



A DISCUSSION OF A DESIGN DEFECT IN CURRENT HANDGUNS AND TORTS

THE PROBLEM

Current handguns, which usually are purchased for self defense use, do not have a simple, practical, and reliable means for accurately aiming and shooting them in close quarters life threatening situations.

That defect might be the basis for legal action against gun makers, sellers, and trainers under State statutes or via common law product liability claims of defective design, and failure-to-warn.(1)
(2)

(Note: (1), (2),.... are used to designate footnotes.)

Handguns do come with sights for use in aiming and shooting them accurately, and the use of the sights to aim and shoot with, is taught in training courses.

But, based on shooting data, videos, scientific publications, and papers authored by police and others, it has become clear that in real life and death close quarters situations, the sights are not used, or cannot be used to accurately aim and shoot.

For example, in 70% of the cases reviewed in a study of over 4000 NYPD police combat cases, no sight alignment was employed when the gun was fired. And the distance involved in 75% of the cases, was less than 20 feet.(3)

That is reality, and the miss rate of about 80% in armed encounters, is an example of it.

In the past, failure to use the sights and bad accuracy, were blamed on operator error and/or inadequate training.

Now, the evidence has established that they are the natural result of using a handgun that requires the use of the gun sights to accurately aim and shoot in close quarters life threat situations.

In those situations, what is called the Body Alarm Reaction (BAR), is automatically and instinctively activated. It is a hereditary self preservation mechanism that when activated, triggers a number of immediate physiological changes.(4)

One of those physiological changes is the loss of use of fine motor skills. And the ability to focus on near objects, like the sights, can be lost. Both are needed to use the sights to accurately aim and shoot. Without them, shooting accuracy and one's survival become a matter of chance.

The BAR also affects body positioning and the ability to perform shooting stances which also may have an adverse affect on the use of the sights. Also, as gunfights typically last only a few seconds, there will be no time to take "proper" aim and shoot as required for accuracy when using the sites. Also, a target may be moving which makes it even more difficult to hit.

Further, one can expect that such situations will occur in bad or poor light where it will be difficult to use the sights even if one could focus on them, and in poor or bad lighting conditions, muzzle flash can add to the difficulty of accurate shooting when using the sights.(3)

Additionally, though the sites are adequate for marksmanship shooting on a range in optimal shooting conditions, in a select review of 200 of the police combat cases reviewed cases, no clear relationship was established between an officer's range qualification scores and his ability to strike a target in a combat situation.(3)

The result is that the usual gun buyer/user will be left with no practical and effective means and/or method for aiming and shooting the gun in a real life and death close quarters self defense situation.

What you will get and which is often seen in videos of police shootings, is point and blast or spray and pray shooting with its terrible accuracy rate, and survival by chance.

THE REMEDY:

There is a simple, practical, reliable, and inexpensive remedy available now. It is an aiming aid that can be added to or incorporated in handguns.

It does not require the use of the gun sights, fine motor skills, or near vision for accurate aiming and shooting at close quarters. And it is very easy to use, and can be used effectively with little or no training.

It was patented (US 6023874 2/15/00), but no longer is.

Anyone who wishes to make and add the aid to firearm/s, is welcome to do so, if done at their own risk and expense and if they accept full responsibility for any and all results.

For test shoot info with pics, and info on how to "roll your own" aid, click on this link.

[Test shoot info.](#)

As the photos show, the aid is in the form of a small shelf that extends out horizontally from the side of the gun just below the slide. And it is aligned with the gun barrel.

As all of us can instinctively and accurately point at objects with our index finger, when it is placed against the finger rest and pointed, the gun barrel will also be pointed accurately at the target.

The middle finger of the same hand, or the index finger of the other hand is then used to pull the trigger.

The method of shooting can be called AIMED Point Shooting or P&S. Just point and pull the

trigger. That is all there is to it. P&S is not new, but it is not widely known/accepted in the gun world.

