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# Comments: Walking the Line of Admissibility: Why Maryland Courts Should Reexamine the Admissibility of Field Sobriety Tests

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# WALKING THE LINE OF ADMISSIBILITY: WHY MARYLAND COURTS SHOULD REEXAMINE THE ADMISSIBILITY OF FIELD SOBRIETY TESTS

## I. INTRODUCTION

In what was one of the earliest reported instances involving expert testimony, a Dr. Brown of Norwich took the stand in 1665.<sup>1</sup> Dr. Brown offered the expert scientific opinion that the accused women were witches and, by practicing their witchcraft, they had bewitched many children.<sup>2</sup> There was no challenge as to the validity of the expert scientific testimony, and the defendants were found guilty and hanged.<sup>3</sup> In 2005, witchcraft is no longer the problem facing American society that it was in the 1660's. Still, scientific testimony, albeit more sophisticated than that mentioned above, is an important tool relied upon by courts to combat society's problems, including driving under the influence of alcohol.

An estimated thirty percent of Americans will be involved in an alcohol-related automobile accident at some point in their lives.<sup>4</sup> According to the National Highway Traffic Safety Administration ("NHTSA"), almost 18,000 citizens per year, or nearly fifty people per day, are killed as a result of accidents involving impaired drivers.<sup>5</sup> Aside from the cost in human life, the economic effects of such accidents are large as well, as the estimated cost to the public caused by these crashes in 2000 was \$114.7 billion.<sup>6</sup> In response to these statistics, every state has criminalized impaired driving.<sup>7</sup>

In January of 2002, the United States District Court for the District of Maryland decided *United States v. Horn*, a case in which the Federal Rules of Evidence were applied to Maryland's drunk driving law.<sup>8</sup> Par-

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1. *Reed v. State*, 283 Md. 374, 385 n.7, 391 A.2d 364, 370 n.7 (1978) (citing *A Trial of Witches at Bury St. Edmonds*, 6 Howell's State Trials 687, 697 (1665)).
  2. *Id.*
  3. *Id.*
  4. Mothers Against Drunk Driving [hereinafter MADD], *Drunk Driving in the United States*, at <http://www.madd.org/stats/0,1056,3726,00.html> (last visited Mar. 29, 2005). The MADD Web site cites a National Highway Traffic Safety Administration study from the year 2000 as the source of this information.
  5. National Highway Traffic Safety Administration, *Stop Impaired Driving*, at <http://www.nhtsa.dot.gov/people/injury/alcohol/stopimpaired/> (last visited Mar. 29, 2005).
  6. See *supra* note 4.
  7. The MADD Web site has a link that allows the reader to access the drunk driving laws for a majority of states, which can be found at <http://www3.madd.org/laws/> (last visited Mar. 29, 2005).
  8. *United States v. Horn*, 185 F. Supp. 2d 530 (D. Md. 2002).

ticularly, these Rules were applied to the use of Standardized Field Sobriety Tests and the admissibility of the results of these tests at trial.<sup>9</sup> As a result of the holding of *Horn*, two approaches now exist governing the admissibility of field sobriety tests in Maryland, depending upon whether the case is tried in federal or state court.<sup>10</sup> In order to understand the existing dichotomy, it is essential to examine the historical development of the admissibility of scientific, technical, or other specialized knowledge given in the form of expert testimony. Part II of this comment will examine the two competing approaches governing the reliability of scientific techniques and their admissibility as evidence. Part III will discuss the three field sobriety tests that make up the Standardized Field Sobriety Test battery. Part IV of this comment illustrates the treatment by Maryland and federal courts of testimony relating to the field sobriety tests under the applicable evidentiary standard. Finally, Parts V and VI will show that the federal court was correct in its analysis of the field sobriety tests, and that Maryland courts would be wise to reconsider taking judicial notice of the reliability of the field sobriety tests.

## II. HISTORICAL BACKGROUND

### A. *Maryland Law and the Frye/Reed Standard*

In 1923, the Court of Appeals of the District of Columbia considered the admissibility of the testimony of an expert witness as to the results of a systolic blood pressure deception test in *Frye v. United States*.<sup>11</sup> In affirming the trial court's ruling that the testimony was inadmissible, the court of appeals established a common law doctrine governing the admissibility of expert testimony regarding scientific principles.<sup>12</sup> The court held:

Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony de-

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9. *Id.*

10. In *Horn*, the defendant was stopped at the entrance of the Army facility at Aberdeen Proving Ground, which is located in Maryland but subject to federal jurisdiction. See *Horn*, 185 F. Supp. 2d at 532. The Federal Rules of Evidence are applicable in cases tried under the Assimilative Crimes Act. *Kay v. United States*, 255 F.2d 476, 479 (4th Cir. 1958) (interpreting the Assimilative Crimes Act, 18 U.S.C. §§ 7, 13).

11. 293 F. 1013, 1013-14 (D.C. Cir. 1923). The systolic blood pressure deception test was a primitive sort of polygraph examination, based on the premise that "conscious deception or falsehood, concealment of facts, or guilt of crime, accompanied by fear of detection when the person is under examination" would result in a rise in the test subject's blood pressure. *Id.* at 1013.

12. *Id.* at 1014.

duced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.<sup>13</sup>

Simply put, the *Frye* court established a rule that expert testimony regarding scientific information would only be admissible if the method used to deduce the information is established and generally accepted within the particular scientific field in question.

The Court of Appeals of Maryland adopted the *Frye* approach in the 1978 case *Reed v. State*.<sup>14</sup> *Reed* addressed the trial court's admission of voice identification testimony based on spectrogram analysis, commonly known as "voiceprints."<sup>15</sup> The trial court ruled the analysis admissible after hearing testimony regarding the general validity and reliability of this method of identification.<sup>16</sup>

In determining the proper standard to analyze the admissibility of scientific evidence, the Court of Appeals began its analysis by discussing the reliability of the techniques used to deduce such evidence.<sup>17</sup> The court concluded that if the reliability of a technique cannot be judicially noted, it must be demonstrated to the court before testimony based on this evidence can be introduced at trial.<sup>18</sup> Instead of placing the determination of the "threshold question" regarding the reliability of testimony within the discretion of each trial judge, the Court of Appeals of Maryland adopted the standard from *Frye v. United States* as the test to determine the reliability of a scientific technique.<sup>19</sup> Thus, according to the *Reed* Court, "if a new scientific technique's validity is in controversy in the relevant scientific community, or if it is generally regarded as an experimental technique, then expert testi-

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13. *Id.* Upholding the trial court's refusal to admit the test results, the court stated that the "test has not yet gained such standing and scientific recognition among physiological and psychological authorities as would justify the courts in admitting expert testimony." *Id.*

14. 283 Md. 374, 381, 391 A.2d 364, 367-68 (1978).

15. *Id.* at 375, 377, 391 A.2d at 364-66. The defendant in this case had been convicted of "rape, unnatural and perverted sex acts, robbery, verbal threats, and unlawful use of the telephone." *Id.* at 377, 391 A.2d at 365. The convictions were based in part on the prosecution's use of spectrographic analysis and comparison of recorded phone conversations between the victim and the defendant and voice exemplars of the defendant made while he was in custody. *Id.* at 376, 391 A.2d at 365.

16. *Id.* at 377, 391 A.2d at 365.

17. *Id.* at 380, 391 A.2d at 367 (stating that "the validity and reliability of a scientific technique may be so broadly and generally accepted in the scientific community that a trial court may take judicial notice of its reliability.").

