

Present: All the Justices

APRIL A. KEESEE

v. Record No. 990181 OPINION BY JUSTICE BARBARA MILANO KEENAN  
January 14, 2000

HOWARD ALEXANDER DONIGAN

FROM THE CIRCUIT COURT OF AMHERST COUNTY  
J. Michael Gamble, Judge

In this appeal from a judgment for the defendant in a negligence action, we determine whether the trial court abused its discretion in admitting the testimony of an automobile accident reconstruction expert concerning "average" human perception and reaction times.

In June 1997, April A. Keesee filed a motion for judgment against Howard Alexander Donigan alleging that Donigan negligently operated his motor vehicle, which collided with the vehicle she was driving and caused her to sustain personal injuries. Keesee alleged, among other things, that Donigan failed to keep a proper lookout while driving and failed to keep his vehicle under proper control.

The following evidence was presented in a jury trial. On September 8, 1996, at about 3:15 a.m., Keesee was injured when the car she was driving on State Route 655 in Amherst County collided with Donigan's vehicle. The accident occurred on the

two-lane roadway as Donigan approached Keesee's vehicle from the opposite direction.

A large fallen tree limb blocked Donigan's lane of travel from the shoulder of the road to a point near the center line mark. When Donigan saw the tree limb, he was able to steer his vehicle so that the tires on the driver's side passed through the small clearing between the end of the limb and the center line mark of the road. The front tire on the passenger's side rolled over the tree limb, but the rear tire on that side hit the limb and the vehicle was "thrown" into the path of Keesee's oncoming vehicle. The front left corners of the two vehicles collided.

Donigan testified that he was travelling at a maximum speed of 35 miles per hour when he saw the limb blocking his lane of travel. He stated that the headlights on his vehicle illuminated the roadway ahead for a distance of about 75 to 100 feet.

Michael Gould, a friend of Keesee's, testified that he was driving his vehicle on Route 655 in the same direction as Keesee about 50 yards ahead of Keesee's car. When Gould saw the tree limb blocking the lane in which Donigan's vehicle was approaching, Gould "flashed" his vehicle's high beam headlights several times to warn Donigan of the approaching danger.

Donigan testified that he thought Gould was trying to inform him that Donigan had his own high beam headlights activated.

Over Keese's objection, the trial court permitted Donigan to present the testimony of Stephen B. Chewning, who qualified as an expert in accident reconstruction, concerning "average" human perception and reaction times. Before ruling on Keese's objection, the trial court permitted counsel to question Chewning outside the jury's presence. During this questioning, Chewning agreed that many factors, including a person's physical condition, visual acuity, and cognitive abilities, affect the length of time required for that person to perceive and react to an unexpected highway danger. Chewning stated that an older person would have slower than "average" reaction times, while an athlete or an airplane pilot would react to sudden events faster than "average." Chewning acknowledged that he had not tested Donigan's vision or assessed his cognitive and physical abilities but assumed that they were "normal." The trial court overruled Keese's objection to Chewning's testimony.

Chewning testified before the jury regarding a person's perception of and reaction to an unexpected hazard while driving. He testified that based on numerous industry studies conducted by universities and government agencies over the past sixty years, a driver requires three-quarters of a second, "on average," to perceive a hazard. That driver also takes another

three-quarters of a second to react to what he has perceived. Thus, Chewning concluded that a driver requires an average of 1.5 seconds between the time he first recognizes a hazard and the time he executes an action to avoid the hazard. Chewning stated that this figure is subject to a variation of as much as four-tenths of a second, depending on the individual involved.

Chewning explained that this "average" period of 1.5 seconds is an "industry standard" that has remained constant since the 1930's, and generally is used in accident reconstruction unless there is a specific reason not to use it. He also testified, based on mathematical calculations, that a vehicle traveling 35 miles per hour covers 51.3 feet per second.

In his closing argument, Donigan's counsel used Chewning's testimony to support his argument that since Donigan required 1.5 seconds to perceive and react to the presence of the tree limb, he did not have sufficient time to avoid the accident. The jury returned a verdict in favor of Donigan, and the trial court entered judgment in accordance with the jury verdict.

On appeal, Keesee argues that the trial court erred in admitting Chewning's testimony concerning "average" perception and reaction times. She contends, among other things, that Chewning's testimony concerning this test data was inadmissible because it failed to consider whether Donigan's physical and

mental condition may have affected his perception and reaction times.

In response, Donigan contends that the challenged testimony was properly admitted because it assisted the trier of fact in understanding the process by which a person perceives and reacts to an unexpected hazard while driving. He asserts that Chewning did not express an opinion concerning Donigan's specific reaction and perception times during the accident, but simply "educated the jury" regarding a technical aspect of the case. Donigan argues that Chewning's testimony provided the jury with the knowledge necessary to consider Donigan's perception and reaction in determining whether he acted as a reasonable person would have acted under the circumstances presented. We disagree with Donigan's arguments.

