. *Id.* at 21, 295 N.W.2d at 195. The defendant filed a request for discovery specifically seeking the test ampoule to determine whether it was capable of producing an accurate breathalyzer reading at the time of the test. *Id.* at 24, 295 N.W.2d at 197. The defendant then moved to suppress the results of the test because the ampoule had been destroyed immediately following administration of the test. *Id.* at 21, 295 N.W.2d at 195. The trial court suppressed the breathalyzer test results, and the State appealed. *Id.* The State contended that routine destruction of the ampoules by law enforcement officers did not infringe upon the defendant's constitutional rights. *Id.* at 25, 295 N.W.2d at 197. The court of appeals held that the ampoule constituted material evidence protected by a defendant's constitutional right to due process of law. *Id.* at 24, 295 N.W.2d at 197. *See* U.S. CONST. amend. XIV, § 1.

83. State v. Humphrey, 104 Wis. 2d 97, 102-05, 310 N.W.2d 641, 644-45 (Ct. App. 1981) (citing *State v. Booth,* the court of appeals stated that due process protects a defendant's right to test independently the ampoules), *rev'd,* 107 Wis. 2d 107, 318 N.W.2d 386 (1982). *See* State v. Booth, 98 Wis. 2d 20, 295 N.W.2d 194 (Ct. App. 1980).

84. 104 Wis. 2d at 99, 310 N.W.2d at 642. A breathalyzer test produced a blood alcohol reading of 0.23%. *Id.* at 99, 310 N.W.2d at 643.

of the State.[85] When the State failed to produce the breathalyzer ampoules, the defendant moved to suppress the test results, contending that the State had failed to comply with his discovery demand.[86] The trial court denied the motion, and the defendant was convicted.[87]

The court of appeals in *Humphrey* interpreted its earlier decision in *State v. Booth.*[88] It held that the case should be reversed and remanded to the trial court to determine "whether the State can establish that the chemical composition of the ampoule has changed over time so that 'analysis of a test ampoule made by a defense expert would be futile and unavailing.' "[89]

In *Booth* the court of appeals, in affirming the order of the trial court, suppressed evidence of the test results because the State failed to produce the breathalyzer ampoules.[90] The trial court had made findings of fact about the nature and retesting of ampoules that supported the defendant's right to discovery.[91] The court of appeals concluded that the evidence supported the trial court's findings of fact.[92]

In *Humphrey* the court of appeals explicitly rejected the State's argument that *Booth* implicitly placed a thirty-day time limit on a discovery request by the defense.[93] In addition, the court of appeals

85. *Id.* at 99-100, 310 N.W.2d at 643.

86. *Id.* at 99-100, 310 N.W.2d at 642-43.

87. *Id.* at 99, 310 N.W.2d at 643.

88. 98 Wis. 2d 20, 295 N.W.2d 194 (Ct. App. 1980).

89. 104 Wis. 2d at 100, 310 N.W.2d at 643 (quoting State v. Raduege, 100 Wis. 2d 27, 32, 301 N.W.2d 259, 261-62 (Ct. App. 1980)). The *Humphrey* court stated that the prosecution has a duty to disclose to the defendant information that has been specifically requested. 104 Wis. 2d at 102, 310 N.W. 2d at 644. The *Humphrey* court further stated that when "no request or only a general request for exculpatory information has been made, the state's failure to disclose information is reversible error only when the evidence is so material that the defendant is denied a fair trial." *Id.* The court concluded that a defendant seeking the ampoule used in the breathalyzer examination must make a specific request for the test ampoule in order that the state may comply or attempt to rebut the alleged materiality of the ampoule. *Id.*

90. State v. Booth, 98 Wis. 2d 20, 20, 295 N.W.2d 194, 195 (Ct. App. 1980).

91. *Id.* at 22, 295 N.W.2d at 196. The trial court made the following findings of fact:

