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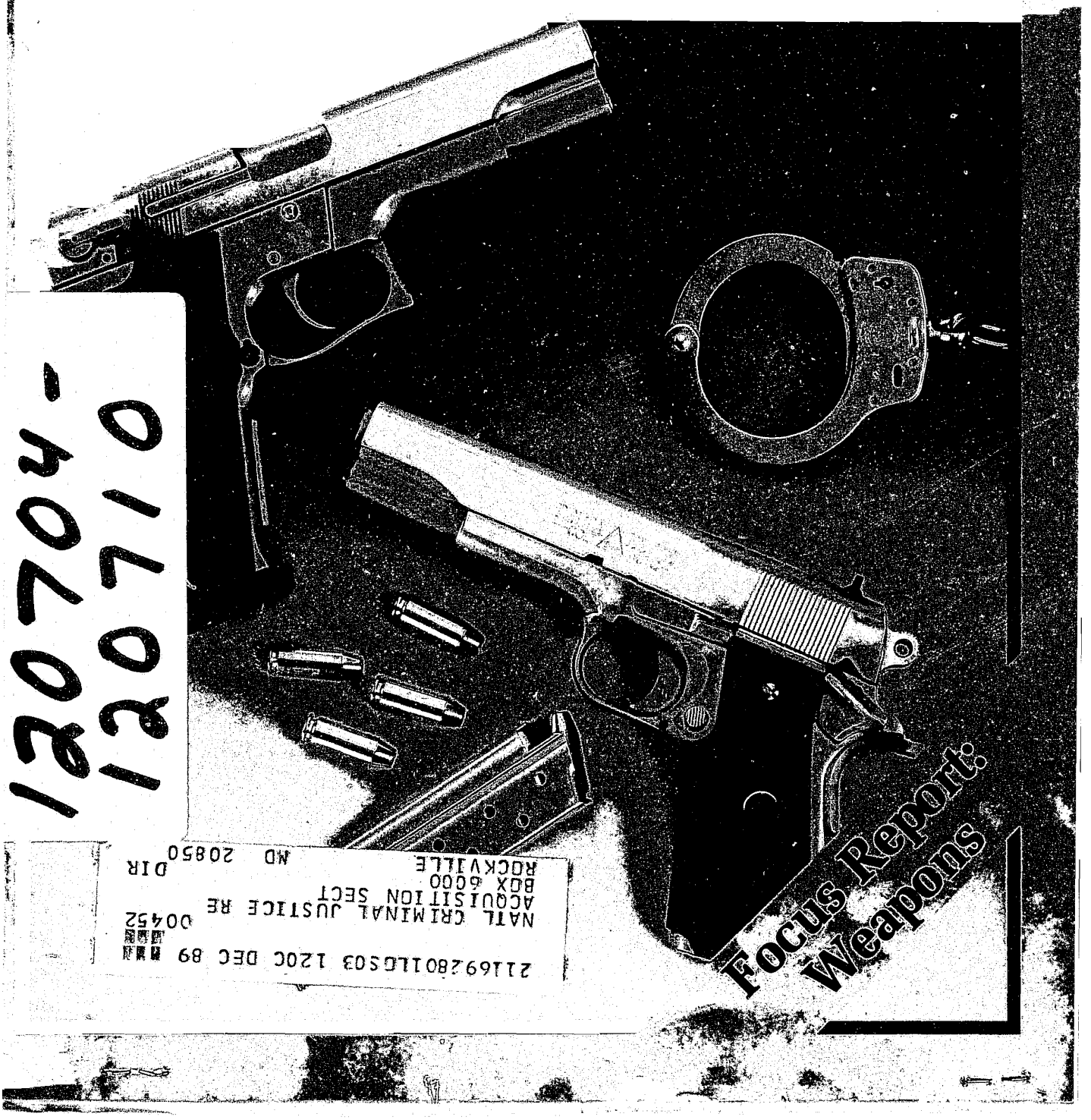

Focus Report: Weapons

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FOCUS: Weapons

FEATURES:

DEPARTMENTS:

About The Cover:

The weapons carried by police officers are one of those equipment items regarded by most as: seldom used, but extremely vital when needed. As such, new developments such as the Wondertens by Whit Collins on page 22, and S&W's new semi-auto by Bill Clede on page 28, are of great interest.