18. *Id.* This demonstration will usually be done through testimony, but a court can take notice of law journals, scientific journals, and other publications. *Id.*

19. *Id.* at 381, 391 A.2d at 367-68 (quoting *Frye*, 293 F. 1013, 1014 (D.C. Cir. 1923)).

mony based upon its validity cannot be admitted into evidence."<sup>20</sup> If a technique has gained acceptance in the scientific community, testimony regarding the results of the test using this technique may be introduced into evidence only after the trial judge determines that the proposed testimony will be helpful to the fact-finder, and the expert is properly qualified.<sup>21</sup> The *Reed* Court held the results of these tests inadmissible because of an existing disagreement in the scientific community on the reliability of voiceprinting.<sup>22</sup>

### B. Federal Law and the Rule 702/Daubert/Kumho Tires Standard

Until 1993, the standard in federal courts governing the admissibility of expert testimony deduced from the application of scientific techniques was the "general acceptance" test articulated in *Frye v. United States* and adopted by Maryland courts in *Reed v. State*.<sup>23</sup> In that year, however, the Supreme Court had the opportunity to consider the interplay of the *Frye* general acceptance standard and the Federal Rules of Evidence.<sup>24</sup> Because the Court held that the Federal Rules of Evidence superseded *Frye*, any analysis of the Court's holding must begin with an examination of the applicable rule.<sup>25</sup>

Federal Rule of Evidence 702 reads in full:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.<sup>26</sup>

Because Rule 702 directly addressed the issue decided in *Frye*, the *Daubert* Court reasoned:

Given the Rules' permissive backdrop and their inclusion of a specific rule on expert testimony that does not mention

20. *Reed*, 283 Md. at 381, 391 A.2d at 368.

21. *Id.* at 389, 391 A.2d at 372.

22. *Id.* at 399-400, 391 A.2d at 377. The case was remanded for a new trial, but the court pointed out that the holding would be subject to reconsideration should "voiceprinting" become generally accepted in the scientific community subsequent to the ruling. *Id.*

23. See *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 585 (1993). Before articulating the new federal standard, the Court wrote that "[i]n the 70 years since its formulation in the *Frye* case, the 'general acceptance' test has been the dominant standard for determining the admissibility of novel scientific evidence at trial." *Id.*

24. *Id.* at 582-83, 586-87.

25. *Id.* at 587.

26. FED. R. EVID. 702.

“general acceptance,” the assertion that the Rules somehow assimilated *Frye* is unconvincing. *Frye* made “general acceptance” the exclusive test for admitting expert scientific testimony. That austere standard, absent from, and incompatible with, the Federal Rules of Evidence, should not be applied in federal trials.<sup>27</sup>

In other words, the Court held that *Frye* no longer applied in federal cases.

After announcing its ruling in *Daubert*, the Court went step-by-step through the new requirements that must be met for scientific evidence to be reliable in accordance with Rule 702.<sup>28</sup> The first step of analysis under *Daubert* is that the subject of the testifying expert’s attestations must be “scientific.”<sup>29</sup> In order to qualify as scientific knowledge, an inference or assertion must come from utilizing the scientific method.<sup>30</sup> The second consideration a federal court must undertake is whether the proposed testimony will “assist the trier of fact to understand the evidence or to determine a fact in issue,” or, simply put, whether the testimony is relevant.<sup>31</sup>

In determining whether these two considerations are met, the *Daubert* Court gave a list of observations that may aid a trial judge.<sup>32</sup> The first factor on the *Daubert* “checklist” used to determine whether the technique used by the expert is scientific is whether the technique “can be (and has been) tested.”<sup>33</sup> Next, a trial court judge can consider whether the technique or theory has been subjected to peer review, either through publication or some other means.<sup>34</sup> The known or potential error rate of the method should also be considered.<sup>35</sup> Finally, the Court stated that general acceptance can also be a factor in this determination.<sup>36</sup> The Court summarized its analysis by stating that a Rule 702 inquiry should be flexible, and that the focus should

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27. 509 U.S. at 589. The “permissive backdrop” of the Rules referred to by the Court refers to the liberal standard of relevance established by the Rules. See *id.* at 587; see also FED. R. EVID. 401, 402.

28. 509 U.S. at 589-95.

29. *Id.* at 589-90. The Court also acknowledged that under the language of the Rule, “technical, or other specialized knowledge” also applies, but noted that its discussion was limited to the scientific context. *Id.* at 590 n.8.

30. *Id.* at 590.

31. *Id.* at 591; see also FED. R. EVID. 702; U.S. v. Downing, 753 F.2d 1224, 1242 (3d. Cir. 1985) (stating that “[a]n additional consideration under Rule 702—and another aspect of relevancy—is whether expert testimony proffered in the case is sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute”).

32. 509 U.S. at 592-94. The Court noted that this “checklist” is not definitive. *Id.* at 593.

33. *Id.*

34. *Id.* at 593-94.

35. *Id.* at 594.

36. *Id.* See also *supra* note 12 and accompanying text.

be on principles and methodology, not the conclusions formed therefrom.<sup>37</sup>

To complete a Federal Rule of Evidence 702 analysis, one must next look to *Kumho Tire Co. v. Carmichael*.<sup>38</sup> Here, the Supreme Court extended the standard articulated in *Daubert* to apply to testimony based on "technical" and "other specialized knowledge," thereby expanding applicability of the doctrine over virtually all expert testimony.<sup>39</sup> The Court then clarified the list of factors enunciated in *Daubert*, noting that they may not apply "to all experts or in every case."<sup>40</sup> The Court further asserted that the trial court will have "broad latitude" in deciding both how to determine reliability and ultimately deciding if this process is satisfied, thus making the testimony reliable.<sup>41</sup> The Court concluded its holding in *Kumho Tire* by stating that "Rule 702 grants the district judge the discretionary authority, reviewable for its abuse, to determine reliability in light of the particular facts and circumstances of the particular case."<sup>42</sup>

In order to understand how these competing approaches are applied in drunk driving cases, one must first become familiar with the standardized field sobriety tests to which the above-mentioned evidentiary standards are applied.

### III. THE STANDARDIZED FIELD SOBRIETY TESTS

#### A. *The Horizontal Gaze Nystagmus Test*

Nystagmus describes an involuntary eye motion that can be exhibited in two ways.<sup>43</sup> The first is "pendular nystagmus, where the eye

37. *Daubert*, 509 U.S. at 594-95. At issue in *Daubert* was the admissibility of studies linking the drug Bendectin to birth defects. *Id.* at 582-85. Because the lower courts had utilized the *Frye* "general acceptance" standard, the case was remanded. *Id.* at 597-98.

38. 526 U.S. 137 (1999). At issue in *Kumho* was testimony by an expert in tire failure analysis in a diversity suit involving a car accident. *Id.* at 142. Because the expert was not a scientist, there was an issue as to whether *Daubert* applied. *Id.* at 141.

39. *Id.* at 141-42. See *supra* note 28 and accompanying text.

40. *Kumho*, 526 U.S. at 141-42.

41. *Id.* at 142. The trial court must have the same kind of latitude in deciding how to test an expert's reliability, and to decide whether or when special briefing or other proceedings are needed to investigate reliability, as it enjoys when it decides whether that expert's relevant testimony is reliable. *Id.* at 152. See *supra* notes 28-36 and accompanying text (discussing the *Daubert* factors).

42. *Kumho*, 526 U.S. at 158. The Court reversed the court of appeals' holding that the trial judge had abused his discretion in acting as a reliability "gatekeeper." *Id.* at 145-46, 158. Therefore, the trial judge's conclusion that the tire expert's testimony was unreliable and should be excluded was affirmed. *Id.*

43. James J. Dietrich, *Horizontal Gaze Nystagmus: The Science & the Law: A Resource Guide for Judges, Prosecutors and Law Enforcement*, Section I, at <http://>

oscillates equally in two directions.”<sup>44</sup> The second is “jerk nystagmus, where the eye moves slowly away from a fix[ed] point and then is rapidly corrected.”<sup>45</sup> Horizontal gaze nystagmus (“HGN”) is a type of jerk nystagmus.<sup>46</sup>

Alcohol consumption causes alcohol gaze nystagmus, which includes HGN.<sup>47</sup> When intoxicated, a person’s smooth and accurate control of his or her eye movements will break down.<sup>48</sup> The purpose of the HGN test is twofold: (1) to “identify drivers with [blood alcohol content] in the .08-.12 range that make up the bulk of the impaired drivers who do not necessarily exhibit exaggerated characteristics of impairment; and (2) [to] detect impairment in alcohol-tolerant drivers who may not display any gross coordination and balance problems.”<sup>49</sup>

The HGN test is administered by requiring a subject to follow an object, “such as a pen or the tip of a penlight,” with his or her eyes.<sup>50</sup> The administering officer will place the object above eye-level and about twelve to fifteen inches from the subject’s face.<sup>51</sup> Next, the officer instructs the subject of the test to follow the object with his or her eyes only, and not move his or her head.<sup>52</sup> The officer then conducts the test looking for three “clues” in each eye that HGN is present, which would indicate impairment.<sup>53</sup> The clues are lack of smooth pursuit,<sup>54</sup> distinct nystagmus at maximum deviation,<sup>55</sup> and angle of onset of nystagmus prior to forty-five degrees.<sup>56</sup> If at least four clues

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[www.nhtsa.dot.gov/people/injury/enforce/nystagmus/hgntxt.html](http://www.nhtsa.dot.gov/people/injury/enforce/nystagmus/hgntxt.html) (last visited Mar. 29, 2005).