> (1) Retesting of an ampoule cannot recreate the evidentiary breathalyzer test results.
> (2) Capping a used ampoule is not technically difficult or costly.
> (3) The contents of a capped ampoule can be remeasured and can be tested to determine whether the proper chemicals were present and whether they were present in the proper concentrations and proper volume.
> (4) The requisite volume of three cubic centimeters of solution in the test ampoule is essential to the accuracy of the breathalyzer test.
> (5) It is always possible to determine whether or not there was a 0.025 percent potassium dichromate solution in the test ampoule.
> (6) It is possible that the solution in a capped used test sample would be subject to continued chemical change with the passage of time; nevertheless, it is possible to restandardize the breathalyzer test up to 30 days after the test.

Id. (footnotes omitted). The court of appeals stated that it would sustain the findings of fact unless the findings were " 'against the great weight and clear preponderance of the evidence.' " *Id.* at 23, 295 N.W.2d at 196 (quoting Bies v. State, 76 Wis. 2d 457, 469, 251 N.W.2d 461, 467 (1977)).

92. 98 Wis. 2d at 23, 295 N.W.2d at 196.

93. 104 Wis. 2d at 100, 310 N.W.2d at 643. The court quoted from an earlier decision, stating

rejected the State's contention that *Booth* should not be applied retroactively.[94] The court of appeals favored retroactive application to all prosecutions pending at the time the *Booth* decision was issued when the defendant had timely demanded the breathalyzer results or when the defendant at trial had raised the issue of destruction of the test ampoules.[95]

The Wisconsin Supreme Court, however, reversed the decision of the court of appeals.[96] The supreme court held that the State had no duty to produce the breathalyzer test ampoule used in the defendant's test because the defendant only made a general, rather than a specific request for exculpatory evidence.[97] The defendant's motion failed to request that the State produce the ampoule.[98] The court added that *Booth* did not apply because in *Booth* the "court of appeals emphasized that it was not 'faced with a general or ambiguous discovery request.' "[99] Because the supreme court found *Booth* inapplicable, it stated that the court of appeals erred in deciding that *Booth* would be retroactive.[100]

Even when a defendant makes a specific request as mandated by the Wisconsin Supreme Court in *Humphrey,* courts may defeat a defendant's right to discovery of the test ampoule by stating that the ampoule does not produce material information.[101] In *State v. Larson*[102] the North Dakota Supreme Court held that because the defendant failed to demonstrate that retesting the test ampoule would produce material evidence that would reflect on the accuracy of the breathalyzer test results, he failed to meet the materiality

that " 'there is nothing magical about *Booth's* implied thirty day time limit. Such an implied time limit should not be construed to be applicable to other cases wherein different circumstances may exist and differing expert testimony may be given.' " *Id.* (quoting State v. Raduege, 100 Wis. 2d 27, 32, 301 N.W.2d 259, 261-62 (Ct. App. 1980)).

94. *Humphrey,* 104 Wis. 2d at 103-05, 310 N.W.2d at 644-45.

95. *Id.* at 105, 310 N.W.2d at 645. The court reviewed three criteria to determine whether a rule should be prospectively applied. *Id.* at 104, 310 N.W.2d at 645. The first criterion is the effect of the new rule on the fact finding process. *Id.* If the new rule has a beneficial impact on this process, then the court favors retroactivity. *Id.* The second criterion is the extent of reliance by law enforcement authorities on the old standards. *Id.* This factor generally suggests prospective application. *Id.* The third criterion is the effect on the administration of justice. *Id.* In *Humphrey* the court stated that the rule in *Booth* would have a beneficial impact on the fact finding process, supporting retroactivity. *Id.* The law enforcement authorities in *Humphrey,* however, relied in good faith on the former rule and this reliance would suggest prospective application. *Id.* at 103-04, 310 N.W.2d at 645. Concerning the third criterion, the *Humphrey* court concluded that it could apply the rule in a manner that limits the burdensome effect on the administration of justice that could result from a total retroactive application of *Booth. Id.* at 105, 310 N.W.2d at 645. Thus, the court concluded that *Booth* should be given retroactive application in certain circumstances. *Id.*

96. State v. Humphrey, 107 Wis. 2d 107, 108, 318 N.W.2d 386, 387 (1982), *rev'g* State v. Humphrey, 104 Wis. 2d 97 (Ct. App. 1981).