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ISOSCELES VS. WEAVER

Shooting Stances

The Selection of a Shooting Stance Under Stress

by Harland Westmoreland ©

In June of 1980 I responded to a disturbance and subsequently shot one of the perpetrators. To this day I remember the incident in vivid detail, including the shooting stance I assumed: Isosceles.

Why this is especially important is, at the time I was a strong advocate of the Weaver stance and shot that stance exclusively. I also taught only the Weaver. However, I was initially trained to shoot Isosceles. I had converted to Weaver only about two years prior to the shooting incident. I explain my use of the Isosceles as reverting back to my initial training.

Firearms trainer Bruce Siddle stated during a lecture in 1987 that he had recently observed a phenomenon among firearms instructors. He explained that while conducting high stress scenarios ("Red Handle Gun Exercises") during a class made up entirely of firearms instructors, he found that they were shooting from an Isosceles rather than a Weaver stance. Each of these participants had been trained exclusively in the Weaver shooting stance. This explanation by Siddle renewed my interest in this apparent phenomenon.

It would be helpful to review the history of the Isosceles and Weaver shooting stances before proceeding. Tony Lesce, author of many law enforcement articles, wrote, "The first systematic gun fighting doctrine to have any wide influence was that of Fairburn and Sykes, of the Shanghai Police, who developed some important principles during the 1920's.

"Regarding the shooting stance, they came to a critical insight as a result of an incident in Shanghai in 1927. A police raiding party had to pass through an alley to conduct a pre-dawn raid. After the raid, they conducted their prisoners down the same alley in the opposite direction in daylight. It was then they noticed that wires were strung across the alley at throat height. These turned out to be washlines, but the fact that nobody had run into them while approaching the site of the raid burned with significance."

"It became obvious that men instinctively crouch when expecting to be fired upon, and shooting from the crouch position became vogue. The men of the raiding party had approached the alley in a crouch, passing under the lines. This was immediately incorporated into the training given recruits into the Shanghai Police." The "instinctive

crouch" coupled with both arms extended straight out in front holding the weapon became known as the Isosceles Stance.

In 1977 Jeff Cooper wrote, "The Weaver stance is the personal invention of Jack Weaver, of Lancaster, California. He worked it out himself in 1958, and taught us all how to shoot."

As you can see, the Isosceles Stance was recognized in combat and the Weaver Stance was developed for competition. However, the "experts" disagree on which shooting stance is superior. Cooper (1977) wrote, "The Weaver stance, even as demonstrated was resisted for a time. I, for one, competed against Jack for almost two years before I saw the light. But finally it became obvious that I could not lick him unless I joined him, and by about 1962 no serious competitor shot from any other stance if he had a choice."

Masod Ayoob (1984) disagreed and wrote, "The Weaver, for several reasons, tends to fall apart under extreme stress." He continued, "While some people will fire better with one technique on the range, and some with another, we are finding that the straight-arms Isosceles position seems to work best under extreme stress."

The contemporary gun fighting authority John Farnam, himself a devotee of the Weaver stance, admitted in print that the Isosceles holds up better under extreme pressure. So did Chapman, developer of the best technique in the Weaver family, who called the Isosceles the "stress position."

So we have two very distinct and diametrically opposed views. Which of the "experts" are we to believe and what do we teach?

Police firearms instructors are charged with teaching what is probably the most critical psycho-motor skill used by police officers. We gauge the officer's skill level in terms of where the holes appear on a piece of paper. Therefore, all too often, we make our selection of the components and techniques taught based on that criterion.

As a firearms instructor, I found that I could achieve better results, more holes in the center of the paper, faster, teaching the Weaver rather than the Isosceles. Therefore, that is what I taught for about ten years.