44. *Id.*

45. *Id.* The study compares a normal eye to one with jerk nystagmus: “An eye normally moves smoothly like a marble rolling over a glass plane, whereas an eye with jerk nystagmus moves like a marble rolling across sandpaper.” *Id.*

46. *Id.*

47. *Id.* at Section II. Alcohol also causes positional alcohol nystagmus, which is not included in the field sobriety tests, and therefore will not be discussed further. *Id.*

48. *Id.*

49. *Id.* at Section III.

50. *Id.*

51. *Id.*

52. *Id.*

53. *Id.*

54. *Id.* The officer slowly moves the object from the center of the subject’s face towards the left ear, watching to see if the left eye will follow smoothly or exhibit nystagmus. *Id.* The process is then repeated with the right eye. *Id.*

55. *Id.* The officer again moves the object toward the left ear, this time pausing at the point that the eye has gone as far to the side as possible. *Id.* The officer will hold the object here for about four seconds, looking to see if there is a “distinct and sustained nystagmus.” *Id.* Again, the process is repeated with the right eye. *Id.*

56. *Id.* In this test, the “officer moves the object at a speed that would take about four seconds” to go from the center of the face to the edge of the subject’s left shoulder. *Id.* If the eye begins to exhibit nystagmus before



are present, it is likely that the subject has a blood alcohol content ("BAC") of at least .10.<sup>57</sup> The HGN test is regarded as the most "scientific" or "technical" of the field sobriety tests.<sup>58</sup>

### B. *The Walk and Turn Test*

The second part of the Standardized Field Sobriety Test battery is the Walk and Turn ("WAT") Test.<sup>59</sup> The WAT test is a "divided attention" test, which, according to the NHTSA, can be performed easily by most unimpaired persons.<sup>60</sup> During the test, the subject is instructed to take nine steps along a straight line in a heel-to-toe fashion.<sup>61</sup> After completing this, the suspect must then pivot on one foot and do the same in the opposite direction.<sup>62</sup> In the WAT test there are eight indicators of impairment: failing to maintain balance while listening to instructions, beginning the test before the instructions are completed, stopping during walking to maintain or regain balance, failing to walk in a heel-to-toe manner, stepping off of the line, using arms for balance, making an improper turn, or taking an improper number of steps.<sup>63</sup> Research indicates that seventy-nine percent of those exhibiting two or more of the above indicators will have a BAC of .08 or greater.<sup>64</sup>

### C. *The One-Leg Stand Test*

The final test in the Standardized Field Sobriety Test trilogy is the One-Leg Stand ("OLS") Test.<sup>65</sup> In this test, the subject must raise a

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the object reaches approximately forty-five degrees from the center of the face, a "clue" exists. *Id.* The process is repeated with the right eye. *Id.*

57. See *U.S. v. Horn*, 185 F. Supp. 2d 530, 536-37 (D. Md. 2002). According to the manual, based on these test results, one would be able to correctly classify a suspect as intoxicated about seventy-seven percent of the time. *Id.*

58. See *id.*

59. See *id.* at 537.

60. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSP., DEVELOPMENT OF A STANDARDIZED FIELD SOBRIETY TEST (SFST) TRAINING MANAGEMENT SYSTEM, DOT HS 809 400, Appendix A (Nov. 2001), available at [http://www.nhtsa.dot.gov/people/injury/alcohol/sfst/appendix\\_a.htm](http://www.nhtsa.dot.gov/people/injury/alcohol/sfst/appendix_a.htm) (last visited Mar. 29, 2005). The One-Leg Stand test is also considered a divided attention test. *Id.* The rationale behind these tests is that an impaired person is likely to have difficulty dividing attention between simple physical and mental tasks. *Id.* See also *infra* notes 63-68 for discussion of the One-Leg Stand test.

61. See NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 60, at Appendix A.

62. *Id.*

63. *Id.* The subject is also told to keep his arms at his side during the test. See *Horn*, 185 F. Supp. 2d at 537.

64. NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., *supra* note 60, at Appendix A (citing JACK STUSTER & MARCELLINE BURNS, U.S. DEP'T OF TRANSP., VALIDATION OF THE STANDARDIZED FIELD SOBRIETY TEST BATTERY AT BACs BELOW 0.10 PERCENT (1998), available at <http://www.nhtsa.dot.gov/people/injury/alcohol/Archive/Limit.08/!SFSTREP.PDF> (August 1998)).

65. *Id.*

foot off of the ground approximately six inches and count out loud by thousands.<sup>66</sup> The subject will have to maintain this position for thirty seconds.<sup>67</sup> In this test, there are four indicators of impairment.<sup>68</sup> These indicators are “swaying while balancing, using arms to balance, hopping to maintain balance, and putting the foot down” on the ground.<sup>69</sup> Individuals exhibiting two or more of these indicators will, according to the NHTSA, have a BAC of .08 or higher eighty-three percent of the time.<sup>70</sup> When the results of the Standard Field Sobriety Test are combined, the NHTSA states that officers accurately conclude a subject is intoxicated ninety-one percent of the time.<sup>71</sup> Obviously, the conclusions of the NHTSA alone are not enough to make the tests admissible in impaired driving trial, and courts around the country have approached the admissibility of the test results differently, coming to different conclusions as to their reliability.<sup>72</sup>

#### IV. EVIDENTARY TREATMENT OF STANDARD FIELD SOBRIETY TESTS UNDER STATE AND FEDERAL STANDARDS

##### A. *The Maryland Standard*

In *Crampton v. State*,<sup>73</sup> the Court of Special Appeals of Maryland held that the trial judge did not err in admitting an arresting officer’s testimony regarding observations of a suspect’s performance of field sobriety tests.<sup>74</sup> The tests the defendant had to complete, however, were not all part of the Standardized Field Sobriety Test battery discussed above.<sup>75</sup> The court limited the officer’s testimony to telling the jury that the defendant was unable to perform the tests and was arrested.<sup>76</sup>

In 1995, the Court of Special Appeals considered whether the *Frye/Reed* standard must be satisfied in order for an officer’s testimony re-

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66. *Id.*

67. *Id.*

68. *Id.*

69. *Id.*

70. *Id.* (citing STUSTER & BURNS, *supra* note 64).

71. *Id.* (citing STUSTER & BURNS, *supra* note 64). Accuracy increases to ninety-four percent if explanations for false positives are included. *Id.* (citing STUSTER & BURNS, *supra* note 64).

72. *See infra* Section IV and accompanying text.

73. 71 Md. App. 375, 525 A.2d 1087 (1987), *aff’d*, 314 Md. 265, 550 A.2d 693 (1988).

74. *Id.* at 389, 525 A.2d at 1094. The court ruled that the *Frye/Reed* standard did not have to be satisfied, as the officer’s testimony was based on “essentially empirical observations, involving no controversial, new, or ‘scientific’ technique.” *Id.* at 388, 525 A.2d at 1093-94.