97. 107 Wis. 2d at 116, 318 N.W.2d at 390.

98. *Id.* at 115, 318 N.W.2d at 390.

99. *Id.* (quoting State v. Booth, 98 Wis. 2d at 24, 295 N.W.2d at 197).

100. 107 Wis. 2d at 117, 318 N.W.2d at 391.

101. *See, e.g.,* State v. Canaday, 90 Wash. 2d 808, ____, 585 P.2d 1185, 1188 (1978) (ampoule retesting does not produce reliable scientific evidence).

102. 313 N.W.2d 750 (N.D. 1981).

requirement of *Brady v. Maryland.*[103] The court thus declared that the State was not required, as a matter of due process, to make the ampoule from the breathalyzer examination available for independent testing.[104]

The court applied the *Brady* standard[105] and required the defendant to establish that independent analysis of the test ampoule would produce material evidence.[106] The *Larson* court concluded that the defendant failed to demonstrate that the test ampoule, if it were available, could be analyzed to produce material evidence.[107] The court added that the scientific community has not clearly accepted the feasibility of analyzing used test ampoules.[108] The court therefore stated that it could not take judicial notice of the results obtained from retesting.[109] Because the defendant failed to demonstrate that analysis of the test ampoule would provide material evidence, the defendant could not meet the *Brady* materiality requirement.[110]

The reasoning of the North Dakota court is contrary to a scientific study[111] that examines the problems associated with the preservation of ampoules.[112] The study indicates that when ampoules are placed in tightly capped dark glass bottles and refrigerated at minus one degree centigrade within one hour of the test, the daily rate of change in apparent blood alcohol concentration is insignificant.[113] Either the forensic toxicologist

103. State v. Larson, 313 N.W.2d 750, 756 (N.D. 1981). Citing *Brady v. Maryland,* the North Dakota Supreme Court stated that the State must disclose evidence that is material and favorable to the defendant. *Id. See* Brady v. Maryland, 373 U.S. 83 (1963).

104. 313 N.W.2d at 756. In *Larson* a breathalyzer test produced a reading of 0.15%. *Id.* at 751-52. After taking the test, the defendant requested the State to give him, for independent testing, both a sample of his breath obtained by the officer who had administered the breathalyzer test and the used test ampoule. *Id.* at 752. The State could not honor either request because the operator did not save a sample of the defendant's breath and because the operator discarded the test ampoule immediately after the test. *Id.* The defendant contended that the State's failure to provide him a breath sample or the test ampoule constituted a violation of his constitutional right to due process. *Id.*

105. *See Brady,* 373 U.S. at 87. The United States Supreme Court held "that the suppression by the prosecution of evidence favorable to an accused upon request violates due process where the evidence is material either to guilt or to punishment, irrespective of the good faith or bad faith of the prosecution." *Id.*

106. *Larson,* 313 N.W.2d at 754.

107. *Id.* The court set forth the methods by which a defendant could establish materiality. *Id.* The court stated that expert testimony could establish that the test ampoule could be analyzed scientifically to produce evidence reflecting on the accuracy of the test results. *Id.* In *Larson* a forensic toxicologist employed by the state testified that it would not be possible to analyze the test ampoule to obtain evidence reflecting upon the accuracy of the breathalyzer test result. *Id.* No evidence in the record rebutted this testimony. *Id.* at 755. The court concluded that the defendant failed to meet the materiality requirement of *Brady. Id. See Brady,* 373 U.S. at 87 (evidence must be material to mandate disclosure).