Bruce Siddle's observations, however, indicate that the vast majority of officers, regardless of their past training, do not choose the Weaver Stance under stress. Remember, this is the stress of a controlled exercise, not the stress of an actual life threatening situation.

The question of how an officer responds under stress is critical to the training performed. Obviously it should only be those techniques that are applicable to the street officer and that which an officer can retain and perform under stress—such as a gunfight. To ascertain those techniques, was the purpose of this study.

Methodology

This study focused on the question, "What shooting stance do officers select under stress?" I did not look at the Weaver Shooting Stance or the Isosceles Shooting Stance in their classic form but rather I viewed them both in a more generic way.

I found early on that foot positioning, or more precisely, lower body positioning was one of the first things to break down under stress. Therefore, I have not concerned myself with the total body position but, rather with the upper body.

For this study, therefore, a Weaver Stance is defined as the upper body being turned at an angle to the adversary with the off-side forward. The weapon is held in the strong hand, the strong hand is extended straight out in front at eye level, the off-side hand is also supporting the weapon, and the off-arm is bent at the elbow with the elbow pointing down. As such, the arms and hands are in a "push-pull" position.

In the Isosceles, the upper body is square with the adversary. The weapon is held in the strong hand supported by the off-hand and both arms extended straight out in front. The Isosceles, for this study, can also be a one-handed shooting stance. The upper body position remains the same but the off-hand is not assisting in supporting the weapon.

I did not use the terms Isosceles and Weaver in the early research phase. Rather, I used Front Facing Shooting Stance (Front Stance) for the basic Isosceles and Side Facing Shooting Stance (Side Stance) for the basic Weaver. This was done because I was not seeing the classic forms of either of these stances and was searching for more generic terms. However, this terminology seemed to create some confusion and I returned to the more traditional terms. But since the Front Stance and

Side Stance terms were used during a part of the research phase this terminology is used in some quotes.

Data for this study was gleaned from various sources, including several textbooks, magazine articles, and professional journals, as well as the review of video tapes and my personal observations of "Practical Training Exercises." During the review of the video tapes and my personal observations, I attempted to address the following questions:

- From what distance did the officer perceive the threat?
- Did the officer have prior knowledge of the existence of a potential threat? (Weapon holstered or unholstered)
- Was the officer stationary or moving when the threat was perceived?
- Did the officer utilize available cover before responding to the threat with his weapon?
- What shooting stance did the officer select?

Before getting into the results of the study some background information is necessary. Bruce Siddle, Director of Pressure Point Control Tactics Management System, provided me with a video tape containing a portion of the practical exercises conducted during a "Red Handle Gun" training seminar. ("Red Handle Gun" refers to a cotton wad bullet concept developed by Lt. Robert Welsch of the Ohio Highway Patrol.) This tape contained 18 events. (I am defining an event as a confrontation between one officer and one suspect, thus one officer and two suspects would be viewed as two events).

Thirteen of the events were during "routine" traffic stops and the remainder involved disturbance call type scenarios. The officers involved were all firearms instructors who were trained exclusively in the Weaver Stance and had a minimum of five years experience.

I also viewed a video tape provided by Officer Kevin Gordon of the Cahokia, Illinois Police Department. This was also a tape of "Red Handle Gun" exercises and contained 48 events, 44 of which were "routine" traffic stops and four domestic type contacts. The officers in this video ranged from a low of two years experience to a high of 18 years experience. Most had been trained exclusively in the Weaver Stance, however, some of the older officers had originally been trained in the Isosceles Stance and later converted to the Weaver.

Also as part of this study, I video taped or personally observed when taping was not possible, 21 members of a Tarrant County Junior College Criminal Justice Training Center Recruit Class. These recruits are exposed to both the Weaver and the Isosceles Stances and are then allowed to select the stance they prefer.

The recruits used in this study had selected and used the Weaver Stance. The firearms training, which is a minimum of 40 hours was conducted only four weeks prior to my observations of the events used in this study. Thirty-two events were observed: 19 were "high risk" traffic stops and 13 were "building search" scenarios. (An event during this part of the study is defined as before but now also includes the stance selection while clearing the suspect vehicle after the removal of all known suspects.)