75. *Id.* at 386, 525 A.2d at 1093. The tests the officer required the suspect to complete were to “stand on one leg, recite the alphabet, and perform a heel-to-toe test.” *Id.* *See supra* notes 41-69 and accompanying text for discussion of the Standardized Field Sobriety Test Battery.

76. *Crampton*, 71 Md. App. at 387, 525 A.2d at 1093.

garding an individual's performance on an HGN test to be admissible.<sup>77</sup> In *Schultz v. State*, the court ruled that a *Frye/Reed* foundation was required for the HGN test to be admissible.<sup>78</sup> The Court stated that "the HGN test, however, does not test a suspect's coordination or ability to recollect. It is based upon a scientific principle that the extent and manner in which one's eye quivers can be a reliable measure of the amount of alcohol one has consumed."<sup>79</sup>

The court then stated, however, that the results of HGN tests would be admissible without reference to the *Frye/Reed* standard, as the court took judicial notice of the test's reliability and acceptance.<sup>80</sup> Under Maryland law, a court may take judicial notice of a fact if it is "not subject to reasonable dispute" and either "generally known within the territorial jurisdiction of the trial court," or "capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned."<sup>81</sup> The *Schultz* court used cases from other jurisdictions in taking judicial notice of the fact that the Standardized Field Sobriety Tests are reliable.<sup>82</sup>

The court's judicial notice was somewhat qualified, however, as the State would still be required to show that the test was properly conducted and given by a qualified officer.<sup>83</sup> In 1999, the Court of Special Appeals of Maryland further limited the doctrine by ruling that HGN tests cannot be used as proof of a specific BAC.<sup>84</sup>

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77. *Schultz v. State*, 106 Md. App. 145, 664 A.2d 60 (1995).

78. *Id.* at 150-51, 664 A.2d at 62-63.

79. *Id.* at 156, 664 A.2d at 65.

80. *Id.* at 164-65, 664 A.2d at 69. The court stated: "We shall further hold, however, that the results of HGN tests are, nevertheless, admissible in the trial courts of this State without further reference to the *Frye/Reed* standard. We take judicial notice of the reliability and acceptance of the HGN test." *Id.* The court supported its holding that judicial notice can be taken in regard to the reliability of HGN tests by discussing cases from other jurisdictions where HGN testing was found to be a reliable indicator of intoxication. See generally *id.* at 167-73, 664 A.2d at 71-74.

81. Md. R. 5-201(b).

82. 106 Md. App. at 167-68, 664 A.2d at 71. The court stated:

Because the test is so frequently, even predominantly, used in a forensic setting, however, there is another, equally reliable, source—the holdings of other courts that have examined the question.

... We can draw our own conclusions from the collection of holdings of our sister (or brother) courts, including those that have found a sufficient basis for taking judicial notice.

*Id.*

83. *Id.* at 174, 664 A.2d at 74. The court wrote, "We take judicial notice that the results of HGN testing, if the test is properly given by a qualified officer, are admissible to indicate the presence of alcohol in a defendant." *Id.* The Court of Special Appeals ruled that the trial court erred in admitting the officer's testimony in *Schultz*, as a sufficient foundation was not established as to the officer's qualifications. *Id.* at 180, 664 A.2d at 77.

84. *Wilson v. State*, 124 Md. App. 543, 554-56, 723 A.2d 494, 499-500 (1999).

### B. *The Federal Standard*

The federal standard governing the admissibility of the Standardized Field Sobriety Tests was articulated by Magistrate Paul Grimm in *United States v. Horn*.<sup>85</sup> Magistrate Grimm first analyzed the admissibility of field sobriety tests as direct evidence of intoxication.<sup>86</sup> Like Maryland courts, Magistrate Grimm held that using only the results of the Standardized Field Sobriety Tests is not enough to prove BAC levels.<sup>87</sup> The *Horn* analysis then turned to the question of whether the field sobriety test battery can be used as circumstantial evidence of intoxication.<sup>88</sup> Similar to Maryland courts, Magistrate Grimm held that the tests can be used as circumstantial evidence of intoxication as long as they first meet the Rule 702 requirement of reliability as interpreted in the *Daubert /Kuhmo Tire* analysis.<sup>89</sup> It is here that the holding in *Horn* began to diverge from Maryland law.<sup>90</sup>

Next, Magistrate Grimm concluded that “the Standardized Field Sobriety Test evidence in this case does not, at this time, meet the requirements of *Daubert/Kumho Tire* and Rule 702 as to be admissible as direct evidence of intoxication or impairment.”<sup>91</sup> Alternatively stated, the test cannot be used as direct evidence of a particular BAC, intoxication, or impairment in federal court.

Another example of Magistrate Grimm’s divergence from Maryland law is his treatment of the OLS and WAT tests. Like Maryland, Magistrate Grimm concluded that these two tests are merely “standardized procedures” used to make objective observations of coordination, speech, balance, concentration, ability to follow directions, physical

85. 185 F. Supp. 2d 530 (D. Md. 2002).

86. *Id.* at 556.

87. *Id.* See also *supra* note 83-84 and accompanying text.

88. *Horn*, 185 F. Supp. 2d at 557.

89. *Id.* at 557-58. See also *Wilson*, 124 Md. App. at 555, 723 A.2d at 499-500.

90. *Horn*, 185 F. Supp. 2d at 557-58. Magistrate Grimm wrote:

The state courts overwhelmingly have concluded that the results of SFSTs are admissible as circumstantial evidence of alcohol consumption but have offered little guidance about what exactly the testifying officer may tell the fact finder about the SFSTs, their administration, and the performance of the suspect when doing them. The possibilities range from simply describing the tests—without explaining the scientific or technical bases underlying them or their claimed accuracy rates and describing only what the officer observed when they were performed, absent any opinions regarding whether the suspect “passed” or “failed” or assessment of the degree of intoxication or impairment—to a full explanation of the tests, their claimed accuracy, the number of “standardized clues” the suspect missed, and an opinion that the suspect “failed” the test—in short everything up to testimony about the specific BAC of the driver.

*Id.* at 557. See also *Wilson*, 124 Md. App. at 554-55, 723 A.2d at 499-500.

91. *Horn*, 185 F. Supp. 2d at 557.

condition, and mood.<sup>92</sup> However, Magistrate Grimm's analysis went further in limiting the admissibility of these tests.<sup>93</sup> Magistrate Grimm turned to the Florida District Court of Appeals for guidance.<sup>94</sup> In *State v. Meador*,<sup>95</sup> the Florida court wrote:

While the psychomotor tests [OLS and WAT] are admissible, we agree with defendants that any attempt to attach significance to defendants' performance on these exercises beyond that attributable to any of the other observations of a defendant's conduct at the time of the arrest could be misleading to the jury and thus tip the scales so that the danger of unfair prejudice would outweigh its probative value. The likelihood of unfair prejudice does not outweigh the probative value as long as the witnesses simply describe their observations.<sup>96</sup>

Building upon this reasoning, Magistrate Grimm held that, when offered as circumstantial evidence of alcohol ingestion, the probative value of *any* of the Standardized Field Sobriety Tests comes from their nature as observations of behavior, and not scientific, technical, or specialized knowledge.<sup>97</sup> Because of the nature of these tests, an officer's testimony is limited to describing the procedures used in administering the test and observations as to the defendant's performance.<sup>98</sup> In order to use terms such as 'test,' 'standardized clues,' 'pass' or 'fail,' the test must satisfy the Rule 702/*Daubert/Kumho Tire* standard; Magistrate Grimm concluded the test does not presently meet this standard.<sup>99</sup>

Magistrate Grimm based his decision on many factors. He held that the evidence introduced by the defense in *Horn* as to the first two *Daubert/Kumho Tire* factors—the methods used to develop the tests and the error rates of the tests—leads to the conclusion that the test is not satisfied.<sup>100</sup> Therefore, this evidence must be analyzed.

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92. *Id.* at 558. Grimm wrote that "[i]f offered as circumstantial evidence of alcohol intoxication or impairment, the probative value of the SFSTs derives from their basic nature as observations of human behavior, which is not scientific, technical or specialized knowledge." *Id.* at 559. Cf. *Crampton*, *supra* notes 73-76 and accompanying text.

