IN THE SUPREME COURT OF NORTH CAROLINA

No. 468PA97

FILED: 9 JULY 1998

STATE OF NORTH CAROLINA

v.

BOBBY NEAL HELMS

On discretionary review pursuant to N.C.G.S. § 7A-31 of a unanimous decision of the Court of Appeals, 127 N.C. App. 375, 490 S.E.2d 565 (1997), finding harmless error and affirming judgment entered by Greeson, Jr., J., on 24 April 1996 in Superior Court, Union County. Heard in the Supreme Court 9 March 1998.

Michael F. Easley, Attorney General, by Isaac T. Avery, III, Special Deputy Attorney General, for the State-appellant and -appellee.

Shawna Davis Collins for defendant-appellant and -appellee.

FRYE, Justice.

Defendant appealed his conviction of driving while impaired in violation of N.C.G.S. § 20-138.1. He contended that the trial court erred by admitting into evidence the results of a horizontal gaze nystagmus (HGN) test without the establishment of a proper foundation. Defendant contended that the HGN test is a scientific test requiring expert testimony as to its reliability. The Court of Appeals agreed that the State failed to lay a proper foundation at trial for admission of the HGN test results. Nevertheless, the panel concluded that the error was harmless and upheld defendant's conviction. We agree with the Court of

Appeals on the admissibility of the HGN test results but reverse on the issue of harmless error.

The State's evidence adduced at trial tended to show the following: Officer E.P. Bradley (Bradley) had stopped at an intersection in Monroe, North Carolina, at approximately 4:00 a.m. on 30 December 1995 when defendant drove past. Bradley noticed the tail lights of defendant's automobile were not operating and, while following the vehicle, observed it weave from the left side of its lane of travel to the right, striking the curb with the right front tire. Bradley activated his blue light, and defendant's automobile made a wide right turn onto a side street, veering into the opposite lane before coming to a stop.

Bradley approached the vehicle and immediately noticed a strong odor of alcohol as defendant rolled down the driver's side window. Bradley requested that defendant produce his driver's license, and the latter indicated "he didn't have any license." Bradley noted defendant's speech was "mumbled" and asked him to exit his vehicle. As defendant did so, he was unsteady on his feet. Bradley further observed defendant's eyes were bloodshot, his shirt tail was hanging out, and his clothes were soiled. Later, as defendant sat in the patrol car, Bradley noted a strong odor of alcohol emanating from defendant.

Thereafter, Bradley administered an HGN test. Bradley directed defendant to focus upon a pen held twelve to fifteen inches from defendant's face as Bradley slowly moved the pen out of defendant's field of vision towards the latter's ear. Bradley

testified, over strenuous objections by defendant, that twitching of defendant's eyes during administration of the test would be associated with alcohol intoxication. On redirect examination, Bradley stated he had completed a forty hour training class dealing with the HGN test.

Based upon the results of the HGN test and his observations concerning defendant's operation of his vehicle and the odor of alcohol on defendant's breath, Bradley formed the opinion that defendant had consumed a sufficient quantity of alcohol so as to have impaired his mental and physical abilities. Bradley then placed defendant under arrest and transported him to the county jail, where defendant refused administration of an intoxilyzer test. At the county jail Bradley administered other sobriety measuring tests known as the one-legged stand and the walk-and-turn test. Defendant performed poorly on both tests.

Defendant presented no evidence at trial. The jury returned a verdict of guilty of driving while impaired.

Following his conviction, defendant was sentenced to a term of two years imprisonment based upon the presence of aggravating circumstances. Defendant appealed to the Court of Appeals contending that Bradley's testimony concerning the HGN test was inadmissible. Defendant contended that the HGN test is a scientific test and thus testimony as to HGN test results are admissible only following a proper foundation pursuant to N.C.G.S. § 8C-1, Rule 702. Because the State failed to lay such a foundation, defendant asserts, the HGN test results were improperly admitted into evidence.