Obviously, the portion of this study detailed above is directed toward identifying the shooting stance most often selected by officers in stressful situations. A second part of this study is to attempt to explain why that selection is made. The data for this section of the study was developed through the use of textbooks and journals. I also mailed a letter to several sports psychologists summarizing my findings and requesting

their opinions on why these things were happening.

Breakdown of Raw Data

Ninety-eight events were viewed in this study. They were first grouped into two general categories: Spontaneous and Non-spontaneous situations.

Spontaneous situations were those events where the officer had no prior warning of an armed encounter and his weapon was holstered. These include "routine" traffic stop scenarios and the domestic call scenarios. The non-spontaneous situations were those events where the officer had prior warning and his weapon was not holstered. These are the "high risk" traffic stop scenarios and the building search scenarios.

I identified 66 spontaneous events and 32 non-spontaneous events, which I broke down by distance: under ten feet, and over ten feet. These were further defined by shooting stance, either Isosceles or Weaver, and finally if one or two hands were used. The results follow.

Spontaneous—Under Ten Feet

Of the 39 events occurring at this distance, an Isosceles stance was used by the officer during 29 of the events. A Weaver stance was used in only one event. (What happened to the other nine? They fell back, grabbing their chest or abdomen, just like they had been hit by a real bullet rather than a mere cotton wad.)

Of the 29 who used an Isosceles stance, 18 used one hand. The lone Weaver stance used both hands. A look at the percentages shows that 96.7% of the officers who responded with their weapon utilized an Isosceles stance and 3.3% from the Weaver stance. Those who only used one hand included 62.1%, and 23.1% did not respond with their weapon.

Spontaneous/Over Ten Feet

Of the 27 events at this distance, 25 demonstrated an Isosceles stance and two a Weaver stance. Only four went to a single hand hold, and all of them used an Isosceles stance. The percentages work out to be 92.6% used in an Isosceles stance, 7.4% used a Weaver stance, and 14.8% fired with one hand.

Spontaneous Totals

The spontaneous events total 66. Fifty-seven resulted in an officer responding to threat with his weapon. Of these responses, 54 (94.7%) did so from an Isosceles stance and three (5.3%) from a Weaver stance. Twenty-two (38.6%) of the officers responded using only one hand and nine (13.6%) of the officers failed to respond with their weapon.

Non-Spontaneous/Under Ten Ft

Twenty-seven events took place at this distance. Twenty responses (74.1%) were from an Isosceles stance and seven (25.9%) used the Weaver stance. All the responses were two handed, either holding the weapon, or in the case of a flashlight being used, supporting the weapon.

Non-Spontaneous/Over Ten Ft

Only five events occurred at this distance. Three (60%) used an Isosceles stance and two (40%) used a Weaver stance. As with under ten feet, all responses utilized both hands.

Non-Spontaneous Totals

The non-spontaneous events total 32. Twenty, or 71.9%, were from an Isosceles stance and nine, or 28.1%, a Weaver stance.

Study Totals

Overall 98 events were viewed. Seventy-seven (78.6%) resulted in an Isosceles stance and 12 (12.2%) a Weaver stance. Twenty-two (22.5%) used only one hand from an Isosceles stance. Nine (9.2%) failed to respond.

Why is this phenomenon occurring? What causes an officer to perform contrary to his training under stressful situations?

Siddle (1988) wrote, "The first answer is that Weaver is not a gross motor skill, but a fine motor skill." Simply stated, a gross motor skill is an activity using the body as a whole, relying on major muscle groups. A fine motor skill is precision activity.

With this in mind, visualize yourself assuming a Weaver stance. Your strong-side foot is to the rear; your body rotates at an angle to the target, your strong-side arm extends straight out, and your off-side arm is bent with the elbow pointing down while you pull back and down slightly with your off-hand.

Now assume an Isosceles stance. Both arms come straight out in front of you applying equal pressure and your knees bend slightly. Which of the two would you say demonstrates a gross motor skill? If you said Isosceles, you selected

the right one.

