

**IN THE STATE COURT OF FULTON COUNTY
STATE OF GEORGIA**

STATE OF GEORGIA,	:	
	:	
vs.	:	
	:	Case No. _____
_____, :	DOA: _____	
	:	Citation No.: _____
<i>Defendant.</i>	:	

**BRIEF IN SUPPORT OF MOTION TO EXCLUDE TESTIMONY
CORRELATING THE HORIZONTAL GAZE NYSTAGMUS TEST TO
IMPAIRMENT BY DRUGS AND “DRE” EVIDENCE UNTIL THE STATE
HAS LAID A PROPER FOUNDATION PURSUANT TO *HARPER***

The Defendant has moved this Honorable Court to exclude testimony regarding the Horizontal Gaze Nystagmus test until the State has laid a proper foundation pursuant to Harper for correlating HGN to alleged drug impairment. Because (1) there is a complete lack of study and validation with regard to the ability of the HGN test to predict impairment by the *drugs* at issue in this case and there is not a case in Georgia that has recognized the HGN test as satisfying the Harper standard for the purpose of determining impairment by *drugs*, the HGN test evidence should be excluded from evidence at the trial of this case.

The Defendant has also moved this Honorable Court to exclude “DRE” evidence, including but not limited to the lack of convergence test, the pupilometer test, the rebound dilation test, and the pulse rate test, based upon the failure of the State to introduce any evidence that such evidence satisfies the Harper standard.

In support of his motion, the Defendant shows this Honorable Court the following:

I. The Horizontal Gaze Nystagmus Test Is a Scientific Test Under *Harper v. State*

The determination of whether a scientific principle or technique is admissible in criminal case in Georgia is governed by the rule stated in Harper v. State, 249 Ga. 519, 525-26, 292 S.E.2d 389 (1982). The Harper rule requires that the Court in a criminal case determine “whether a given scientific principle or technique is a phenomenon that may be verified with such certainty that it is competent evidence in a court of law....” Id. at 525. Otherwise stated, the Court must determine whether the scientific principle or technique “has reached a scientific stage of verifiable certainty” or “rests upon the laws of nature.” Id. (citations omitted). “[E]vidence based on a scientific principle or technique is admissible only if the science underlying the evidence is a phenomenon that may be verified with such certainty that it is competent evidence in a court of law.” Parker v. State, 307 Ga.App. 61, 704 S.E.2d 438 (2010).

In Harper, the Georgia Supreme Court described the types of evidence that our trial courts should look to in determining whether a scientific principle or technique has reached a scientific stage of verifiable certainty. The Harper court explicitly expressed its disapproval of the “counting heads” rule of Frye v. United States, 293 F. 1013 (D.C. Cir. 1923). Id. According to the Harper Court:

The trial court may make this determination from evidence presented to it at trial by the parties; in this regard expert testimony may be of value. Or the trial court may base its determination on exhibits, treatises or the rationale of cases in other jurisdictions. The significant point is that the trial court makes this determination based on the evidence available to him rather than by simply calculating the consensus in the scientific community. Once a procedure has been recognized in a substantial number of courts, a trial judge may judicially notice, without receiving evidence, that the procedure has been established with verifiable certainty, or that it rests upon the laws of nature.

Id. at 525-26. “[O]nce a procedure has been utilized for a significant period of time, and expert testimony has been received thereon in case after case, the trial court does not have to keep reinventing the wheel; a once novel technology can and does become commonplace.” Hawkins v. State, 223 Ga. App. 34, 476 S.E.2d 803, 807 (1996).

Certain evaluations commonly employed in DUI investigations, such as the “ABCs,” the “Walk-and-Turn Test,” and the “One-Leg Stand Test,” have been recognized as “physical dexterity exercises that common sense, common experience, and the ‘laws of nature’” share are performed less well after drinking alcohol.” Hawkins, 223 Ga. App. 34, 476 S.E.2d 803, 807 (1996). Accordingly, “[t]he screening of these gross motor skills is hardly the type of ‘scientific principle or technique’ to which Harper referred, and this Court will not hold these physical manifestations of impairment, which could be as obvious to the layperson as to the expert, to such a standard of admissibility.” Id.