108. 313 N.W.2d at 755.

109. *Id.*

110. *Id.* at 756.

111. *See* Jones & Volpe, *Storage Properties of Breath Ampuls,* 40 J. STUD. ON ALCOHOL 1039, 1043-44 (1979) (retesting of ampoules can produce reliable evidence).

112. *Id.*

113. *Id.*

employed by the state toxicologist office in *Larson* chose to ignore the available scientific information or he was unaware of it.

One issue that courts and defendants have not addressed is whether the mouthpiece should be saved. A new mouthpiece is used for each breath test.[114] Preservation of the mouthpiece would afford a defense expert the opportunity to determine whether a defendant had vomit or other foreign materials in his mouth during the test. Vomit or other foreign materials can produce unusually high test results, which would therefore render the test invalid.[115] By saving the mouthpiece the defendant may thus be able to obtain material evidence.

Discovery of mouthpieces and test ampoules would allow both parties an opportunity to test the validity of the breath test results. Discovery, however, could require the state to expend additional funds to retain and store the various chemicals and other materials associated with the breath test. Also, some breath tests would be difficult to reconstruct. Thus an alternative method of supplementing the foundation requirement may be more appropriate.

A defendant could supplement the foundation requirement by asking the state to preserve a sample of his breath or by asking for an independent test. This second test approach would safeguard a defendant's right to due process by allowing him to verify the results of the first test.

IV. THE TWO TEST APPROACH

Recently, state courts have considered whether the state must provide a second independent testing of the initial chemical analysis[116] or a second breath specimen or its functional equivalent[117] to satisfy a defendant's due process guarantees.[118] In

114. Telephone interview with Sergeant Clifford Phelps, certified breathalyzer operator for the Grand Forks Police Department, Grand Forks, North Dakota (Mar. 11, 1983).

115. *See, e.g.*, Scales v. City Court, 122 Ariz. 231, ____, 594 P.2d 97, 99-100 (1979) (foreign substance composed of hydrocarbons inside the test ampoule would produce a chemical reaction erroneously suggesting the presence of alcohol).

116. *See, e.g.*, State v. Cornelius, ____ N.H. ____, ____, 452 A.2d 464, 465 (1982) (defendant may choose a person to conduct an additional test).

117. *See, e.g.*, Municipality of Anchorage v. Serrano, 649 P.2d 256, 259 (Alaska Ct. App. 1982) (State must attempt to find a method to check the results of the breathalyzer).

118. In considering whether a state must conduct a second test or provide the defendant with a sample for his use, courts have not generally distinguished between a defendant's right to due process guaranteed by a state constitution or by the United States Constitution. *See, e.g.*, State v. Shutt, 116 N.H. 495, ____, 363 A.2d 406, 408 (1976) (court stated that "[d]estruction of the [test and reference] ampoules destroyed no evidence that could be violative of due process"). The United States Constitution provides that "[n]o state shall . . . deprive any person of life, liberty, or property, without due process of law." U.S. CONST. amend. XIV, § 1. The United States Constitution provides the minimum standard in determining the scope of a defendant's right to due process. *See, e.g.*, Johnson v. Hassett, 217 N.W.2d 771, 776-77 (N.D. 1974) (under the dual system of federal and

Municipality of Anchorage v. Serrano[119] the Alaska Court of Appeals declared that "the due process clause of the Alaska Constitution[120] 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."[121] The *Serrano* court recognized that due process mandates additional testing or investigation when the initial test produces material evidence and when the state can conduct a second test through reasonable cost and effort.[122]

The *Serrano* court also noted that a defendant may choose to have a second breathalyzer examination performed by a person he selects.[123] The court declared that the arresting officer must expressly inform a defendant of his right to secure an independent test.[124] The officer must also make a reasonable and good faith effort to assist a defendant in finding a person qualified to perform the independent examination.[125] Finally, the State must show that persons qualified to conduct the independent tests were in fact available in the area in which the officer administered the initial chemical analysis.[126]