Siddle continued, "According to the Inverted-U Hypothesis, an individual loses the ability to perform fine motor skills optimally as stress increases." Put another way, the more complex the task, the greater the chance of failure under high stress conditions. Remember yourself in the shooting stances? Which one is more complex? Weaver? Right again.

Siddle also wrote, "Just like all motor skills can be classified as a fine or gross motor skill, it can also be classified as either a closed skill, which is a skill that is carried out in a fixed or never changing environment, or an open skill, which is a skill that is performed in a constantly changing or moving environment."

You will recall that the Weaver stance was conceived for the stress competition (closed skill), not a gunfight (open skill). With the application of these motor learning theories, I believe that Siddle has correctly identified the foundation for answering the questions concerning the cause of this phenomenon.

However, I believe that there are some other factors at work here. First, consider the factors involved in the operation of an automobile. This is a fine motor skill, of course. And it surely must be classified as an open skill because of constant changes in the environment based on things like traffic, weather, and road conditions.

The act of operating an automobile is a much more complex task than that of shooting a gun. However, we are quite successful in training officers to utilize certain driving techniques during emergency situations and having those officers retain and perform those techniques under the stress of actual pursuit situations.

No training scenario can match the stress of an actual high speed pursuit through a populated urban area. Why, then do officers follow their training in the pursuit and not in the scenario? I believe that it is the suddenness of the interjection of stress.

Stress builds during a pursuit and our bodies are allowed to adjust to it while in the training scenarios. In an actual confrontation the stress is instantaneous and we simply react. The resuits of this study tend to support this theory as a higher percentage of the officers responded according to their programming during the scenarios classified as non-spontaneous.

This brings forth the next factor. Benson (1975) wrote, "Humans, like other animals, react in a predictable way to acute and chronic stressful situations, which trigger an inborn response that has been part of our physiological make-up for perhaps millions of years. This has been popularly labeled the 'fight or flight' response."

There is another response that is just as much a part of our physiological make-up and just as predictable as the "fight or flight" response. That response, when suddenly attacked—especially in close quarters—is to face our opponent squarely with our hands and arms extended out in front of us. This is a natural stance assumed by all animals who defend themselves on two legs. Add a handgun and you have an Isosceles stance.

Dr. Robert Weinberg, a sports psychologist and Regents Professor with the University of North Texas, supports this theory. He wrote, "From my experience as a researcher in the area of stress and psychomotor performance, I offer the following thoughts. One principle that seems appropriate is that individuals usually return to their preferred or instinctive mode of behavior (in this case movement pattern) especially under stress.

When put into a stressful situation (in a police officer's job, sometimes life threatening) it is instinctual to face your opposition rather than turn to the side. This is a strong instinct since it's part of the fight or flight response to danger."

Dr. Tom Seabourne, a sports psychologists with the Northeast Texas Community College, tends to support the theory that the Isosceles stance is a natural movement under stress. He wrote, "The front stance may simply be more comfortable to the officer even though prior training dictated the Weaver style. The front stance may feel stronger to the officer as both hands are applying equal force. There may simply be an inherent flaw in the Weaver approach."

In summary, the Weaver stance seems to break down under the stress of a confrontation due to a combination of the following basic concepts:

- An inability to perform fine motor and open skills under high stress.
- The sudden injection of the stress.
- An inborn reflex to squarely face the attack.

During the course of this study, some factors outside the scope of my initial purpose caught my attention. These factors are movement, point shooting, and failures. Also, while accuracy was not addressed in this study, no commentary on this issue would be complete without it.

Movement

Never in my viewing of the spontaneous events, and seldom during the non-spontaneous events, did the officers simply respond to the threat. Their responses were always coupled with movement. The movement took the form of crouching, moving straight back, moving from side to side, falling to the ground, or combinations of these actions.

Seldom during the spontaneous events, and never under ten feet, did this movement consist of an attempt to go to available cover but, rather took the form of random movement. The propensity to go to available cover was greater during the non-spontaneous events.

