

THE ILLUSION OF SEEING

By Derrick Bartlett



There is no perception without attention, and no attention without training.

All photos courtesy of Ron Yanor / Adamax Tactical

You and your partner have been dispatched to another domestic. A husband and wife have been going at it all evening, and one of the neighbors finally called it in. While en route, dispatch updates the call, advising that the wife has now called, claiming her husband has threatened to kill her. He can be heard in the background yelling obscenities. You anticipate the worst now, and pick up the pace.

You arrive on the scene and, as you start toward the front door, a female comes out. You can't quite make out what she's yelling, but she is very animated and is pointing back at the door. The sound of the screen door draws your attention in the direction of an agitated male descending the stairs and heading your way. He, too, is yelling and waving his arms. But in his right hand, you see a dark object.

Almost simultaneously, you have his full attention, and he has yours.

You watch as his hand swings up, and points at your face. You instinctively move left to the cover of a tree and draw your sidearm. You yell to him, "Drop your weapon, now!" He pauses briefly, but doesn't drop the object. You press the trigger, once, twice, three times, and you see the male stagger, then fall sideways.

Suddenly, the world goes quiet. For the first time, you can clearly hear what the woman is saying. "He's calling the police on me. He says I pulled a knife on him. I don't have a knife." Your partner brushes past you and closes in on the man on the ground. You leave cover and follow him. The man is still clutching the object and your partner's flashlight illuminates the cordless phone. The world around you stops.

INFORMATION FROM SENSES

Every moment of your life, you make decisions based on the information you receive from your senses. How fast can you access and

process it? Do you trust that information to be accurate? Are you missing important details? How could this affect your life, job and safety?

Did you shoot this man because he pointed a phone at you? Why did you shoot him? I'm sure your initial answer would be, "Because I thought he had a gun." But you didn't shoot him because you thought he might have a gun. You shot him because you thought you saw a gun, and you reacted to that information accordingly. But the reality is, you were betrayed by your training, experience and hardwiring. And you are not the first officer to fall prey to this visual dynamic. Nor, unfortunately, will you be the last.

The culprit here, and in similar situations, is called "perceptual blindness," and it affects everyone to varying degrees. In your line of work, the effects, literally, can mean the difference between life and death.

MISCONCEPTIONS

Police officers, like many in the general public, share several misconceptions about seeing. They believe they see everything going on around them. If something out of the ordinary occurs, they are sure they will notice. They trust that everything they see is an accurate representation. And they believe that everything they see is recorded somewhere in their brain and can be recalled at will. All are wrong.

A difference exists between vision and seeing. Vision is a passive sense. Light is reflected off objects around us and picked up by the rods and cones inside the eyes. There, the light is transformed into electrical impulses, which are transmitted along the optic nerve to the visual cortex of the brain. This is an ongoing, unconscious process.

In the brain, those impulses are processed, and through a comparison and recall process they are refined into the images that construct the world around us. This is seeing. And because seeing takes place in the brain, this is where the phenomenon of perceptual blindness begins.

Perceptual blindness has been studied extensively in the scientific community for decades. Only now is it finding practical application in fields like police work. For a profession in which observation skill plays such a critical role, understanding this is extremely important. Perceptual blindness affects everyone to varying degrees and, because of conditioning and neurological hardwiring, you are contributing to the problem. It is a breakdown in the complex visual recognition cycle and it manifests itself in several ways.

Inattentional blindness: The scientific definition is the inability to detect unexpected changes or movements to which we aren't paying attention. Because seeing requires attention, being the least bit distracted can cause you to miss the information your eyes

are sending to your brain. One can literally look at something and fail to see it. This could be a weapon in the hand of a suspect or a vehicle approaching an intersection.

Change blindness: The failure to notice large changes across different views of a scene, especially if the change occurs during an extraneous disruption of visual continuity, such as a rapid eye movement, a blink or a distraction. Ironically, some of the tactics we have been teaching in building clearing and firearms training inadvertently exaggerate this situation.

Cognitive blindness: Seeing is closely tied to recognition and memory. In

observation, many times, the brain will take shortcuts, physically accessing a limited amount of visual input, then relying on memory and experience to fill in the blanks. As a result, people often see only what they expect to see, even if it isn't really there, or what they were looking for, and not recognizing otherwise obvious things.

This is what caused the officer in our opening scenario to shoot a man armed with a telephone. Between the radio traffic, his experience and the actions of the wife and husband when he arrived, the officer intellectually came to the expectation that the husband would be armed. He saw an object in the hus-



Tactics like quick peeks and rapid visual sweeps may inadvertently exaggerate "change blindness."



In "cognitive blindness," people see only what they expect to see, even if it is not there.

band's hand and allowed his mind to fill in the missing details. He made the assumption the object was a gun. The power of this assumption is so strong, he will convince himself he saw a gun.

The officer's reaction from that point on would be understandable. Over the years, officers have shot suspects holding phones, lighters and wallets, firmly believing they saw a gun. Of course, the public, the media, and in some cases, the officer's own agency, doubt the testimony of the officers involved. After all, "How could anyone mistake a phone for a gun?"

