

FORCE SCIENCE[®] NEWS

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I. Force Science launches new studies of assailants' threatening moves

A major fresh look at some of the Force Science Institute's seminal research on the physical dynamics of assaults on officers is underway at two universities.

The goal, says FSI's executive director Dr. Bill Lewinski, is to use highly sophisticated technology that's now available to more deeply explore earlier findings that have become critical to modern law enforcement training and tactics, investigations, and legal proceedings.

Whatever results emerge and their potential impact on police operations are expected to be thoroughly analyzed and ready for disclosure by the end of the year, Lewinski says.

SEEKING PATTERNS. Graduates of Force Science Analysis certification training will recall seeing FSI's pioneering videos that document how quickly armed suspects fleeing from officers can turn and shoot mid-stride while continuing to run—a dynamic that sometimes results in subjects being inadvertently shot in the back by pursuing officers defending themselves.

Tests of that scenario and a variety of other assault methods are being repeated in a motion study by a research team at a university in Minnesota, using students in the age range typical of offenders as the “assailants.”

“This time the action is being recorded by high-speed video ‘capture-and-analysis’ programs that are used in the civilian world to study movements of professional athletes,” Lewinski explains. “These record at 200 to 1,000 frames per second, which allows a very high level of precision and certainty when analyzing the physical dynamics involved. Elements like speed, distance traveled, the nature and sequence of movement, and other components of attacker behavior.”

From scrutinizing the images in such fine detail, the researchers expect to identify, among other things, patterns of movement that could indicate danger cues of a pending assault, Lewinski says.

“The findings will also help in recreating the most accurate version of a use-of-force event during investigations and court appearances,” he says.

WIRED. At a university in Utah another research team with similar goals is using different high-tech gear to monitor and study assailant movement. These researchers are replicating eight forms of assault that FSI has studied in the past, including pointing and shooting from a car seat, pulling a gun from the waistband, initiating a gun attack from the “bootleg” position, and so on.

“Their data is mined from accelerometers and gyroscopes attached to limbs and other body parts of student volunteers and transmitted instantaneously to a computer spreadsheet for immediate analysis,” Lewinski says.

“Before, we were able to document how fast an attack can occur from different positions in terms of hundredths of a second. With this technology, we can measure elements of speed and movement precisely within *thousandths* of a second.”

Again, patterns as well as important isolated findings that are scientifically documented are expected to benefit street officers, investigators, trainers, legal representatives, and use-of-force evaluators whose accurate understanding of human dynamics is critical.

“The fundamental research findings of Force Science are relied upon by law enforcement and the criminal justice system throughout the US and internationally,” Lewinski told *Force Science News*. “As technology advances and new methods for digging deeper become available, we consider it imperative that we keep our basics as up to date as possible.”

In turn, we’ll keep our readers informed as more details of these projects are available.

III. Should failure to record equate with excessive force? A court speaks.

The problem of officers failing to activate recording equipment before or during a force encounter can be a thorny one with multiple potentially negative consequences. But a plaintiff in a federal lawsuit has tried to push the issue to a new and radical extreme.

The incident in question began in the snowy, predawn hours of Christmas Day, 2013, in Cedar Falls, a college town of 41,000 in central Iowa when a municipal officer cruising the deserted streets noticed a vehicle with its engine running stopped at an intersection half a block from an Iowa State Patrol post.

In rousing the large, 20-something man dozing behind the wheel, the officer “detected odors of alcohol and burnt marijuana,” according to a published decision earlier this month by the 8th Circuit US Court of Appeals.

The officer took the car keys, frisked the driver, and finding no weapons began to escort him to his patrol car, intending to drive to the police station for sobriety testing in a controlled, snow-free environment.

ATTACK! Suddenly, says the Court decision, quoting the officer’s version of events, the suspect “hit him with a roundhouse punch to the left side of his head, knocking him to his knees. [The suspect] continued to hit [the officer], who radioed for backup.”

As the assailant's hammering continued, the officer "felt a tug on his duty belt" where he kept his sidearm. Exhausted, lightheaded, feeling he was nearly losing consciousness, and "fearing for his life, [the officer] warned [the suspect] that he would shoot him if he didn't stop."

As the suspect relentlessly continued the assault, the officer "fired a shot, hitting [the suspect] in the lower left abdomen. The shot backed [the attacker] up, but he started moving toward [the officer] again. [The officer] fired two more shots, hitting [the suspect] in the front left shoulder and in the back right shoulder area."