93. Like much of Magistrate Grimm's analysis, the underlying principle here is in agreement with Maryland law. He, however, seems to be more thorough in his discussion, thus resulting in a federal standard that is more restrictive as to the admissible testimony from an arresting officer in a DWI/DUI case.

94. *Horn*, 185 F. Supp. 2d at 559.

95. 674 So. 2d 826 (Fla. Dist. Ct. App. 1996).

96. *Id.* at 832.

97. *Horn*, 185 F. Supp. 2d at 559. Magistrate Grimm extended the *Meador* court's approach to the psychomotor tests to all SFSTs, including the HGN test. *Id.*

98. *Id.*

99. *Id.* See also *supra* note 89 and accompanying text.

100. *Horn*, 185 F. Supp. 2d at 556.

The evidence showing the development of the tests was introduced by industrial psychologist Joel P. Wiesen, Ph.D.<sup>101</sup> Dr. Wiesen testified about the development of the tests by examining five reports discussing the sobriety exams.<sup>102</sup> The reports were as follows: a June 1977 report prepared for the NHTSA titled "Psychophysical Tests for DWI Arrests" ("1977 Report");<sup>103</sup> a March 1981 final report titled "Development and Field Test of Psychophysical Tests for DWI Arrest" ("1981 Report");<sup>104</sup> a September 1983 field evaluation titled "Field Evaluation of a Behavioral Test Battery for DWI," ("1983 Report");<sup>105</sup> a November 1995 study of the Standardized Field Sobriety Tests titled "A Colorado Validation Study of the Standardized Field Sobriety Test (SFST) Battery," (the "1995 Report");<sup>106</sup> and an undated study titled "A Florida Validation Study of the Standardized Field Sobriety Test (SFST) Battery" ("Florida Report").<sup>107</sup>

Dr. Wiesen was "highly critical" of the studies mentioned above.<sup>108</sup> Six specific problems were cited with the 1977 Report.<sup>109</sup> Dr. Wiesen also cited eight concerns with the 1981 Report,<sup>110</sup> seven problems with the 1983 Report,<sup>111</sup> five with the 1995 Report,<sup>112</sup> and three with

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101. *Id.* at 542. Dr. Wiesen had ten years experience working for the Commonwealth of Massachusetts developing civil service examinations and ten more years as an independent consultant in test development and validation. *Id.* His testimony is summarized in a table found at pages 542-43.

102. *Id.*

103. *Id.* at 535-36. The report was prepared by Marcelline Burns, Ph.D., who has commonly been used by the prosecution as an expert in DWI/DUI cases, and Herbert Moskowitz, Ph.D., both of the Southern California Research Institute [hereinafter SCRI]. *Id.* at 535-36 & n.14.

104. *Id.* at 536. Dr. Burns and SCRI prepared this report for the NHTSA. *Id.*

105. *Id.* Theodore E. Anderson, Robert M. Schweitz and Monroe B. Snyder prepared this study. *Id.*

106. *Id.* The report was prepared by Dr. Burns and the Pitkin County (Colorado) Sheriff's Office and was funded by the NHTSA. *Id.*

107. *Id.* Dr. Burns and the Pinellas County (Florida) Sheriff's Office prepared this report. *Id.*

108. *Id.* at 542.

109. *Id.* The problems cited were the following: 1) a chin rest was used in the lab tests, which was not done in the field; 2) a single set of data was used, artificially inflating scores; 3) the tests were not age and gender neutral; 4) the lab tests were monitored to ensure they were correctly performed, which was not done in the field; 5) scoring was not adjusted to reflect differences in results based on the time of day the HGN test was conducted; and 6) the fact that "the study was not peer reviewed, and would not have been accepted if offered." *Id.*

110. *Id.* They were as follows: 1) very high error rates; 2) no adjustment to reflect effects of time of day on HGN testing; 3) low test/retest reliability rates; 4) testing officers not basing decisions on SFST results; 5) possible bias; 6) fifty percent of suspects arrested had a BAC below legal limit; 7) officers used in study were not representative of all officers; and 8) reports that in the field some officers entirely forgot or ignored standardized procedures. *Id.*

111. *Id.* They were as follows: 1) the professional standards of the testing community were not met; 2) a failure to monitor data collection; 3) arrests

the Florida Report.<sup>113</sup> Dr. Wiesen concluded, “[I]n light of the specific critiques above (which are not exhaustive), I can only conclude that the field sobriety tests do not meet reasonable professional and scientific standards.”<sup>114</sup>

Dr. Wiesen’s testimony casts serious doubt on the methods used in the development of the tests. The testimony of another expert for the defense discussed the error rates of the field sobriety tests. Analyzing the same studies as Dr. Wiesen, Harold P. Brull, a licensed psychologist, observed that there was a “complete absence of evidence ‘which would allow one to predict a known error rate in the field.’”<sup>115</sup> Brull concluded that if the error rates of the field sobriety tests were known, they “likely would have been unacceptable in real world situations.”<sup>116</sup> The testimony on the methods used to develop the field sobriety test battery and the error rates of the tests led Magistrate Grimm to hold that the tests were unreliable under a *Daubert/Kumho Tire* analysis for proving a specific BAC.<sup>117</sup>

Another key factor to Magistrate Grimm’s holding was the possible causes of HGN other than intoxication.<sup>118</sup> The *Schultz* court ruled that, to offset the possible alternative explanations to HGN, the trial court must ensure that “the proper precautions were taken or the proper considerations were accounted for prior to the administration of the test itself.”<sup>119</sup> Magistrate Grimm’s holding in *Horn*, however,

made due to results of breath tests made it impossible to tell what the arresting decision was based upon; 4) a failure to report twenty-five percent of the data; 5) no statistical tests were performed on the data; 6) the tests were not administered in standard fashion; and 7) the accuracy of the data was suspect. *Id.*

112. *Id.* They were as follows: 1) the report was too incomplete to draw conclusions on the test’s validity; 2) sections of the report were missing; 3) possible bias; 4) no monitoring of data collection; and 5) unclear results based on two different arrest standards. *Id.*
113. *Id.* They were as follows: 1) the report was incomplete; 2) the methodology was not described in the report; and 3) the data was incompletely described. *Id.*
114. *Id.* at 543.
115. *Id.* at 543-44.
116. *Id.* at 544.
117. *Id.* at 556. Magistrate Grimm reached this conclusion without considering peer review of the tests or acceptance in an unbiased, relevant technical or scientific community. *Id.* He noted, however, that the tests would fail even if these factors were also considered. *Id.* at 556-57.
118. *Id.* at 555-56. The *Horn* decision refers to the *Schultz* court, which listed 38 possible causes of HGN besides alcohol. *Id.* at 555-56 & n.45. See also *Schultz v. State*, 106 Md. App. 145, 180-81, 664 A.2d 60, 77 (1995). A few of these causes would seemingly be common amongst the general population, including: influenza, eye strain, eye muscle fatigue, excessive consumption of caffeine or exposure to nicotine, aspirin, some prescription drugs, heredity, antihistamine use, and diet. *Id.*
119. 106 Md. App. at 180, 664 A.2d at 77.

provides defendants with the opportunity to make the finder of fact aware of these alternate causes.<sup>120</sup>

## V. MARYLAND'S FLAWED APPROACH TO STANDARDIZED FIELD SOBRIETY TESTS

In the famous speech "The Path of the Law," Justice Oliver Wendell Holmes said:

It is revolting to have no better reason for a rule of law than that so it was laid down in the time of Henry IV. It is still more revolting if the grounds upon which it was laid down have vanished long since, and the rule simply persists from blind imitation of the past.<sup>121</sup>

While Justice Holmes was certainly speaking before the time of enforcement of drunk driving laws and field sobriety tests, Maryland courts would be well-served to pay heed to Holmes's principle in their treatment of the admissibility of the results of the Standardized Field Sobriety Tests. In taking judicial notice of the reliability of HGN testing, Maryland courts are guilty of perpetuating what other courts have sought to avoid. For instance, the Court of Appeals of New Mexico commented that the district court is required to "conduct a searching, de novo inquiry into the validity of the HGN FST (Field Sobriety Test), not to merely rubber stamp the decisions of courts in other jurisdictions that have admitted such evidence."<sup>122</sup> This approach to the issue was not followed in *Schultz v. State*.<sup>123</sup> Because Magistrate Grimm conducted a more thorough, thoughtful analysis than Maryland state courts have, his opinion is persuasive, and his conclusions are indeed the correct ones.