In reaching its decision, the *Serrano* court relied upon the holding in *Lauderdale v. State*.[127] In *Lauderdale* the Alaska Supreme

state constitutions, a statute may be constitutional under the United States Constitution and unconstitutional under the North Dakota Constitution). *See generally* Brennan, *State Constitutions and the Protection of Individual Rights,* 90 HARV. L. REV. 489, 489-504 (1977) (numerous state constitutions provide citizens with greater protection than does the United States Constitution).

119. 649 P.2d 256 (Alaska Ct. App. 1982). In *Serrano* the defendants filed a motion to suppress the breathalyzer test results on the ground that the failure to preserve a breath sample at the time of testing violated the defendants' right to confront and cross-examine the evidence against them. Municipality of Anchorage v. Serrano, 649 P.2d 256, 257 (Alaska Ct. App. 1982). The district court granted the suppression motion. *Id.* On review to the superior court, the court held that due process does not require the preservation of breath samples. *Id.*

120. *See* ALASKA CONST. art. I, § 7 ("No person shall be deprived of life, liberty, or property without due process of law. The right of all persons to fair and just treatment in the course of legislative and executive investigations shall not be infringed.").

121. *Serrano,* 649 P.2d at 258.

122. *Id.* at 259.

123. *Id.* at 258 n.5. The *Serrano* court limited its decision stating: "We hold only that before the results of a breathalyzer test can be admitted evidence in a prosecution for driving while intoxicated, due process requires that the defendant be given some opportunity to secure independent testing of the accuracy of the breathalyzer test administered." *Id.*

124. *Id.*

125. *Id.*

126. *Id.*

127. *Id.* at 258-59 (citing Lauderdale v. State, 548 P.2d 376 (Alaska 1976)). In *Lauderdale* the State arrested the petitioner for drunk driving. 548 P.2d at 378. After entering a plea of not guilty, the petitioner filed a motion seeking inspection of the ampoules used in the breathalyzer test. *Id.* The Alaska Supreme Court declared that the trial court did not abuse its discretion in requiring the production of the ampoules. *Id.* at 379. The *Lauderdale* court also noted that the State's failure to produce this evidence violated the defendant's right to due process. *Id.* at 381. This right was apparently a right protected by the due process clause of the United States Constitution; the court supported its holding by citing cases that stand for the proposition that the due process clause of the Constitution protects a defendant's right to a fair trial. *Id.* (quoting Brady v. Maryland, 373 U.S. 83, 87 (1963) ("suppression by the prosecution of evidence favorable to an accused upon request violates due process where the evidence is material either to guilt or to punishment")). The court stressed that because the subsequent testing of the ampoules would be the only means of insuring that the State properly conducted the initial chemical analysis, the State's failure to produce the ampoules for the defendant's use violated the defendant's right to due process. 548 P.2d at 381.

Court declared that the State must preserve the ampoules used in the breathalyzer test for examination by the driver.[128] The *Serrano* court noted, however, that the mere preservation of existing evidence is not sufficient to satisfy the due process requirements of the Alaska Constitution.[129] The court asserted that because the results of the chemical analysis are extremely important to an arrested motorist, due process requires the State to make reasonable efforts to preserve a breath sample in cases in which it intends to admit the results of the test.[130]

The *Serrano* court found persuasive the fact that the breathalyzer procedure often yields inaccurate results.[131] The court noted that a breath sample is subject to both operator and mechanical error and that the ability of a defendant to cross-examine the breathalyzer test is critical to his case.[132]

Finally, the court in *Serrano* asserted that requiring law enforcement officials to preserve a breath sample does not place an undue burden on the state.[133] The *Serrano* court noted that technology exists for the state to erect a system for preserving breath samples at a reasonable cost with sufficient accuracy.[134] Because law enforcement officials have reasonably relied upon the prior legal standard, the *Serrano* court concluded that its decision should have only a prospective application.[135]