In contrast to those tests which test gross motor skills (e.g., a walk-and-turn or one-leg stand test) or which drawn upon commonsense for their utility in a DUI investigation (e.g., an alphabet test), certain tests typically employed in DUI investigations require a determination that the Harper standard has been satisfied. In Hawkins, the Court of Appeals clarified that **the horizontal gaze nystagmus (hereinafter, “HGN”) test is a scientific test that required a Harper foundation.** The HGN test involves “the well-known and medically accepted principle that nystagmus can be caused by the ingestion of alcohol: ‘Jerk nystagmus ... is characterized by a slow drift, usually away from the direction of gaze, followed by a quick jerk of recovery in the direction of gaze. A motor disorder, it may be congenital or due to a variety of conditions affecting the brain,

including ingestion of drugs such as **alcohol and barbiturates....**’ Hawkins, 476 S.E.2d at 807 (citations omitted)(emphasis added).

II. The HGN Test Satisfies the *Harper* Standard for Indicating Alcohol Impairment

In Hawkins, the Court further held “that the “HGN test is an accepted, common procedure that has reached a state of verifiable certainty in the scientific community and is admissible as a basis upon which an officer can determine that a driver was impaired **by alcohol.**” Id. at 808 (emphasis added). Thus, the Hawkins Court held that the trial court was no longer required to hear expert testimony in order to introduce evidence of HGN for the purposes of determining impairment by alcohol. Id. In reaching its conclusion that the production of evidence to satisfy the Harper standard for admissibility was no longer required, the Court observed the following:

- (1) the effect of **alcohol** on the eyes and inducing horizontal gaze nystagmus is recognized in The Merck Manual of Diagnosis and Therapy;
- (2) the horizontal gaze nystagmus test has undergone validation studies sanctioned by the National Highway Traffic Safety Administration (Burns & Moskowitz, “Psychophysical Tests for DWI Arrest,” U.S. Department of Transportation, Rep. No. DOT-HS-802-424 (1977); Schweitz & Snyder, “Field Evaluation of a Behavioral Test Battery for DWI,” U.S. Department of Transportation, Rep. No. DOT-HS-806-475 (1983);
- (3) the horizontal gaze nystagmus test has been employed by law enforcement in all 50 states;
- (4) the relationship of horizontal gaze nystagmus to **alcohol consumption** was recognized in the premier DUI defense treatise (Erwin, Defense of Drunk Driving Cases (3rd ed. 1985), § 8.15A[3]);and
- (5) “The characteristics, theory, and scientific acceptability of HGN testing in relation to DUI cases has been discussed in numerous articles and in numerous judicial opinions. See particularly, State v. Superior

Court, 149 Ariz. 269, 718 P.2d 171, appendices A & B 182-184, 149 Ariz. 269, 718 P.2d 171 (1986); *State v. Nagel*, 30 Ohio App.3d 80, 506 N.E.2d 285 (1986); see also, e.g., Barnes, The Effects of **Ethyl Alcohol** on Visual Pursuit and Suppression of the Vestibulo-Ocular Reflex, 406 ACTA Otolaryngol Supp., p. 161 (Sweden 1984) (**ethyl alcohol** disrupted visual pursuit eye movement by increasing number of nystagmic “catch-up saccades”); Goldberg, Effects and After-Effects of **Alcohol**, Tranquilizers and Fatigue on Ocular Phenomena, Alcohol and Road Traffic, p. 123 (1963) (of different types of nystagmus, alcohol gaze nystagmus is the most easily observed); Zyo, Medico-Legal and Psychiatric Studies on the **Alcoholic Intoxicated Offender**, 30 Japanese J. of Legal Medicine, No. 3 (1976), p. 169 (recommends use of nystagmus test to determine somatic and mental symptoms of **alcohol intoxication**, as well as **blood alcohol content**).”

Hawkins, 476 S.E.2d at 807-808.

III. The HGN Test Lacks An Adequate Foundation Pursuant to *Harper* For the Detection of Impairment of Drugs

In Hawkins, the Court held that the HGN test generally satisfies the *Harper* standard for the detection of alcohol. However, even in the context of detecting alcohol impairment, there are limits to the admissibility of HGN evidence. In Bravo v. State, 304 Ga. App. 243, 246-47, 696 S.E.2d 79, 82-83 (2010) (citations omitted), the Court of Appeals reversed a conviction based, in part, on an officer’s testimony that he relied upon HGN evidence to determine a numerical level of a driver’s blood-alcohol level. There are limits imposed upon the admissibility of opinions based upon HGN test evidence even in the context of an alcohol-based DUI under Harper.