The Court of Appeals held that Bradley's testimony regarding the HGN test results was inadmissible and declined to take judicial notice of the validity of the test. Though it found the admission of the HGN test results into evidence improper, the court found that the remaining testimony at trial overwhelmingly established defendant's guilt of driving while impaired. Thus, it concluded, the error was harmless.

This Court has not previously addressed the admissibility of HGN evidence. In now resolving this matter we look first to other jurisdictions which have considered the issue. Some courts have held that the results of HGN tests are admissible without evidentiary foundation. They reason that the HGN test is simply another field sobriety test, such as the finger-to-nose, sway, and walk-and-turn test, admitted as evidence of intoxication. *Whitson v. State*, 314 Ark. 458, 863 S.W.2d 794 (1993); *State v. Murphy*, 451 N.W.2d 154 (Iowa 1990); *Fargo v. McLaughlin*, 512 N.W.2d 700 (N.D. 1994); *State v. Nagel*, 30 Ohio App.3d 80, 506 N.E.2d 285 (1986) and *State v. Sullivan*, 310 S.C. 311, 426 S.E.2d 766 (1993). The Ohio Court of Appeals, for example, noted that

> the gaze nystagmus test, as do the other commonly used field sobriety tests, requires only the personal observation of the officer administering it. It is objective in nature and does not require expert interpretation.
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> . . . .
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> It should be remembered that the [HGN] test was one of a number of field sobriety tests administered by the officer to assist him in assessing [defendant's] physical condition. Taken together, they were

> strongly suggestive of intoxication. It does not require an expert to make such objective determinations.

Nagel, 30 Ohio App.3d 80, 80-81, 506 N.E.2d 285, 286.

A majority of those jurisdictions addressing the admissibility of HGN evidence have concluded the HGN test is a scientific test requiring a proper foundation to be admissible. *Ballard v.* State, 1998 WL 150774 (Ala. App.); State *v. Superior Court In and For Cochise County*, 149 Ariz. 269, 718 P.2d 171 (1986); *State v. Meador*, 674 So.2d 826 (Fla. Dist. Ct. App.), *review denied*, 686 So.2d 580 (Fla. 1996); *Commonwealth v. Sands*, 424 Mass. 184, 675 N.E.2d 370 (1997); *Emerson v. State*, 880 S.W.2d 759 (Tex. Crim. App.), *cert. denied*, 513 U.S. 931, 130 L. Ed. 2d 284 (1994). Nystagmus has been defined as a physiological condition that involves

> an involuntary rapid movement of the eyeball which may be horizontal, vertical or rotary. An inability of the eyes to maintain visual fixation as they are turned from side to side (in other words jerking or bouncing) is known as horizontal gaze nystagmus, or HGN.

Leahy, 8 Cal.4th at 592, 882 P.2d at 323 (citations omitted). The courts which hold that HGN tests are scientific tests note that the HGN test is based on an underlying scientific assumption that a strong correlation exists between intoxication and nystagmus. Because that assumption is not within the common experience of jurors, before HGN evidence may be heard by a jury there must be testimony as to the techniques used by the police officer and the officer's qualifications to administer the test.

A subset of those courts which hold that HGN tests are scientific in nature, also hold that expert testimony is required to establish that the scientific principles upon which the HGN test is based are generally accepted by the scientific community. According to these cases, unless a police officer has special training or adequate knowledge qualifying him as an expert to explain the correlation between intoxication and nystagmus, his testimony is not adequate foundation for the admission of HGN test results. *State v. Cissne*, 72 Wash.App. 677, 865 P.2d 564, *review denied*, 877 P.2d 1288 (1994); *Hulse v. State*, 1998 WL 239615 (Mont.); *People v. Leahy*, 8 Cal.4th 587, 882 P.2d 321 (1994); *Commonwealth v. Miller*, 367 Pa.Super. 359, 532 A.2d 1186 (1987); *State v. Ruthardt*, 680 A.2d 349 (Del. 1996); *Schultz v. State*, 106 Md.App. 145, 664 A.2d 60 (1995).

