



Force Science[®] News #321

To register for a free, direct-delivery subscription to *Force Science[®] News*, please visit www.forcescience.org. Articles are sent twice per month via e-mail. For reprint or mass distribution permission, please e-mail: editor@forcescience.org.

Death takes blinded trooper who was a legend in law enforcement

In this issue:

- I. Death takes blinded trooper who was a legend in law enforcement
- II. New book: How to use neuroscience to build better shooters
- III. A scientist looks at a dangerous police enemy: Violent rage
- IV. Famous police-shooting database has infamous shortcomings
- V. Worthy of quoting: On the persecution of police

I. Death takes blinded trooper who was a legend in law enforcement

Bobby Smith, the Louisiana trooper whose dauntless spirit became legendary in law enforcement after he was blinded by a felon's shotgun blast to the face decades ago, died last weekend at age 63.

Smith was a portrait of resilience. He was left permanently sightless in 1986 by an attack by a drug dealer at the end of a pursuit. After that, his marriage dissolved, he lost one child to a drug overdose and another to a car wreck, suffered severe financial hardships, and at one point was set on suicide.

Yet he rebounded to earn a PhD, write three books, create a foundation to help officers recover from traumatic events, and become an international motivational speaker who is estimated to have addressed more than a million people worldwide to mention only a few of his remarkable accomplishments.

Now, says Louisiana State Police Supt. Col. Mike Edmonson, Heaven has welcomed home a hero.

A moment of silence, please, for an outstanding officer and an unforgettable human being.

Our thanks to police attorney and Force Science Analyst Richard Crites and retired Tpr. J. L. Raybourn of the Missouri Highway Patrol for their help with this report.

II. New book: How to use neuroscience to build better shooters

With his new book *Building Shooters*, firearms guru Dustin Salomon promises to reveal a novel and highly effective approach to teaching gun skills, based on practical principles of neuroscience and designed specifically for armed professionals who do not have access to enough time, ammunition, special facilities, training packages, or resources.

In the opinion of Dr. Bill Lewinski, executive director of the Force Science Institute, Salomon delivers in spades.

Building Shooters, Lewinski says, offers the clearest, simplest, most well-founded psychomotor training program I have seen for developing shooting skills, without the need for extensive live fire.

Most shooting books in the police world are all about tactics. Salomon focuses not just on developing and maintaining mechanical skills but also on improving judgment and decision-making. He explains what works, why it works, and how to use it in the most efficient way.

Lewinski told Force Science News he was introduced to the book by a shooting companion, a Navy SEAL who happens to have been the supervisor of Chris Kyle, the celebrated American sniper.

TRAINING CHALLENGES. Back in 2001, in the wake of the infamous terrorist attack on the USS Cole, Salomon was a young gunnery officer on an American naval warship, newly assigned to conduct a crash course to train and qualify some 200 crew members in weapons that ranged from pistol to heavy machine gun.

Many law enforcement trainers can identify with the challenges he faced: a lack of training ammunition, a shortage of range availability, limited access to the personnel who required the training due to other work tasking, and inconsistent levels of support, ranging from tacit acceptance to open hostility by command staff.

The teaching methods he developed then and has deepened since through ongoing research and experimentation are wholly different than the standard training model and, he claims, produce better results with fewer resources.

BRAIN STORAGE/RETRIEVAL. The book's subtitle, *Applying Neuroscience Research to Tactical Training System Design and Training Delivery*, captures the thrust of its content which, thankfully, is not as pedantic or intimidating as that mouthful sounds.

Fortunately, Salomon's style across nearly 200 pages frames complex concepts in language that is fully accessible by a layman's mind.

An instructor's goal, he writes, is to place information into the student's brain in such a way that it is recalled effectively when it is needed especially when the life-threatening stress of a gunfight, for example, makes the normal cognitive processes [of] complex decision-making, information recall, and data analysis next to impossible.

To achieve that challenging objective, Salomon says, a trainer needs a practical understanding of how the brain as an information system can be influenced by instructional techniques, environmental conditions, and stimuli.

As a foundation, Salomon devotes five chapters to explaining the different types of memory short-term, long-term, declarative, and procedural and how these are properly involved in learning, consolidating, and utilizing the physical and mental elements of effective weaponcraft.

CRITICAL DOZEN. In one 37-page section, Salomon examines 12 critical factors that trainers can directly influence to affect retention, judgment, and performance. These include, among others: non-teaching priming sessions, observational learning, sleep patterns, emotional arousal, exercise, learning interference, and timing of instruction.

Buttressed by documentation from research studies, Salomon presents a bevy of scientific truths that can help in shaping program designs. A sampling:

- Motor skills tend to degrade less when taught in the afternoon rather than the morning;
- Downtime of at least 24 hours after learning new material is essential for creating optimum retention (more instruction time and more practice time do not necessarily equate to increased learning);
- While practicing firearms and tactical skills in a high-stress environment is important, high stressors should not be intentionally introduced when learning skills is the objective;
- [E]motional arousal can either enhance learning or inhibit learning; the deciding factor is whether or not the emotion is fear, which can disrupt the brain's ability to learn ;
- If students don't receive a full sleep period within 12 hours of being exposed to new training, a significant amount of the potential for long-term retention may be lost.

Each such entry is expanded on, with the science behind it clearly explained.

TRAINING MODEL. For the last half of his book, Salomon focuses on what he calls a neural-network-based training model. This he describes as a tool that facilitates a

structured, neurologically designed development of courses and allows for tracking student skill development.