The US Army, in its FM 3-23-35, Combat Training With Pistols M9 And M11 (2003) Chapter 2 Section II, confirms that everyone has the ability to point at objects rapidly and accurately.

The FM says in part: "When a soldier points, he instinctively points at the feature on the object on which his eyes are focused. An impulse from the brain causes the arm and hand to stop when the finger reaches the proper position....When the eyes are shifted to a new object or feature, the finger, hand, and arm also shift to this point....It is this inherent trait that can be used by a soldier to rapidly and accurately engage targets."

The use of the aiming aid is not required to use the P&S method of shooting. But without one, correct finger placement is not automatic and as assured at both day and night.

Also the index finger will not be protected from being hit by the slide or ejected shells, and it may move out of position when the gun is fired rapidly and multiple times.

The P&S method of shooting is not dependent on a particular body position or stance.

And, the grip shown on the web page of test shoot results, provides very effective recoil control, and serves to make up a strong and secure gun platform for shooting as well as delivery of front punches and elbow smashes if needed.

Lastly, the P&S method can be used in conjunction with the sights, if conditions are such that the sights can be used and there is time to use them.

The method actually enhances the use of the sights in those situations because it is an effective means for recoil control, and it provides for rapid target re-engagement while firing.

The S&W Bodyguard, Berreta PX4, Walther PPS and SIG P290 appear to be made to be used with P&S. [Here is a link to a page that shows those guns along with info on their being designed for use with P&S.](#)

FOOTNOTES:

(1) From *Cincinnati v. Beretta U.S.A. Corp.*, 95 Ohio St.3d 416, 2002-Ohio-2480,...At common law, a product is defective in design "if it is more dangerous than an ordinary consumer would expect when used in an intended or reasonably foreseeable manner or if the benefits of the challenged design do not outweigh the risk inherent in such design." *Knitz v. Minster Machine Co.* (1982), 69 Ohio St.2d 460, 23 O.O.3d 403, 432 N.E.2d 814, syllabus.

(2) From *Cincinnati v. Beretta U.S.A. Corp.*, 95 Ohio St.3d 416, 2002-Ohio-2480,...We likewise find that appellant can bring a common-law failure-to-warn claim. Under the rationale espoused in *Carrel v. Allied Prods. Corp.*, supra, the statute does not clearly state that it intended R.C. 2307.76, the failure-to-warn statute, to supersede the common-law action. *Id.*, 78 Ohio St.3d at 288, 677 N.E.2d 795. Thus, the common-law failure-to-warn claim survives the enactment of Ohio's Product Liability Act, R.C. 2307.71 et seq.

To recover under a failure-to-warn theory at common law, the plaintiff must prove that the manufacturer knew or should have known, in the exercise of reasonable care, of the risk or hazard about which it failed to warn and that the manufacturer failed to take precautions that a reasonable person would take in presenting the product to the public. *Crislip v. TCH Liquidating Co.* (1990), 52

Ohio St.3d 251, 257, 556 N.E.2d 1177.

The court of appeals reasoned that the failure-to-warn claim could not go forward because the defendants owe no duty to warn of the dangers associated with firearms, which are open and obvious dangers. Although, in general, the dangers associated with firearms are open and obvious, appellant has alleged sufficient facts in its complaint to overcome a motion to dismiss. As pointed out by Judge Painter's concurrence, some of the allegations involve risks that are not open and obvious, such as the fact that a semiautomatic gun can hold a bullet even when the ammunition magazine is empty or removed. Therefore, since appellant properly alleges failure to warn, this claim withstands a motion to dismiss. See, also, *White v. Smith & Wesson*, 97 F.Supp.2d at 827-828, where the court refused to hold as a matter of law that the use of handguns involved an "open and obvious risk."

(3) The SOP 9 report, was first published in 1981. It was the result of a ten year study of over 6000 New York City Police Department police combat situations.

Some of its conclusions and findings are that:

A..."The majority of incidents in which officers used their firearms occurred in poor lighting conditions."