In the instant case, the Court of Appeals held, in accord with the majority view, that the HGN test does not measure behavior a lay person would commonly associate with intoxication but rather represents specialized knowledge that must be presented to the jury by a qualified expert. We agree. Once the expert testifies as to the relationship between HGN test results and intoxication, he or she is then subject to cross-examination to test the validity and reliability of the HGN test. Appropriate questions on cross-examination might be whether eye twitching or nystagmus could also be caused by nervousness, certain diseases, lack of sleep, or certain medications rather than alcohol intoxication. *See Schultz*, 106 Md.App. at 180-81,

664 A.2d at 77 (listing thirty-eight causes of nystagmus other than alcohol intoxication).

Under the North Carolina Rules of Evidence, "new scientific method[s] of proof [are] admissible at trial if the method is sufficiently reliable." *State v. Pennington*, 327 N.C. 89, 98, 393 S.E.2d 847, 852 (1990). This Court has stated that "in general, when no specific precedent exists, scientifically accepted reliability justifies admission of the testimony of qualified witnesses, and such reliability may be found either by judicial notice or from the testimony of scientists who are expert in the subject matter, or by a combination of the two." *State v. Bullard*, 312 N.C. 129, 148, 322 S.E.2d 370, 381 (quoting 1 Henry Brandis, Jr., Brandis on North Carolina Evidence § 86, at 323 (2d ed. 1982)). We find nothing in the record of the case before us to indicate that the trial court took judicial notice of the reliability of the HGN test. Further, the State presented no evidence and the court conducted no inquiry at trial regarding the reliability of the HGN test. Until there is sufficient scientifically reliable evidence as to the correlation between intoxication and nystagmus, it is improper to permit a lay person to testify as to the meaning of HGN test results. Accordingly, the admission of Bradley's testimony regarding the results of the HGN test administered to defendant was error.

Notwithstanding its finding that the admission of the HGN test results was improper, the Court of Appeals found that the receipt of the evidence was harmless error because the remaining evidence presented at trial overwhelmingly established

defendant's guilt of the crime of driving while impaired. The remaining evidence against defendant presented by the State is as follows: (1) Bradley testified that defendant crossed the center line and hit the right curb in his vehicle when he pulled back into his lane; (2) Bradley noticed a strong odor of alcohol coming from the car when he stopped defendant; (3) defendant was unsteady on his feet; (4) defendant's eyes were red and hazy and his clothes were disheveled; and (5) there was an odor of alcohol coming from defendant's breath. The following additional evidence was brought out on cross-examination: (1) Bradley admitted that the lay out of Hill Street requires a wide turn and that no dividing line exists on the street; (2) Bradley admitted that alcohol itself has no odor but the flavorings of the beverage cause it to smell like an alcoholic beverage; (3) there was no evidence in the record that defendant had been drinking an alcoholic beverage and not a non-alcoholic beverage with similar flavorings; (4) there are many different reasons which could cause a person's eyes to be red other than the use of alcohol; and (5) Bradley could not say for sure that defendant's speech was abnormal on the night in question because he had never heard defendant speak before.

We disagree that the evidence presented by the State at trial overwhelmingly established defendant's guilt. The admission of the HGN test results was, therefore, not harmless error. N.C.G.S. § 15A-1443(a) (1988) requires that defendant must show that had the error in question not been committed, a reasonable possibility exists that a different result would have

been reached at trial. The additional evidence brought out during defense counsel's cross-examination of Bradley supports a reasonable possibility that the jury could have reached a different verdict. We conclude that in light of the heightened credence juries tend to give scientific evidence, had evidence of the HGN test results not been erroneously admitted a reasonable possibility exists of a different outcome at trial.

Accordingly, and for the reasons stated herein, we reverse the Court of Appeals and remand for a new trial.

REVERSED AND REMANDED.