The standard of review that we apply is well established. The admission of expert testimony is a matter within the sound discretion of the trial court, and we will reverse the trial court's judgment only when the court has abused this discretion. Tarmac Mid-Atlantic, Inc. v. Smiley Block Co., 250 Va. 161, 166, 458 S.E.2d 462, 465 (1995); Brown v. Corbin, 244 Va. 528, 531, 423 S.E.2d 176, 178 (1992).

We first note that Keese did not raise a hearsay objection to the admission of the disputed testimony or argue that the testimony failed to qualify for admission under the provisions

of Code § 8.01-401.1. See, e.g., Todd v. Williams, 242 Va. 178, 182-83, 409 S.E.2d 450, 452-53 (1991). Therefore, we consider Keesee's argument apart from these legal principles.

Expert testimony generally is admissible in civil cases if it will aid the trier of fact in understanding the evidence. See Code §§ 8.01-401.1 and -401.3; Tittsworth v. Robinson, 252 Va. 151, 154, 475 S.E.2d 261, 263 (1996). However, the admission of expert testimony is subject to certain fundamental requirements, including the requirement that the evidence be based on an adequate foundation. Id.; Tarmac Mid-Atlantic, Inc., 250 Va. at 166, 458 S.E.2d at 465-66; Lawson v. Doe, 239 Va. 477, 482-83, 391 S.E.2d 333, 336 (1990). Thus, expert testimony is inadmissible if it is founded on assumptions that have an insufficient factual basis. Tittsworth, 252 Va. at 154, 475 S.E.2d at 263; Tarmac Mid-Atlantic, Inc., 250 Va. at 166, 458 S.E.2d at 466; see Gilbert v. Summers, 240 Va. 155, 160, 393 S.E.2d 213, 215 (1990).

In addition to these basic principles, we also consider two recent decisions in which we have addressed the admissibility of expert testimony offered to assist a trier of fact in understanding general scientific or technical principles. In Holmes v. Doe, 257 Va. 573, 578, 515 S.E.2d 117, 120 (1999), we held that the trial court did not abuse its discretion in permitting an expert witness to explain the general relationship

between a vehicle "hydroplaning" and the factors of wet road conditions, tire tread depth, and vehicular speed. In Breeden v. Roberts, 258 Va. 411, 414-16, 518 S.E.2d 834, 836-37 (1999), we held that the trial court abused its discretion in excluding expert testimony from a mechanic regarding the effect that a frozen brake adjuster has on the operation and performance of a vehicle.

In these two cases, the expert testimony concerning those general scientific and technical principles did not require any specific information about the drivers involved in the cases, the condition of their vehicles, or other circumstances in which the accidents occurred. Thus, the expert testimony concerning general principles in these cases was appropriate to aid the triers of fact in drawing their own conclusions from the factual evidence received from the other witnesses. See Holmes, 257 Va. at 578, 515 S.E.2d at 120.

The expert testimony at issue in the present case presents a distinct contrast from the type of expert testimony approved in Breeden and Holmes. In those cases, the experts did not attempt to relate the scientific principles about which they testified to a particular driver or vehicle. Here, however, Chewning applied his testimony to a particular driver, Donigan, in the absence of foundation evidence that would place him

within the subject matter of Chewning's testimony concerning the "average" driver.

As stated above, Chewning acknowledged that the "average" driver response times are subject to variation, depending on a driver's physical condition, visual acuity, and cognitive abilities. However, he performed no tests to establish that Donigan fell within the average range with regard to such variables. When asked whether he performed tests to determine Donigan's perception time, Chewning replied, "No, I've put him into an average category." When questioned whether he merely assumed that Donigan's reaction times are "the standard," Chewning stated, "Yes."

This testimony was insufficient to lay a foundation for admission of the challenged evidence because the probative value of that evidence rested on assumptions about Donigan that had no factual basis in the record. See Tittsworth, 252 Va. at 154, 475 S.E.2d at 263; Tarmac Mid-Atlantic, Inc., 250 Va. at 166, 458 S.E.2d at 466. Thus, we conclude that the trial court abused its discretion in allowing Chewning's testimony, absent foundation evidence that Donigan's physical and mental characteristics relevant to his perception and reaction times placed him within the average range of persons tested.

Contrary to Donigan's assertion, this error was not harmless. Chewning was the only expert witness who testified on



this subject, Donigan's counsel emphasized this evidence in his closing argument and, thus, the testimony may well have made a lasting impression on the jury to Keesee's prejudice. See CSX Transp., Inc. v. Casale, 250 Va. 359, 367, 463 S.E.2d 445, 450 (1995).

For these reasons, we will reverse the trial court's judgment and remand the case for a new trial consistent with the principles expressed in this opinion.

Reversed and remanded.