B..."Dim light firing involves still another element which is different from full light firing, muzzle flash. Muzzle flash from the off-duty gun may be more distracting than that of the service gun since, in many cases, they have shorter barrels. Dim light training, then, must involve use of both weapons."

C..."The distances Involved where the officers survived the encounter have, as with those which were fatal, remained almost the same during the SOP years (1970-1979) and a random sampling of cases going back as far as 1929. In these cases, 4,000, the distances were:

Contact to 10 feet 51%
10 feet to 20 feet 24%
20 feet to 45 feet 10%
45 feet to 75 feet 7%
Over 75 feet 5%
Undetermined 3%"

It was also noted that as the distance between the officer and the assailant increased, so did the officer's chance for survival....

D..."Shooting with both the strong and weak hand is a standard part of firearms training. However, the review showed that officers, with an occasional exception, fired with the strong hand. This was the case even when it appeared advantageous to use the weak hand."

E..."Body positions taught during firearms training have remained fairly constant over the years. In 84% of the cases reviewed, the officer was in a standing or crouch position (supported and unsupported) when he fired."

F..."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 officers reported that they used the instinctive or point shooting method of firing. This technique was used for a variety of reasons: the close proximity of their adversary, rapid escalation of the incident, poor lighting or the need for the swiftest possible reaction.

As the distance between the officer and his opponent increased, some type of aiming was reported in 20% of the cases. This aiming or sighting ran from using the barrel as an aiming reference to picking up the front sight and utilizing fine sight alignment. The remaining 10% could not remember whether they had aimed or pointed and fired the weapon instinctively."

G..."An attempt was made to relate an officer's ability to strike a target in a combat situation to his range qualification scores ended with no clear connection. After making over 200 such comparisons, no firm conclusion was reached."

H..."The police officer's potential for hitting his adversary during armed confrontation has increased over the years and stands at slightly over 25% of the rounds fired. An assailant's skill was 11% in 1979. Observations made on this subject are impossible to document and must be considered as opinions. There are many variables in armed confrontations which cannot be measured because they cannot be recreated, such as the reaction to stress (a major factor). It was noted, however, that the potential of striking a target in a gunfight has improved since incorporation of training exercises in close combat, moving targets at close range, dim light and multiple target firing."

Many police officers find firing a revolver accurately difficult, even in the academic environment of a controlled pistol range. In a police action rapid heart beat, muscle tremors and irregular breathing, brought on by emotional tension and/or physical exertion, add to the inherent difficulty. When these physiological and psychological factors are coupled with poor lighting, irregular terrain, obstructed view and Irregular movement of the target, it is easy to understand why shooting accurately is extremely difficult."

(4) See Bruce K. Siddle's book *Sharpening the Warrior's Edge: The Psychology and Science of Training*, (1995) It is distributed by PPCT Research Publications, PPCT Management Systems, Inc., Millstadt, IL 62260.

(4) Continued...The following references three papers and a book which further document the inability of being able to use the the sights to aim and shoot accurately in real life and death close quarters situations.

The papers, which were authored by police, also discuss training and methods to effectively deal with CQ life and death situations.

1. The first paper was presented by Lt. Darin Clay on 11/9/2001 at the Criminal Justice Institute of the University of Arkansas, Little Rock, AR. The title of the paper is: *Understanding the Human Physiological and Mental Response to Critical Incidents*.

A portion of the paper deals with the physiological effects that one can expect to experience in a life and death close quarters encounter, and includes references to the work of Grossman and Siddle.

The loss of the use of fine motor skills, which are necessary to use the sights to shoot with, is not discussed. It is mentioned, but only as a given. The majority of the discussion is focused on the use of complex motor skills.

Fine motor skills, according to Siddle, diminish rapidly when the heart rate exceeds 120 BPM, and they are lost to use around 130 BPM. Also, a minimum heart rate of 145 can be expected in a real life and death close quarters situation.