### A. *The Court of Special Appeals of Maryland Erred in Taking Judicial Notice of the Reliability of the Tests*

*United States v. Horn* revealed a plethora of evidence and testimony that indicate that the Standardized Field Sobriety Tests are simply not reliable indicators of intoxication.<sup>124</sup> Maryland courts, however, have

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120. 185 F. Supp. 2d at 561. Under *Horn*, the government may prove a connection between exaggerated HGN and intoxication in three ways: "asking the court to take judicial notice of it," elicitation of testimony of a qualified expert, or through submission of learned treatises. *Id.* Defendants, in turn, may prove there are other causes of HGN with the same tools available to the government, plus the additional tool of cross-examining the government's expert. *Id.*

121. Oliver Wendell Holmes, *The Path of the Law*, Address before the Boston University School of Law (Jan. 8, 1897), in 10 HARV. L. REV. 457, 469 (1897). At the time of this speech, Mr. Justice Holmes was a judge on the Supreme Judicial Court of Massachusetts.

122. *State v. Lasworth*, 42 P.3d 844, 850 (N.M. Ct. App. 2001).

123. See *supra* notes 77-83 and accompanying text.

124. See *supra* notes 97-120 and accompanying text.



either dismissed these factors or have completely failed to consider them when deciding the reliability of the tests. In *Schultz*, the Court of Special Appeals of Maryland wrote:

As we have attempted to show, the great weight of scientific literature supports its reliability and the majority of jurisdictions around the country have declared HGN testing to be reliable. We take judicial notice that the results of HGN testing, if the test is properly given by a qualified officer, are admissible to indicate the presence of alcohol in a defendant.<sup>125</sup>

In deciding to take judicial notice if the reliability and acceptance of the test, the court wrote, "We perceive that the studies, scientific articles, foreign cases, and other literature on the subject that we have reviewed reveal that most courts and scientific authorities have held the tests reliable if properly administered."<sup>126</sup> The court, however, failed to mention the studies, scientific articles, and other literature it examined in reaching this conclusion, seemingly basing its holding on the research already done by other courts that Maryland chose to follow.<sup>127</sup> This approach leaves open the possibility that unreliable testimony will be presented to the finder of fact.

Unlike the Maryland courts, Magistrate Grimm thoroughly examined all of the relevant scientific data presented by the parties in *Horn* before reaching his conclusion.<sup>128</sup> This difference may be based in part upon the two different evidentiary approaches utilized by the respective courts. Magistrate Grimm observed:

*Daubert* requires analysis of the methodology used, its reliability and validity. *Frye*, on the other hand, may tempt a court faced with determining the admissibility simply to see what other courts have done in the past, as well as review publications supplied by the parties, or found by the court's own efforts, without engaging in the sometimes difficult analysis of the reliability of the science or technology underlying those sources.<sup>129</sup>

The Court of Special Appeals of Maryland merely looked at what other courts employing the *Frye* standard had ruled regarding field sobriety tests, and followed the holding of those courts instead of independently evaluating the tests and their reliability.<sup>130</sup>

The Court of Special Appeals also considered the practical effects of taking judicial notice of the reliability of the tests. The court wrote:

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125. 106 Md. App. 145, 174, 664 A.2d 60, 74 (1995).

126. *Id.* at 165, 664 A.2d 69-70.

127. *See supra* notes 81-82 and accompanying text.

128. *See supra* notes 97-120 and accompanying text. *See also Horn*, 185 F. Supp. 2d at 538-53.

129. *Horn*, 185 F. Supp. 2d at 552 n.39.

130. *See supra* notes 78, 126-27 and accompanying text.

We note with some caution . . . that, by taking judicial notice of the reliability of HGN testing and technique, the appellate court had relieved the State of its burden of establishing the reliability of the test at trial. We acknowledge that we, in taking judicial notice of the reliability of the test . . . are likewise relieving the State of that burden. We shall, nevertheless, take judicial notice that HGN testing, a scientific test, is sufficiently reliable and generally accepted in the relevant scientific community. We do so considering the great weight of scientific support in the literature and in light of its adoption in most other jurisdictions that have addressed the issue.

To do otherwise at this stage in the development of the science would leave to individual courts within the twenty-three jurisdictions of this state (and the various courts and judges within each jurisdiction) to determine, on a case-by-case basis, the scientific reliability of the test. In each of the various jurisdictions, the determination of the reliability and acceptability of such evidence would depend upon the competence, energy, and schedules (and even the budgets) of the various prosecutors throughout the State in obtaining, and producing the attendance of experts at the thousands of trials involving alcohol related offenses in which HGN testing is sought to be admitted. Disparate results and decisions might result in many instances, not from the actual scientific reliability of the tests themselves, but from the differing abilities and resources of prosecutors and the availability of witnesses from the scientific community.<sup>131</sup>

In so stating, the Maryland Court of Special Appeals eschewed the defendant's right to a fair trial by holding that the tests admitted against him are reliable and test what they purport to test.<sup>132</sup> In so doing, the court favored prosecutors, by helping them constrain their budgets and lightening their schedules.

#### *B. Horn's Response to the Maryland Approach*

The concerns of the *Schultz* court are indeed valid ones. Developing a simple test that facilitates an officer's ability to detect drunk driving, as well as punishing those guilty of the offense efficiently and inexpensively, are logical and important goals of a court. Magistrate Grimm agreed, writing, "The practical truth of [the *Schultz* court's] reasoning cannot be denied. . . . [I]t is highly desirable to have available a simple, inexpensive, and reliable test that can be administered by police officers on the road, which would facilitate a prompt and inexpensive trial."<sup>133</sup>

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131. *Schultz*, 106 Md. App. at 173-74, 664 A.2d at 74.

132. *See id.*

133. *Horn*, 185 F. Supp. 2d at 550.

Magistrate Grimm, correctly, did not base his decision on these factors of efficiency and convenience, but on the constitutional guarantee of a fair trial.<sup>134</sup> He wrote:

What cannot be lost in the process, however, is the requirement that the trial be a fair one and that the sum of the evidence introduced against the defendant must be sufficiently probative to prove guilt beyond a reasonable doubt. Expedient as it may be for courts to take judicial notice of scientific or technical matters to resolve the crush of DWI/DUI cases, this cannot be done in the face of legitimate challenges to the reliability and accuracy of the tests sought to be judicially noticed.<sup>135</sup>

The goal of ensuring that every defendant appearing against the State be provided with a fair trial should be given higher priority than setting standards of uniformity and efficiency—standards which make it easier for prosecutors to make their case against those defendants.

While the application of the Rule 702/*Daubert/Kumho Tire* standard may require a more searching examination of the reliability of scientific and technical testimony, adoption of that standard is not required for Maryland courts to correctly decide the admissibility of field sobriety tests.<sup>136</sup> Obviously, Maryland courts are required to follow the Maryland Rules of Evidence, and may therefore be precluded from abandoning the *Frye/Reed* standard.<sup>137</sup> Adopting the federal approach, however, is not a prerequisite for Maryland courts to reach the correct result. Maryland courts need to reexamine the taking of judicial notice of the reliability of field sobriety tests. In fact, if the evidence introduced in *Horn* were available to a court applying the *Frye/Reed* standard, it is likely that the Standardized Field Sobriety Tests would not be found reliable, and therefore subject to limitations similar to those established by Magistrate Grimm in *Horn*.

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134. See generally U.S. CONST. amend. VI (stating that “[i]n all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the State”).