Another state court considered whether the state's failure to preserve an additional breath sample violated the defendants' due process rights.[136] In *State v. Cornelius*[137] the New Hampshire Supreme Court affirmed the conviction of defendant Cornelius and

128. *Lauderdale*, 548 P.2d at 381. The *Lauderdale* court asserted that a subsequent examination of the ampoules would yield scientifically reliable data that would ultimately determine a defendant's guilt or innocence. To deny a defendant the right to cross-examine the results of a breathalyzer test would deny him a fair trial. *Id.*

129. *Serrano*, 649 P.2d at 259. *See* ALASKA CONST. art. I, § 7. The *Serrano* court declared, "We do not believe that *Lauderdale* can be restricted to merely require the state to preserve existing evidence." 649 P.2d at 259.

130. 649 P.2d at 260.

131. *Id.* The *Serrano* court noted that expert testimony revealed that the breathalyzer used by city officials had an error factor of 10% at the 0.10% alcohol level. *Id.* at 259 n.8. Gas chromatography analysis, however, has an error factor of 3%. *Id.* Testing the preserved breath sample on the more accurate gas chromatograph would afford a defendant a valuable second determination of the initial breathalyzer test result. *Id.*

132. *Id.* at 259.

133. *Id.*

134. *Id.* In reaching its decision, the *Serrano* court recognized that other states require the preservation of breath samples for arrested motorists. *Id.* at 259-60 (citing Baca v. Smith, 124 Ariz. 353, 604 P.2d 617 (1979) (State must preserve second breath sample for the private use of a defendant upon request); Garcia v. District Court, 197 Colo. 38, 589 P.2d 924 (1979) (evidence of breath test suppressed when State failed to preserve breath samples); VT. STAT. ANN. tit. 23, § 1203(a) (1981) (State required to preserve initial breath or blood sample to allow a defendant the option of independent analysis)).

135. 649 P.2d at 260.

136. State v. Cornelius, ___ N.H. ___, 452 A.2d 464 (1982).

137. ___ N.H. ___, 452 A.2d 464 (1982).

remanded the motion to suppress evidence of defendant Jones for a trial on the merits.[138] The issue in *Cornelius* was whether the State violated the defendants' due process rights when it failed to take additional breath samples during the administration of the breathalyzer tests.[139] Although the New Hampshire court affirmed Cornelius' conviction, the court indicated its general approval of the two test approach.[140]

The *Cornelius* court held that the equal protection[141] and due process clauses do not require the State to preserve an additional breath sample for independent testing by a defendant.[142] Dissenting Justices Batchelder and King stated that the denial of an opportunity to have a second breath sample tested violated the defendants' constitutional due process rights.[143] Justices Batchelder and King believed that a defendant has a constitutional right to a second breath sample and that this right should apply to the defendants in *Cornelius*.[144] Justice Douglas concurred specially, but stated that "a second breath sample or its functional equivalent should be available" in cases "arising out of facts occurring on or after February 1, 1983."[145] Thus, although the New Hampshire court affirmed Cornelius' conviction, it recognized that basic fairness may require the State to avail itself of technological advancements.[146]

The *Cornelius* court relied on *State v. Shutt*.[147] In *Shutt* the New

---

138. *Id.* at ____, 452 A.2d at 465. This appeal was a consolidation of two trial court decisions. *Id.* at ____, 452 A.2d at 464. In the first case Cornelius was arrested and charged with operating a motor vehicle while under the influence of intoxicating liquor. *Id.* The arresting officer administered a breathalyzer test that showed a blood alcohol content of 0.21%. *Id.* at ____, 452 A.2d at 464-65. The defendant's motion to suppress the results of the breathalyzer test was denied by the trial judge, and the defendant was subsequently convicted. *Id.* at ____, 452 A.2d at 465.