ON THE JOB

So, what does this mean to you on the job? Basically, perceptual blindness affects every aspect of your professional and personal life. You gain about 80% of your sensory input through your eyes. Therefore, you rely very heavily on fast and accurate visual information. So, driving your car safely during routine operations, and especially during expedited runs like pursuits, you depend on your sight. Every day, hundreds of traffic crashes occur in which the parties say, "I didn't see the light," or "I didn't see the other car." Ever wonder how someone could miss a two-ton vehicle coming right at them?

During your daily duties, observing people, reading body language and non-verbal cues, taking reports or collecting evidence, your observation skills play a major role. How much important information do you miss every single day?

In lethal confrontations, your ability to see and accurately process visual input in high-speed will define that thin line between life and death, between a justified shooting and a tragic event. Beyond the direct effects on officers on the street, understanding the peculiarities of vision should be taken into considerations in other areas of law enforcement.

Officers aren't as adept at multi-tasking as they would like to think. If accidents are to be avoided, driving of patrol cars—especially during expedited responses—requires more focused attention. Splitting attention between listening to the radio, trying to read the MDT screen, watching traffic and chatting on your cell phone (I have seen it done) is a recipe for disaster. All of these ancillary tasks impair sight and recognition by limiting the brain's ability to process visual information.

TRAINING IMPLICATIONS

Tactics for building searches and room clearing need to be re-evaluated. Are we teaching officers to execute gross eye movements when they do things like quick peeks and rapid visual sweeps of a room? If so, we are programming them for failure. By teaching them to focus on certain things, we are inadvertently reinforcing the tendency to overlook other, equally important things.

This should also exact more parsing and closer scrutiny of eyewitness accounts, both those of crime victims, bystander witnesses and police officers. This is not meant to imply that these people are intentionally fabricating stories. Instead, research and experience has shown people see less than they think, and much of their "recollection"

is really a construct of their brain, not their eyes.

Courts, investigators, the general public and the media need to be taught the dynamics of vision and how stress can affect perception, reactions and recall. Officers have often been doubted when giving accounts of shootings. Clarity and accuracy of perception are impaired in most people under the best of circumstances. Being in a deadly force encounter can seriously compromise the visual abilities of even trained officers.

In deadly force situations, officers are required to accurately process visual information at high speed. Failure to do so can lead to a delay or a bad decision, which may cost an officer his life. Unfortunately, there are very few mechanisms in place that train officers to see in high speed. And few agencies are taking advantage of that training.

In tactical circles, the phrase "attention to detail" gets a lot of use, but what does that mean in terms of practical application? Police officers have often referred to themselves as "trained observers," but in reality, what kind of training have most of them had? They are taught in the academy and during in-service training to look for certain things.

Watch the hands, look for certain behaviors, and be on the lookout for a particular car or person. Perhaps they have participated in various kinds of Kim's Games. These work more on developing recall skills but don't really teach officers how to see.

There is an axiom in the visual training arena, "There is no perception without attention, and no attention without training." One training program currently in use teaches students the mechanics of vision and seeing. It uses a variety of innovative exercises and visual acuity drills to teach them how to access visual information in increasingly larger blocks, quickly.

The program that exists is not a one-shot inoculation against the problem of

perceptual blindness. It is a progressive program that relies on repetition over an extended period to help rewire the visual process in the student's brain. For those willing to stick with the training, results have been impressive. Officers come away with the ability to see more,

in greater detail, with greater recall and increased accuracy. This allows officers to do their jobs more safely and better.

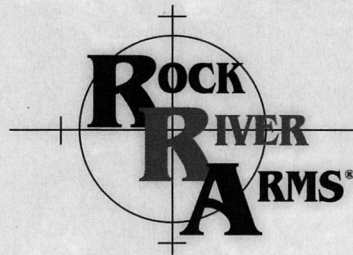
The bad news is that training can't make the problem go away completely or forever. Maintenance of the learned skills will be necessary. Seeing requires

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focused attention. It is simply impossible to maintain a high level of focus on everything going on around you, all of the time. A person would find himself overwhelmed by the sensory input or worn out by the effort.

Even with training, as soon as a person allows his concentration to lapse, it is very easy to slip back into the pre-existing visual habits. Training is designed to teach the officers how to see by increasing their level of awareness. The ultimate goal of the training is to elevate an officer's day-to-day

awareness, helping him to see more, faster.

TRADITIONAL TRAINING

Traditional training in law enforcement has focused on the fundamental skills like driving, report writing and use of force, but it has neglected to address perhaps the most important foundation skills. Vision and observation are tied to every aspect of police work. While we take it for granted that we are naturally good observers, this is

not true. To make police officers safer and more effective in all areas of their professional expertise, they must receive specialized training in how to see.

A few trainers are developing innovative programs to address this issue. Unfortunately, most officers and agencies are unaware of the scale of the problem, and even fewer are aware of the training programs. Considering the potential impact perceptual blindness has on law enforcement officers every day, this has to change quickly. Careers, reputations and lives are all hanging in the balance.

Snipercraft started including information about perceptual blindness in its sniper training courses about five years ago. Since then, we have been refining the presentation and adding new material as we have been learning it. Realizing this information had applications far beyond just snipers, we have expanded the program to include all of law enforcement.

Tactical Vision is an eight-hour class that introduces law enforcement to perceptual blindness, shows officers how it relates to their daily duties and regular life, and through a variety of drills and exercises teaches how to mitigate the effects. For additional information, contact the following resources: Force Science Research Center (www.force-science.com) and Snipercraft Inc. (www.snipercraft.org).

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