135. *Horn*, 185 F. Supp. 2d at 550-51. Magistrate Grimm also recognized the fact that, if taking judicial notice of the reliability of the tests serves to preserve limited prosecutorial resources, the burden of refuting their admissibility will fall on defendants who will likely have even fewer resources at their disposal to challenge the tests. *Id.* at 550 n.36.

136. See *supra* notes 122-23 and accompanying text.

137. See MD. R. 5-702. The Committee note states: “This Rule is not intended to overrule *Reed v. State* and other cases adopting the principles enunciated in *Frye v. United States*. The required scientific foundation for the admission of novel scientific techniques or principles is left to development through case law. Compare *Daubert v. Merrell Dow Pharmaceuticals, Inc.*” *Id.* (citations omitted).

C. *The Standardized Field Sobriety Tests Do Not Satisfy the Frye/Reed General Acceptance Standard*

A look at Magistrate Grimm's rationale in *Horn* shows not only that the Standardized Field Sobriety Tests failed to satisfy the federal evidentiary standard, but also that the *Frye/Reed* standard is likely not met.<sup>138</sup> The Maryland Court of Special Appeals, therefore, erred in *Schultz* by taking judicial notice of the reliability of the Standardized Field Sobriety Tests.

Maryland Rule 5-201(b), which governs what courts may take judicial notice of, reads, "A judicially noticed fact must be one *not subject to reasonable dispute* in that it is either (1) generally known within the territorial jurisdiction of the trial court or (2) capable of accurate and ready determination by resort to sources *whose accuracy cannot reasonably be questioned.*"<sup>139</sup>

Perhaps in 1995, when the Court of Special Appeals of Maryland decided *Schultz*, the existing research led to the conclusion that the field sobriety tests were reliable. However, testimonial evidence from *Horn* refutes the reliability of these tests to such an extent that reliability no longer deserves judicial notice.<sup>140</sup> The fact remains, as well, that the *Schultz* court did not even consider (or at least cite to) any of the scientific studies regarding the tests and their reliability.<sup>141</sup>

Instead of engaging in independent research and forming its own conclusions, the court, relying on a nine-year-old case, based its decision on the fact that other courts had accepted the tests as reliable.<sup>142</sup> The case the *Schultz* court relied upon was *State v. Superior Court*,<sup>143</sup> decided by the Supreme Court of Arizona in 1986.<sup>144</sup> In that case, the court wrote, "Although the publications [indicating the reliability of HGN testing] are not voluminous, they have been before the relevant communities a considerable period of time for any opposing views to have surfaced."<sup>145</sup>

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138. See *infra* notes 142-50 and accompanying text.

139. Md. R. 5-201(b) (emphasis added). See also *supra* note 81-82 and accompanying text.

140. See *supra* notes 97-120, 124 and accompanying text.

141. See *supra* notes 81-82, 123 and accompanying text.

142. See *Schultz*, 106 Md. App. at 157, 664 A.2d at 66 (stating that "[t]he admissibility of the results of HGN testing has been challenged in some foreign jurisdictions for failing to satisfy the *Frye* standard (or the standard adopted by that jurisdiction for determining the admissibility of scientific evidence)"). The court noted *State v. Superior Court*, 149 Ariz. 269, 718 P.2d 171 (1986), as an early case in which the test was unsuccessfully challenged. *Id.*

143. 718 P.2d 171 (Ariz. 1986).

144. *Id.*

145. *Id.* at 181. The sources the Supreme Court of Arizona utilized in its decision can be found in appendices to the opinion at 182-84. This quoted passage seems to indicate that the court encountered little or no opposing

The *Schultz* court, writing in 1995, based their acceptance of HGN testing as reliable upon research from 1986.<sup>146</sup> Judicial notice relieves the prosecution of its burden of proving the reliability and admissibility of the test results, even if evidence indicating the unreliability of the test is available. That research may still have been valid when the *Schultz* court was writing, but the testimony presented in *Horn* certainly calls these studies, and thus the reliability of the test, into question.

Under the *Frye/Reed* standard, a method must have gained general acceptance in the relevant scientific community to be considered reliable.<sup>147</sup> However, based on expert testimony in *Horn*, particularly that of Spurgeon Cole, Ph.D.,<sup>148</sup> one can see that Standardized Field Sobriety Tests probably do not meet this standard.<sup>149</sup> Dr. Cole's testimony first challenged the validity of the tests, which is a component of general acceptance.<sup>150</sup> His criticism focuses on the validity of the WAT and OLS tests.<sup>151</sup>

Looking at the reasons for the Standardized Field Sobriety Tests' failure under the federal standard can be instructive in showing why the general acceptance standard is also not satisfied. When evaluating whether the tests had been subjected to peer review, one of the *Daubert* factors,<sup>152</sup> Cole stated, "[I]t is difficult to see how the NHTSA could claim that the FST is accepted in the scientific community, when results of studies on the validation of the FST have never appeared in a scientific peer reviewed journal, which is a basic requirement for acceptance by the scientific community."<sup>153</sup>

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views, which, in light of *Horn* and many other cases, obviously is not the case.

146. See generally *id.*

147. See *supra* notes 11-22 and accompanying text.

148. *Horn*, 185 F. Supp. 2d 530, 540 (2002). Cole is a Professor Emeritus of Psychology at Clemson University and author of several articles on SFSTs. See *id.* at 539-40. See also <http://www.clemson.edu/psych/faculty.html> (last visited Mar. 29, 2005).

149. Not meeting the *Frye/Reed* standard would not render the tests and their results inadmissible, but it would subject them to *Horn*-like limitations.

150. See *Horn*, 185 F. Supp. 2d at 540. Dr. Cole stated in the Defendant's Memorandum that the SFSTs "must be held to the same standards the scientific community would expect of any valid test of behavior." *Id.*

151. *Id.*

152. See *supra* note 34 and accompanying text.

153. *Horn*, 185 F. Supp. 2d at 541. Dr. Cole concluded his testimony:

Because of its widespread use, the FST battery has been assumed to be a reliable and valid predictor of driving impairment. NHTSA has done little to dispel that assumption. . . . The FST battery to be valid must discriminate accurately between the impaired and non-impaired driver. NHTSA's own research on that issue . . . has not been subjected to peer review by the scientific community. In addition, a careful reading of the reports themselves provides support for the inadequacy of the FST battery.

*Id.* at 541-42.

Because the reliability of the Standardized Field Sobriety Tests has not been subjected to peer review, the concept has not gained general acceptance of the scientific community, making it unreliable even under a *Frye/Reed* analysis.<sup>154</sup>

A number of people within the relevant scientific community have expressed doubts as to the reliability of the HGN tests, showing a lack of general acceptance of the test's reliability. For example, in addition to Dr. Cole, three other experts offered testimony for the defendant in *Horn*.<sup>155</sup> An examination of similar case law reveals several other courts have found Standardized Field Sobriety Tests unreliable indicators of intoxication.<sup>156</sup> Therefore, the Court of Special Appeals of Maryland erroneously took judicial notice of the reliability of the Standardized Field Sobriety Tests under the *Frye/Reed* general acceptance standard.

#### D. Treatment in Other Jurisdictions

Courts in jurisdictions using the *Frye* test have found the Standardized Field Sobriety Tests unreliable and, therefore, inadmissible. For example, in *Young v. City of Brookhaven*,<sup>157</sup> the Supreme Court of Mississippi held that the HGN test failed the *Frye* analysis, as it had not gained acceptance in the scientific community.<sup>158</sup>

It remains to be seen what would happen if Maryland courts reexamined the reliability of the HGN test. One possibility is that, after doing so, the court would reach the same conclusion. This, however, seems unlikely, assuming the examining court would actually analyze the existing research and correctly conclude that the results of HGN

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154. See *supra* notes 11-22 and accompanying text.

