



Engineering Sciences Section - 2016

D24 Forensic Engineering Investigation of a Dual Fatality Auto-Pedestrian Collision by an Impaired-Vision Driver

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After attending this presentation, attendees will be informed of details of the human visual system that were overlooked by the original law enforcement investigation and that help to explain the technical backdrop to a tragic dual fatality auto-pedestrian collision at a marked crosswalk.

This presentation will impact the forensic science community by discussing trial strategy and the use of witnesses, in addition to the final sentence, consequences for the driver, and implications for driving with impaired vision.

At about 9:30 a.m. on August 19, 2009, an elderly couple, 78 years and 76 years of age, went on their daily walk on the route they followed every day. This included crossing a four-lane suburban road in a residential area. Visibility was unlimited, the weather was clear and sunny, and there was no reason to expect a tragic end to their walk.

At the same time, a 55-year-old male, who was a regional representative for an insurance company and administered many types of accident and litigation claims, left his residence on a seemingly routine drive to his office. A few minutes later, as the couple crossed the street, they were hit in the crosswalk. One died at the scene, the other shortly thereafter at the hospital. The driver pulled over and waited for police. Law enforcement analyzed the location, probable speed, and perception reaction time, in addition to some unexplained behavior at the scene. The driver was charged with the two homicides and driving under the influence; however, he had not drunk any alcohol, but had taken a Benadryl medication, as was prescribed for a chronic illness. Approaching trial, he faced two 15-year terms.

However, the medical record of the driver offered some insight into the collision. He had experienced several brain tumors and surgeries. One of these surgeries inadvertently cut the optic nerve, resulting in total blindness in the right eye and partial loss of vision in the left eye. In fact, he retained only his temporal vision.

The presentation will discuss the details of the visual system, the nasal and temporal visual fields, and why the state of Idaho licensed this individual to drive under these conditions. Perception psychology also comes into play in this instance as humans have remarkable abilities to compensate for visual and sensory deficits.

These considerations were useful in understanding the sequence of events that led to the fatal collision. In fact, the driver saw the couple from a distance, reported that they waved to him to go through the intersection, then lost sight of them until the actual collision, not due to drug impairment, but due to the nature of the visual deficit. The reported wave-through action by one of the decedents had a credible basis and will be discussed. Trial strategy and the use of witnesses will also be discussed as well as the final sentence, consequences for the driver, and implications of driving with impaired vision.

Optic Nerve, Impaired Vision, Crosswalk