Lt. Clay stated that "We operate most efficiently in critical incidents with a heart rate between 115-

145 beats per minute. At this level, we still have use of our complex motor skills, visual reaction and cognitive reaction. The body shuts down fine motor skills, such as the ability to write neatly, because it is not necessary for survival.

At 145 beats per minute, complex motor skills begin to diminish. Between 150-175 beats per minute, we experience loss of near vision, loss of peripheral vision (tunnel vision)..."

Here is a portion of his paper which focuses on the ability to use the sights..."We also lose depth perception and our near vision. During an interview with an unnamed officer at my department, he advised me that he had been involved in three shooting situations. He stated that he never took aim with his weapon, but instinctively pointed and shot, striking his target each time. The traditional method of firearms training was to close your non-dominant eye, and focus on your front sight picture before you shot. This works great in training, but when your heart rate reaches 160 beats per minute, it is impossible to focus on your front sight picture. Also when you experience tunnel vision, and one eye is closed, you lose even more peripheral vision. To counter these effects, our department has adapted our firearms training to correspond with the body's natural instincts. We have instructed officers to shoot with both eyes open and on how to present their weapons so that they will be on target by point shooting alone. This is done by resting the thumb of your off hand under the slide pointed toward the muzzle and the trigger finger of your primary hand under the slide on the other side toward the muzzle.

When an officer points these two fingers at an intended target, the front sight will be inline with the target."

Lt. Clay also stated that a "no sight" course was designed by his department to teach shooting without the aid of sights. The students were not to rely on prior training that might stress such things as target acquisition, sight picture. etc.. The course requires shooting from a variety of positions and at close quarter distances:

15 shots at 1 yard,
25 shots at 3 yards,
10 shots at 7 yards.

The paper also mentions the topic of using controlled breathing as a means to control the heart rate..."As mentioned earlier, respiration and heart rate are directly related. In lecture, Grossman stated that officers can prevent their heart rate from climbing by controlling their breathing. Breathing is controlled by the autonomic nervous system. This means that it happens without conscious thought. When we choose to control our breathing, we make it somatic and in effect hold the throttle to the autonomic nervous system. Remsfeld (1986) suggests to "belly breathe". The breathing technique completely fills and flushes out your lungs to expel carbon dioxide waste and replace it with essential oxygen at a certain rhythmic rate.

"The effect is to reverse the alarm response, restore your psychological sense of self-control and return your body to a naturally balanced state" (Remsfeld, 1986, p.30).

This technique consists of taking in a deep breath for four seconds first letting it fill your stomach, the low portions of your lungs and finally your chest. Next, you hold in the breath for four seconds while you try to relax your mind. Then you exhale the breath for four seconds pushing all of it out. These steps are then repeated several times until the heart rate falls. Our swat team practices this technique on the way to an entry to insure that everyone is calm and in control of their facilities.

Short sessions of this technique can even be beneficial. An example of this is when an officer encounters fire and ducks behind cover. While forming a plan, he can use this technique to remain

calm and his ability to effectively return fire will increase."

In my opinion, as most gunfights are over in a matter of seconds, the use of the controlled breathing technique to reduce the heart rate, would be limited.

Also, Lt. Clay's statement about using the index finger to aim the gun, fits in nicely with my thoughts on P&S and using the middle or index finger of the other hand to pull the trigger as mentioned above.

2. Another paper that addresses this subject is: The Anatomy Of Fear and How It Relates To Survival Skills Training.

The author is Darren Laur. He is a Canadian police officer.

His article reinforces the information in the article above, and also adds to it by a discussion of the neuroscientific research of fear, and its relationship to survival skills training?

Basically there are two ways, or pathways, which can be used in dealing with the emotion of fear.

One is where the..., "action can be based on conscious will and thought. This pathway appears to take effect during "progressive" types of fear stimuli. Here a combatives student will be able to apply stimulus/response type training using the OODA model having regards to gross motor skills and Hick's Law.