The Isosceles stance seems to be more suited to movement, especially random movement, than is the Weaver stance. Arnold (1988) supports this and wrote,

"A large number of American police departments teach their personnel to assume a crouch position when firing. The idea behind this is to present an adversary with a smaller target although its validity is debatable. Many argue that the time wasted in assuming the crouch does not justify it and one is better off striving for a quick, effective shot from the normal upright position.

While there is merit in this point of view, it is also true that, if shot at, the natural tendency is to duck, which is a strong argument in favor of the crouch position. In passing, it must be mentioned that the crouch position favors the straight arm two-handed shooting position and is not really suitable for the Weaver stance."

Point Shooting

Fairburn (1984) wrote, "Despite what others say, the sights should be used at all times except when the target is at arms reach." I too held this belief until I got involved in this study. Not one time during a spontaneous event under ten feet did the officer bring his weapon above his armpits and many times that weapon was held at, or slightly above his waist. Also, remember that 62.1% of these officers fired using one hand.

Admittedly, I could not see where the officer's eyes were focused in these situations. However, with the weapon held at the levels I observed, I must conclude that the officer's eyes were focused on the threat and not the front sight. These officers were, in fact, point shooting. I am not the only one to make this observation.

Siddle, in referring to his study wrote, "In the first phases of this study, the interest focused on the two stances. About halfway through the study, I began to focus more on the responses at close ranges. I was surprised once again, that the actions were totally deviating from the officer's training. To be more candid, I was expecting to see some variation of the two-handed close quarter combat truck shooting stance. In these situations, the officers were reacting with the classic old FBI single hand instinctive shooting stance."

Steiner (1988) wrote, "For close-range combat shooting the point-firing method is what works, so long as ranges are close (as almost all combat ranges, where handguns are involved) you do not need the sights to hit your assailant(s)."

Additionally, Wilson (1982) asked the reader to imagine being fired upon at night and wrote, "Do you think you want to take the time to aim? I doubt it. Besides, you can't even see the gun in your hands at night, let alone see a sighting device."

Felter (1988) summarized the question of point shooting nicely. He wrote, "At certain times, point shooting can be pulled from your bag of tricks (techniques) to save your life, by instantaneous gaining the fighting advantage with lightning-quick reactions.

If the situation were to occur to you right now—precariously close, deadly, and quick (PDQ)—you would point that handgun out and start pulling the trigger. Do not kid yourself, in all probability you would do just that, no matter how much you have practiced your favorite two-handed firing stance. When it is that close, you know that you have got to be the fastest to survive.

Given slightly more time and distance and you will instantly go into your locked-in two-handed firing stance. But exceedingly close work, with the threat

trying to press its advantage (the threat usually being first to start, first to fire, and possibly having caught you completely unaware), requires the fastest answer. This has been shown time and time again during very close-quarters encounters. Police officers were only kidding themselves if they do not have a good point-shooting technique. Learn how to do it correctly before you are going to do it for real."

A look at the New York City Police Department's study of combat situations is important. The NYPD study (1981) states, "Good sight alignment is fundamental to target shooting. Yet, 70% of the cases reviewed indicated that no sight alignment was employed when the revolver was fired." These are the results of the stress of an actual gunfight and not competition shooting.

Accuracy, Recoil Control

Cooper (1977) wrote, "...if hitting what you are shooting at, precisely and quickly, is your purpose, one position will do. This is not just my opinion. Give any combat pistol master any sort of realistic problem—any range, any gun, any speed—and he will shoot from the Weaver stance."

Taylor (1988) wrote, "Because of its superior geometric configuration and resultant better utilization of the laws of physics, the Weaver provides better control, particularly with the more powerful weapons, and requires far less physical energy expenditure in the process."

Prior to becoming involved in this study, I would have agreed with these statements completely. However, a study conducted by the Los Angeles Police Department does not support this belief. The LAPD Study was conducted using two recruit classes. One was trained exclusively in the Weaver stance and the other Isosceles. The LAPD study (1985) found, "There was no significant difference in the scoring between the two test classes. Out of a possible 400, the Weaver class average was 357.2 and the Isosceles class average was 357.4."