Similar to the lack of scientific validation for determining a numerical level of a driver’s blood-alcohol level based upon HGN test evidence, there is a complete lack of study and validation with regard to the ability of the HGN test to

predict impairment by the drugs at issue in this case. To the best of the undersigned's knowledge, there is not a case in Georgia that has recognized the HGN test as satisfying the Harper standard for the purpose of determining impairment by drugs. Accordingly, evidence regarding the HGN test should be excluded from this case until the State has adequately laid a foundation for the admission of such evidence in accordance with Harper.

IV. The DRE Evidence Lacks An Adequate Foundation Pursuant to *Harper*

The Defendant has also moved this Honorable Court to exclude “DRE” evidence, including but not limited to the lack of convergence test, the pupilometer test, the rebound dilation test, and the pulse rate test, based upon the failure of the State to introduce any evidence that such evidence satisfies the Harper standard. Prior to the hearing, the State stipulated that the Romberg test evidence in this case would be inadmissible based upon *Mitchell v. State*, 301 Ga. 563, 566–67, 802 S.E.2d 217, 221–22 (2017), disapproved of by *State v. Turnquest*, No. S19A0157, 2019 WL 1982954 (Ga. May 6, 2019). The lack of convergence test, the pupilometer test, the rebound dilation test, and the pulse rate test should be inadmissible for the same reasons that the Georgia Supreme Court held that it was improper to admit the Romberg test evidence in _____:

In the case before us, the only witnesses at the hearing on the motions in limine were the police officers, and only the city police officer testified with respect to “the Romberg balance [sic].” He testified that the subject is instructed to shut his eyes, tilt his head backwards, and estimate the passage of 30 seconds. He added that “[t]he main purpose of [the test] is to get a person’s—excuse me—to gauge a person’s internal clock, to figure out if their internal clock is correct or accurate, given that certain drugs, alcohol being one of them, that could impair your ability to interpret the passage of time or perceive it.” The officer elaborated that he was also looking for “eyelid tremors” and that “pretty much anybody that’s unimpaired and of reasonable faculty can estimate, can get within five seconds, plus or minus, of that 30-second mark.”

On cross-examination, however, the officer acknowledged that he was not aware of any validation studies for the Romberg test, “not like there are for the other three tests, no, sir.” He also acknowledged that the range of plus or minus five seconds as an indication of impairment had not been established. His knowledge of the test was based on his participation in DRE or “drug recognition expert” school. No scientific or medical testimony was presented at the hearing.⁴

We conclude that, on the basis of the evidence presented at the hearing in this case, admissibility of the Romberg test is subject to the Harper standard. The significance of eyelid tremors or an individual’s “internal clock,” how they may be affected by the consumption of alcohol, and particularly whether a range of five seconds above or below the actual passage of 30 seconds establishes impairment, are not matters of common sense or experience, nor are they obvious to the average lay observer.⁵ The trial court therefore erred in failing to conduct a Harper analysis, whether through the evaluation of expert testimony or through the examination of exhibits, treatises, or the law of other jurisdictions. Harper, supra, 249 Ga. at 525-526 (1), 292 S.E.2d 389. We therefore reverse this portion of the trial court’s order.

Mitchell v. State, 301 Ga. 563, 566–67, 802 S.E.2d 217, 221–22 (2017), disapproved of by State v. Turnquest, No. S19A0157, 2019 WL 1982954 (Ga. May 6, 2019).

As in _____, the arresting officer in this case testified that his knowledge of the lack of convergence test, the pupilometer test, the rebound dilation test, and the pulse rate test was based on his participation in DRE or “drug recognition expert” school. No scientific or medical testimony was presented at the hearing. In addition to those authorities cited above, _____ requires that the the lack of convergence test, the pupilometer test, the rebound dilation test, and the pulse rate test be excluded unless and until the State can introduce evidence satisfying the Harper standard.

Respectfully Submitted, this 31st day of May, 2019.

D. Benjamin Sessions
State Bar No. 141280
Attorney for Defendant

3155 Roswell Road, Suite 220
Atlanta, GA 30305
Tel: (470) 225-7710
Fax: (470) 745-0734

CERTIFICATE OF SERVICE

I hereby certify that I have served a true and accurate copy of the foregoing pleading upon the prosecuting attorney in this case by _____ delivery of same to opposing counsel's office.

Respectfully Submitted, this 31st day of May, 2019.

D. Benjamin Sessions
State Bar No. 141280
Attorney for Defendant

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Atlanta, GA 30305
Tel: (470) 225-7710
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