In the companion case Jones had been arrested for the same violation. *Id.* He moved before trial to have the admission of the breathalyzer test results suppressed on the ground that the State violated his due process rights when it did not provide him with an additional breath sample for his independent analysis. *Id.*

139. *Id.* at ____, 452 A.2d at 465.

140. *Id.*

141. *See* U.S. CONST. amend. XIV, § 1 ("No State shall . . . deny to any person within its jurisdiction the equal protection of the laws.").

142. ____ N.H. at ____, 452 A.2d at 465. The court stated that it was "not prepared . . . to conclude that a statute and the procedures employed in its implementation, which passed constitutional muster in 1976, have become constitutionally infirm in 1982." *Id.*

143. *Id.* at ____, 452 A.2d at 467 (Batchelder, J., dissenting). Chief Justice King concurred in the dissent. *Id.*

144. *Id.*

145. *Id.* at ____, 452 A.2d at 466 (Douglas, J., concurring specially).

146. *Id.* at ____, 452 A.2d at 465.

147. *Id. See* State v. Shutt, 116 N.H. 495, 363 A.2d 406 (1976). *Shutt* was a consolidation of two appeals from lower New Hampshire courts. *Id.* at ____, 363 A.2d at 407. In each case the defendant had been convicted of operating a motor vehicle while intoxicated. *Id.* Both defendants claimed that the failure of the State to preserve the ampoules used in the breathalyzer test violated their due process rights. *Id.* at ____, 363 A.2d at 407-08. In light of this alleged due process violation they argued that the breathalyzer evidence must be suppressed at any subsequent trial. *Id.* at ____, 363 A.2d at 407.

Hampshire Supreme Court interpreted a statute that provided that the State must allow the defendant the opportunity to have an additional independent test performed if he so desired.[148] Although the *Shutt* court recognized the statutory right to a second test, it held that the State was not obligated to perform the additional test.[149] The *Cornelius* court found that technological advances since *Shutt* was decided did not make the statute and the procedures employed under it unconstitutional, but stated "that as technological advances occur, the use of which by law enforcement authorities will better enable the State to make more meaningful and real the rights guaranteed citizens under our constitutions, the dictates of basic fairness may require that the State avail itself of such technology."[150]

The two dissenting justices argued that because of the advances in breath testing technology since the *Shutt* decision, the court should now recognize that the absence of a second breath specimen deprives a defendant of his constitutional right to due process.[151] They advocated present and prospective application of a second breath sample requirement.[152]

Justice Douglas concurred in the result, but stated that he would overrule *Shutt* prospectively.[153] He reasoned that because the state had relied on *Shutt* in enforcing highway safety laws, the state should be given adequate time to comply with any new requirement.[154] Although preferring future implementation, Justice Douglas apparently supported the dissenting justices' belief that due process requires the preservation of a second breath sample.[155]

California recognized in *Hasiwar v. Sillas*[156] that arresting

148. State v. Shutt, 116 N.H. at ____, 363 A. 2d at 408. *See* N.H. REV. STAT. ANN. § 262-A: 69-b (1978) (State shall preserve for 30 days samples of the bodily substance tested).

149. 116 N.H. at ____, 363 A.2d at 408. In the breathalyzer testing procedure glass ampoules used in the breathalyzer are broken. *Id.* The defendants had not shown that any useful information could be gleaned from preserving the broken ampoules. *Id.* at ____, 363 A.2d at 407. In any event the court believed that the defendants' due process rights were adequately protected because they could have had an additional independent test performed by a person they selected. *Id.* at ____, 363 A.2d at 408.

150. *Cornelius*, ____ N.H. at ____, 452 A.2d at 465.

151. *Id.* at ____, 452 A.2d at 467 (Batchelder, J., dissenting).