In addressing the area of quick draw the study stated, "Both classes scored an 82% in accuracy and hitting the 10,9, and 8 ring body mass of the target. There was also no significant difference in speed of draw and accuracy between the two stances." In the area of recoil control, the study found, "When the proper fundamentals were applied, both methods effectively controlled the weapon's recoil." The study recommended that "...the current Isosceles method of shooting instruction be retained. There was significant difference between the two stances in the area of accuracy and recoil control. The Isosceles position was found to be the most efficient shooting position based on overall test results and other class training comparisons."

Failures

You will recall that 23.1% of the officers in this study, when presented with a spontaneous event under ten feet, failed to respond with their weapon. That's almost one in four officers simply standing there and letting someone take their life.

James Auten (1988) wrote, "One of the facts that has emerged from all the research concerning confrontations in which officers were shot is this: Most police officers were not mentally prepared to make the 'shoot-don't shoot' decision."

While mental preparation is certainly

a factor here, I wonder if that is the sole cause. I believe, after conducting this study, that current training methods may be one of the culprits, i.e., training officers to attempt a response that is completely unnatural under stress. Could this confusion between what is taught and what is instinctive lead to mental stall? I don't have the hard data to support such a conclusion and that leads me to the next portion of this article.

Future Considerations

Several areas of concern surfaced during the course of this study that I believe merit future research. Failures are of particular concern. The greatest and fastest shot in the world will lose a gunfight if he does not properly respond to the threat. More needs to be done to identify the cause of these failures and develop training methods directed toward defeating the cause or causes.

A vast majority of officers, regardless of their prior formal training, will, under stress, point shoot. Well over half the officers will only use one hand. I believe that this study has correctly identified the reasons for the point shooting in general, however, I believe more research needs to be done into the causes for the use of one hand. Siddle (1988) put forth an interesting theory. He wrote, "The 'probable' reason on why the single hand stance vs. the two-handed stance was used more frequently is Reaction Time Principles.

Unfortunately, motor learning theory literature is not as specific on actions based on reduced reaction time under high levels of stress. In time, I believe that there will be developed a concept of the subconscious prioritizing reactions due to limitations of a stressful event. This area needs to be further researched." I concur.

Dr. David Yukelson, a sports psychologist with Penn State University, presented an interesting opinion regarding visual field. He wrote, "Perhaps they felt their visual field is more acute by facing the target head on which would enhance reaction time and powers of anticipation (similar to squaring up the shoulders in shooting a basket; squaring up ones shoulders in order to make the right tackle in football, etc.)" The question of visual acuity bears additional research.

A lot has been written about training an officer to function under stress and a number of approaches have been tried. McLaughlin (1988) wrote, "While some courses for advanced students include a variance of conditions (noise, light, targets that move right/left and forward/backward, etc.), they lack the most important variable of combat...the possibility of losing your life if you do not control your assailant's ability to take your life."

Obviously, we can't conduct a real gunfight for training purposes, but as I discussed the findings of this study with other firearms instructors, I began to wonder what would happen if we combined the standard type firearms training with Red Handle type training. Specifically, following a standard qualifying round with Red Handle type exercises.

Will this allow an officer to become better acclimated to functioning under stress? This has been discussed with my department's Range Master, Capt. R.E. Clark, and we are planning to begin this type of training in the near future. This training will be video taped and the results charted.

The purpose of this study was to

identify the shooting stance selected by officers during high stress situations. It is now clear to me that the stance is the Isosceles.

Not all officers will use the Isosceles and forsake the Weaver under all circumstances, however, it appears an overwhelming majority of officers given average training will, under stress, go to an Isosceles stance regardless of their prior training.

I have already converted. I now practice from an Isosceles stance and will advocate the same until someone can show me, or I can find, a system that works better under stress.

As police firearms instructor, I have accepted the responsibility of attempting to train officers to survive a deadly force encounter. If that includes being criticized for taking what is likely to be an upopular position, then so be it. L&O

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