The assailant, who had a history of minor drug offenses, survived the shooting and was captured by officers arriving at the scene. He was charged with assault on a peace officer with intent to inflict serious injury and possession of marijuana with intent to deliver, felonies punishable by up to five years each in prison. A jury convicted him of a lesser offense: assault on a peace officer.

In turn, he filed a federal civil rights suit against the officer, the police chief, and the city, alleging use of excessive force and a failure to train, the first such suit against Cedar Falls police in at least 30 years.

Last year a federal district judge made short shrift of that by promptly declaring summary judgment in favor of the defendants and dismissing the suit. The suspect appealed.

RECORDING ISSUE. In court proceedings, the suspect claimed to have no recollection of the incident. The officer's patrol car was equipped with an audio-video recording system, which could be activated via the officer's body microphone. But much of the encounter took place outside the range of the camera, and the officer did not activate the audio. Thus, his version of events was the only detailed account of what happened available.

This opened the door to a creative contention by the plaintiff's lawyer.

On appeal, the attorney argued that the Court "should create an evidentiary presumption at the summary judgment stage against an officer who fails to use audio or video recording equipment that he has been issued."

Namely, this "proposed presumption would permit the court to infer from the lack of audio evidence that [the officer's] use of force was [ipso facto] excessive," allowing the plaintiff's claims to proceed to trial.

The lawyer admitted that he "knows of no court anywhere that has recognized such a presumption," but he argued that because the officer didn't activate an available source of independent evidence he "should not benefit" from the suspect's inability to remember the incident.

OTHER ARGUMENTS. Apart from the recording issue, there were other reasons the summary judgment should be set aside and this case sent to trial, the plaintiff's attorney argued. The officer's use of deadly force was excessive, he claimed, because:

- he knew the suspect was unarmed;
- he failed to use less violent means to subdue the suspect;
- he failed to renew his warning after the first shot; and
- he shot the suspect in the back.

AND THE COURT SAYS.... A three-judge panel of the Court of Appeals responded with a terse written decision that covers fewer than three full pages.

First the Court dismisses the “unique” plea for an evidentiary presumption regarding unactivated recording equipment. The panel terms this a “radical solution” that it isn’t about to adopt.

As for the various alleged “failures” associated with the officer’s attempt to counteract the attack, the panel finds his actions “objectively reasonable” under the standards set down by the US Supreme Court in *Graham v. Connor*.

The suspect “posed an immediate threat to [the officer’s] safety and was actively resisting arrest,” the appellate panel writes. “Weighting approximately 268 pounds, [the suspect] was far larger than [the officer], who weighed approximately 190 pounds.” It was reasonable for the officer to use deadly force to defend himself, fearing “that he might lose consciousness and that [the suspect] could potentially access his service weapon and kill him.”

Regarding less-lethal force, the officer “could not reach his Taser or pepper spray— which were on the opposite side of his duty belt from his service weapon—” because of the suspect’s repeated punches. Even if he’d been able to, the panel points out, an officer need not “pursue the most prudent course of conduct as judged by 20/20 hindsight vision.”

Because deadly force was justified, the officer “was not required to warn [the suspect] before each shot and was permitted to use force until the threat had ended.”

Moreover, the fact that one shot entered the suspect’s shoulder from the rear “bears little similarity” to cases in which “an unarmed man was shot in the back of the head...or four of six shots entered the suspect from behind.... The mere possibility that a shot hit [the suspect] as he withdrew is not enough” for the shooting to be considered unreasonable.

In sum, the Court writes, the officer’s “unrefuted version of events establishes that his use of force was constitutionally reasonable.”

Most official investigations of officer-involved shootings in Iowa are handled by the Iowa Division of Criminal Investigation. SAC Mike Krapfl, a certified Force Science Analyst, shared these comments with *Force Science News*:

“From the time the critical action in this case went off camera until the suspect appears back on camera was 37 seconds. Thirty-seven seconds of ground fighting in which the worst blow was the sucker punch to the head that clearly disoriented the officer. This

really hits home, as Force Science research has shown, that 30 to 60 seconds of ground fighting can be a life-threatening eternity.

“This case involved a clearly objectively reasonable use of force by the officer. Thankfully, the 8th Circuit recognized the assailant’s illogical arguments for what they were and ruled in favor of the officer and his agency.”

Editor’s Note: The involved officer, a 20-year law enforcement veteran, has taken a medical retirement because of post-traumatic stress from this violent encounter.

Police practices expert Ken Wallentine, an Advanced Force Science Specialist, served as a defense expert in the litigation.

Our thanks to Atty. Michael Brave, Director, CEW Legal for Axon Enterprise Inc., for helping to facilitate this report.