152. *Id.* at ____, 452 A.2d at 467-68 (Batchelder, J., dissenting). The dissenting justices stated that "[t]o acknowledge that there is a constitutional infirmity, but postpone its recognition until a specified future date, is to embark upon a dangerous course of judicial legislation and substantially to dilute judicial accountability." *Id.* at ____, 452 A.2d at 468 (Batchelder, J., dissenting).

153. *Id.* at ____, 452 A.2d at 465 (Douglas, J., concurring specially).

154. *Id.* at ____, 452 A.2d at 465-66.

155. *Id.* at ____, 452 A.2d at 466.

156. 118 Cal. App. 3d 295, 173 Cal. Rptr. 358 (Ct. App. 1981). In *Hasiwar* the California Court of Appeals declared that the State properly suspended the driver's operating license because the arrested motorist refused the officer's request to submit to a third breathalyzer test. Hasiwar v. Sillas, 118 Cal. App. 3d 295, 299, 173 Cal. Rptr. 358, 360 (Ct. App. 1981). Because the first two samples yielded results that differed by 0.05%, the arresting officer was required by administrative

officers should obtain two breath samples from a defendant to comply with a state administrative regulation.[157] Furthermore, the *Hasiwar* court asserted that the officer should offer the arrested motorist the opportunity to submit to a third breathalyzer test if the first two samples differ from each other by more than 0.02 grams per 100 milliliters.[158] In recognizing that the state should protect a defendant from the inaccuracies of the breathalyzer process, the *Hasiwar* court emphasized that "[t]he testing of the breath of a person arrested for the driving of a motor vehicle under the influence of intoxicating liquor upon a highway or its equivalent for the purpose of this particular statute is not simply a game."[159]

Because an arrested motorist's license is usually subject to automatic revocation upon refusal of the breathalyzer test,[160] the fair administration of justice should require the states to provide a defendant with a second analysis to corroborate the results of the first test. The two test method appears to be the most reliable way of guaranteeing an accurate breathalyzer test. The implementation of the two test system, however, could prove costly to the states in both police time and equipment. Even though compliance with the two test method could prove onerous, the states must realize that although the dangers posed to the public by drunk drivers are great, the states should not infringe upon fundamental due process guarantees in their efforts to control these dangers.

V. CONCLUSION

Legislatures and courts as agents of society should seek an acceptable balance in protecting citizens from the inebriated driver and in protecting a defendant's right to due process. The value of promoting the welfare of society is inherent to the "get tough" attitude. There is nothing disturbing about an eagerness to make the roads safer unless legislatures and courts fail to recognize the basic assumption of breath tests — an individual defendant, subjected to sanctions, was in fact legally intoxicated. Judicial coordination of the three approaches presented in this Article is one

regulation to request that the defendant submit to a third chemical analysis. *Id.* at 298, 173 Cal. Rptr. at 359. Because the officer advised the motorist that he would lose his license for six months unless he took another test, the officer complied fully with the regulation, and the State satisfied the defendant's due process rights. *Id.* at 299, 173 Cal. Rptr. at 360.

157. *Id.* at 298, 173 Cal. Rptr. at 359.

158. *Id.*

159. *Id.* at 298, 173 Cal. Rptr. at 360. The *Hasiwar* court also stated that the administrative regulation requiring the taking of at least two breathalyzer samples is designed to ensure the reliability of the testing process. *Id.*

160. *See* Fitzgerald & Hume, *The Single Chemical Test for Intoxification: A Challenge to Admissibility*, 66 MASS. L. REV. 23, 36 (1981).

remedy that affords the necessary balance.

The foundation approach places the burden of proof on the state to insure that the breath test results are admissible. The discovery approach places the burden on the defendant to prove that the desired information would be material and favorable to his defense. The two test approach affords an objective measure of the accuracy of the first test. Courts should seek to coordinate these approaches in determining a policy to insure the accuracy of breath testing devices.