155. *Horn*, 185 F. Supp. 2d at 539. They are: Yale Caplan, Ph.D., the former chief toxicologist for the State of Maryland and former scientific director of the Maryland Alcohol Testing Program; Harold P. Brull, a licensed psychologist; and Joel Wiesen, Ph.D., an industrial psychologist and "independent consultant in the field of development and validation of human performance tests." *Id.*

156. See generally *State v. Garrett*, 811 P.2d 488 (Idaho 1991) (holding HGN alone not enough to show intoxication); *State v. Chastain*, 960 P.2d 756 (Kan. 1998) (holding HGN was not an accepted scientific test); *Young v. City of Brookhaven*, 693 So. 2d 1355 (Miss. 1997) (holding the HGN test had not been accepted by the scientific community and HGN is only admissible for probable cause purposes); *Duffy v. Dir. of Revenue*, 966 S.W.2d 372 (Mo. Ct. App. 1998) (holding HGN was not administered correctly so the result was excluded from evidence); *State v. Torres*, 976 P.2d 20 (N.M. 1999) (holding that the State must show the reliability of the HGN test in order for it to be admitted into evidence).

157. 693 So. 2d 1355 (Miss. 1997).

158. *Id.* at 1360-61. The *Young* court went even farther than the *Horn* court did, holding that HGN test results were only admissible at a probable cause hearing, and not admissible at all at trial, stating that "[h]owever, the HGN test can still be used to prove probable cause to arrest and administer the intoxilyzer or blood test. This is the only allowable use for the test results." *Id.* at 1361.

testing have been called into question. The reliability of the tests have been refuted to the point that one can no longer maintain they meet the *Frye/Reed* standard of general acceptance within the scientific community.

One indicia as to how Maryland courts would rule is to examine how other courts, utilizing the *Frye* standard, have held regarding the reliability of field sobriety testing.<sup>159</sup> One such court, the Supreme Court of Mississippi, ruled that the test results were not reliable because the *Frye* standard was not satisfied, and held the tests were only admissible to prove probable cause existed, and completely inadmissible for any other purpose.<sup>160</sup>

The Superior Court of Pennsylvania also ruled that the results of an HGN test were entirely precluded from being admitted into evidence in *Commonwealth v. Apollo*.<sup>161</sup> In that trial, the State presented one expert who testified as to the reliability of HGN testing as an indicator of intoxication.<sup>162</sup> The court held that this testimony did not meet the general acceptance requirement of *Frye*<sup>163</sup> because it was based in part upon the expert's personal observations and views, and the trial court had been confronted with evidence that indicated that the tests were not reliable.<sup>164</sup>

Faced with the same issue, the Supreme Court of Nebraska, utilizing the *Frye* standard, reached a conclusion similar to that of the *Horn* court.<sup>165</sup> In *State v. Baue*, the Nebraska court ruled that the *Frye* test was satisfied, but limited the purpose for which the results of HGN testing could be admitted into evidence to establishing that the defendant *may have been* intoxicated.<sup>166</sup> The court went on to state that

159. The discussion here will center around the *Frye* standard, as this is the method of evaluating scientific evidence currently used by Maryland (and many other states) courts, and in light of the language of the Committee note to MD. R. 5-702. See *supra* notes 132-33 and accompanying text.

160. See *Young*, 693 So. 2d at 1360-61 (Miss. 1997). See also *supra* notes 140-41 and accompanying text. The *Young* court did not explain the reasoning behind its holding that the tests were unreliable.

161. 603 A.2d 1023 (Pa. Super. Ct. 1992).

162. *Id.* at 1027. The expert was a behavioral optometrist who evaluated eye health and visual performance. *Id.*

163. *Frye* was adopted as the applicable standard by Pennsylvania state courts in *Commonwealth v. Topa*, 369 A.2d 1277 (Pa. 1977). See *Apollo*, 603 A.2d at 1026.

164. *Apollo*, 603 A.2d at 1028. The court concluded: "Under these circumstances, we cannot say that the lower court abused its discretion when it precluded the admission at trial of any evidence concerning the administration to appellant of the HGN test or of the results of that test." *Id.*

165. *State v. Baue*, 607 N.W.2d 191 (Neb. 2000).

166. *Id.* at 204. The court wrote:

[W]e hold that the HGN field sobriety test meets the *Frye* standard for acceptance in the relevant scientific communities, and when the test is given in conjunction with other field sobriety tests, the results are admissible for the limited purpose of establishing that a person has an impairment which may be caused by alcohol.

while the results of HGN testing are relevant, the results of the test are not enough to prove that a defendant is guilty of driving under the influence of alcohol.<sup>167</sup> In *State v. Chastain*,<sup>168</sup> the Supreme Court of Kansas considered expert testimony,<sup>169</sup> and still concluded that HGN testing did not satisfy the *Frye* standard.<sup>170</sup>

In light of the jurisdictions that apply the *Frye* standard and have either concluded that HGN testing does not meet the standard, or have limited the purposes for which the test could be used, it is evident that the issue should be reexamined by Maryland courts. *Horn* revealed a plethora of evidence that casts doubt upon the reliability of the Standardized Field Sobriety Tests in general, and the HGN test specifically.<sup>171</sup> Considering this testimony, it is difficult to continue to recognize the reliability of the tests and their results. It is also difficult to understand how Maryland courts can ignore the existing research, relieving the state of its burden of proving the reliability of questionable science, by taking judicial notice of the reliability of the tests.

*E. How Should Maryland State Courts Treat the Standardized Field Sobriety Tests When it Comes to Admitting Their Results into Evidence?*

Because of the thorough analysis of Magistrate Grimm in *Horn*, which considered all of the relevant scientific research available, one can only reach the conclusion that a standard employing similar limitations on the testimony regarding a defendant's performance on a field sobriety test is the correct one. Properly conducted Standardized Field Sobriety Tests can be used to determine whether probable cause existed to charge a driver with DWI or DUI, but may not be used to prove a specific BAC.<sup>172</sup> A court may take judicial notice of the connection between HGN and intoxication, but the defense should be given the opportunity to point out that this relationship is by no means exclusive.<sup>173</sup> Finally, an arresting officer may offer lay opinion testimony of first hand observations of the defendant taking the tests, admissible as circumstantial evidence of intoxication, but may not use conclusory language such as "fail" or "standardized clues" while testifying.<sup>174</sup> Only when similar limitations are placed upon the admissibility of the test results in Maryland state courts will defendants accused of DWI or DUI be ensured the fair trial that they are entitled to.

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*Id.*

167. *Id.*

168. 960 P.2d 756 (Kan. 1998).

169. See *supra* notes 102-03 and accompanying text.

170. *Chastain*, 960 P.2d at 761 (stating that the court was "not satisfied that such testing has achieved general acceptance within the relevant scientific community").

171. See *supra* notes 85-120 and accompanying text.

172. *Horn*, 185 F. Supp. 2d at 532-34.

173. *Id.*

174. *Id.*



## VI. CONCLUSION

Drunk driving is a very serious problem in the United States today.<sup>175</sup> The role of the courts in correcting this problem is to see that those guilty of driving while intoxicated are punished for their actions. In achieving this goal, courts must apply the proper evidentiary standard when determining the admissibility of field sobriety tests. Maryland and federal courts have reached two different conclusions as to the admissibility of these tests.

Regardless of which standard is applied, the holding of *United States v. Horn*—that the Standardized Field Sobriety Tests cannot be used to prove a specific BAC, or even as direct evidence of intoxication, but only as circumstantial evidence of intoxication—is correct.<sup>176</sup> This type of evidence is subject to even further limitations.<sup>177</sup> The Court of Special Appeals of Maryland, in *Schultz v. State*, chose to ignore studies that have disputed the accuracy and reliability of Standardized Field Sobriety Tests by taking judicial notice of their accuracy.<sup>178</sup> Because of the shaky footing upon which judicial notice was taken in *Schultz*, the conclusion that the reliability of the Standardized Field Sobriety Tests has reached “general acceptance” within the scientific community is faulty, and Maryland courts should adopt an approach similar to that in *United States v. Horn*.

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175. *See supra* notes 4-7 and accompanying text.

176. *See supra* notes 85-88 and accompanying text.

177. *See supra* notes 85-117 and accompanying text.

178. *See supra* note 80 and accompanying text.