He critiques the standard training paradigm that dominates much of the existing firearms training in law enforcement. Then he shows how a progression of steps from his new model can correct the shortcomings of the traditional approach and push trainee achievement to new levels.

Much firearms training, Salomon argues, can (and should) be conducted predominately with an officer's duty weapon but without the use of live ammunition. Experience and research both, he claims, suggest that less live-fire and smarter training methodology can not only improve efficiency but can also enhance operational performance and long-term skill retention.

He disputes the shoot more rounds until you get better approach. Instead of embracing a costly training method that promotes ten thousand rounds per man, he proposes an alternate mantra for any training program that is intended to produce operational tactical competence: Ten thousand decisions per man.

In addition to Lewinski, one of the endorsers of Building Shooters is Art Aplan, an advanced training coordinator with the state of South Dakota. This is essential reading for academy staff, curriculum developers, and firearms instructors, he says. We employ many of Salomon's recommendations in our academy and improvements in our firearms program are measurable in terms of shooter success.

The book is available through Amazon, new and used and in the Kindle version. [Click here to go to its listing.](#)

III. A scientist looks at a dangerous police enemy: Violent rage

Another new behavioral science book with practical application in police work is *Why We Snap: Understanding the Rage Circuit in Your Brain*.

In its highly readable and intriguing 400 pages, Dr. R. Douglas Fields, an internationally recognized neurobiologist and brain authority, explores the evolutionary and contemporary triggers behind domestic disputes, barroom brawls, mob violence, road rage attacks, and other sudden violent behavior that officers are routinely challenged to deal with.

In particular, his fascinating explanation of brain function explores sudden outbursts by ordinary people with no history of violence or mental illness. The right trigger in the right circumstances can unleash a fit of rage in almost anyone, Fields writes. Stress puts the brain on a hair trigger primed for snapping, and chronic stress literally rewires the brain.

Fields identifies nine triggers that can ignite rage either in suspects officers encounter or in the officers themselves. These include being in what is seen as a life-or-death situation, experiencing insults, protecting territory, sensing injustice, defending one's tribe, and being restrained.

The understanding you gain from Fields work may protect you from adversaries and from yourself in any number of volatile encounters that might otherwise go south at any moment.

Among the surprises you'll find in *Why We Snap* is this irony: the same pathways in the brain that result in violent outbursts also enable us to act heroically and altruistically. That's why, Fields explains, you'll dive into a frigid winter lake to save a drowning child before your conscious brain realizes what you are doing.

Why We Snap is available from Amazon. [Click here](#) for new, used, or Kindle formats.

IV. Famous police-shooting database has infamous shortcomings

A national online database compiled by the Washington Post is widely considered to be the go-to place for statistics on fatal shootings by police.

But how reliable is it?

Kevin Davis, a prominent use-of-force trainer from Ohio, recently took a probing look at one frequently cited category in the Post's aggregation: officers' deadly shootings of unarmed individuals.

The Post claims that 93 unarmed subjects were killed by police in the US in 2015. Davis examined each one, using the same public information available to the Post.

His findings, published by our strategic partner [PoliceOne.com](#), are illuminating.

- Four individuals the Post lists as having been unarmed were, in fact, armed in the traditional sense. Most often these were reaching for or drawing a weapon when shot and killed, Davis confirmed.
- Several others were shot accidentally while in close proximity to an armed associate who was actively firing at officers. One woman, for example, was shot when her boyfriend started shooting at officers from their car and the cops returned fire.
- By Davis' count, 10 subjects had some type of contact weapon other than a firearm. These included a hatchet that was thrown at officers, a large metal spoon used against an officer after a mentally ill subject tried to heave him over an apartment balcony, a tree branch, and a police radio with which two officers were savagely beaten.

- The Post describes 34 shootings as occurring during attacks in progress. Davis found 50, nearly 50% more than the Post stated. These include attempts at disarming officers and attempts to drown officers. Injuries in these cases included broken bones and head injuries, Davis reports.
- More than a dozen shootings of the unarmed were likely suicides-by-cop, Davis concluded. Often these subjects made drawing motions or pointed something at police that was mistaken to be a gun.
- In a significant number of cases, a less-lethal form of control was attempted and failed before officers resorted to deadly force.

In summary, Davis charitably writes that the Post has come to some questionable conclusions regarding police shootings of unarmed individuals.

Dr. Bill Lewinski, executive director of the Force Science Institute, declares flatly that the newspaper is misleading the public dramatically.

Kevin Davis's report in full can be read on [PoliceOne.com](#). [Click here to read it.](#)

V. Worthy of quoting: On the persecution of police

When someone murders in the name of their religion, we remember not to prejudge everyone of that faith. But when someone dies in police custody and the facts of the incident are in doubt and an investigation is underway, some who we call leaders quickly pronounce the death the result of institutional racism by police. If a court should later rule that the police acted properly, they will fault the criminal justice system and not their own rush to judgment for political gain. They will stand silent, while others under the guise of protests call for the outright murder of law enforcement officers and are then shocked when someone carries out the act. They will then place blame for these crimes on social injustice, lack of economic opportunity, guns, and anything else other than their own complicity in the promotion of hate and division. They fail to recognize occupational bigotry towards those who everyday run towards the sound of screams and gunfire. Both spoken words and silence can bring us together or they can be weapons of mutual destruction.

Every day there is growing evidence that police face persecution similar to that of other groups in our history whose race, religion, or beliefs led them to be taunted, denied service, attacked, and eventually murdered. It's time to educate those we serve, including those who speak with lies and hatred, and ask for equal human and civil rights for law enforcement officers everywhere.

Harvey Hedden, Exec. Dir.