A second pathway is known as the "low road" which is triggered by a spontaneous/unexpected attack. Here, the brain will take control of the body with an immediate "protective reflex" (downloaded directly to the brain stem where all of our reflexive responses to danger are stored), which will override any system of combat that bases its ability on "cognitively" applying a physical response. This is especially true if the trained response is not congruent with the "protective reflex"....

So what can we as Instructors, coaches, and teacher do to incorporate the most current research in the field of Fear and Survival Skills Training?....

Train on the concept of "commonality of technique." The initial plan "A" strategy that I use in an unexpected spontaneous assault (be it armed or unarmed), is no different than in an attack that I do see coming. Why, because no matter if the brain goes "high road" or "low road", my "congruent" gross motor skills will work in both paths. This is a definite tactical advantage.

Understand that although the "low road" reflexive motor responses cannot be changed, they can be "molded" to fit a combative motor skill technique that are useable during a spontaneous attack. I use the Somatic Reflex Potentiation response, which I call "penetrate and dominate," in all my programs. Tony Blauer uses the flinch response in his SPEAR system. Richard Dimitri also incorporates the flinch in his training at Senshido."

This thinking also fits well with P&S which utilizes natural and instinctive action to engage the target.

3. A third paper that addresses the subject is titled Improving Deadly Force Decision Making. The

author is Lt. Dean T. Olson and it was published in the Feb, 1998 issue of the FBI Law Enforcement Bulletin.

It supports the information in the two papers mentioned above.

It also makes note of past teaching of shooting methods that were based on opinion and guesswork, and which in some cases, is still done.

Mention is made of training...."conducted in the static, nonthreatening, low-stress environment of the gun range, gymnasium, or classroom, using what psychologists call closed motor skill training. Such training exercises are predictable, planned, static, and low-stress.

A common example is traditional firearms qualification on the gun range in which officers fire only on command at identical paper targets that do not return fire. Techniques that look or feel effective in this type of environment often have little or no application in a stressful, dynamic, real-world environment.

The most prominent example involves the transition from the instinctive shooting style of the single-handed point, or "FBI crouch," and modified isosceles shooting stances to the Weaver stance decades ago. Generations of law enforcement officers learned the Weaver stance- essentially a field interrogation stance in which the officer assumes a three-quarter side stance, gun side and groin bladed away from the target with the strong arm and gun hand fully extended and almost locked, stabilized and supported by the weak arm. Firearms instructors extolled the virtues of the Weaver stance as an improved shooting platform. Unfortunately, research has shown that it is extremely difficult to assume the Weaver stance when confronted by a sudden, close threat.

Why? Humans are binocular animals that process 90 percent of sensory input visually when they experience survival stress. During a deadly force encounter, officers instinctively and uncontrollably crouch and square off facing the threat to maximize visual input to the brain. This instinctive stance was first documented in the 1920s based on observations of soldiers in combat. Because most deadly force encounters are sudden and close, teaching officers to use the Weaver stance made them rely on a technique ineffective for the deadly force situations they encountered."

As to shooting stances/methods we find that..."at ranges less than 3 yards when time is minimal, officers should use the single-handed point stance. The brain recognizes that there is not enough time to acquire the target with a two-handed grip; therefore, the officer extends the weapon, or punches it out, toward the target at stomach or chest height in a one-handed grip. Officers should use the modified isosceles two-handed stance at ranges greater than 3 yards when time allows and greater accuracy is needed."

P&S fits in well with this type of thinking.

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Book: The book is on the web site of the Violence Policy Center, which is an "antigun" organization.

The book title is: Unintended Consequences - Pro-Handgun Experts Prove That Handguns Are a Dangerous Choice For Self-Defense.

The middle chapters reiterate much of the basic information in the above referenced papers, but in a "tell'em like it is" earthy style that incorporates quotes from various well known trainers and police.

The remainder of the book is very critical of guns and the gun industry.

If nothing else, it is a LOUD wake up call to the gun world that there is a real and immediate need for a simple, practical, effective, and applicable self defensive shooting means and/or method that can be utilized by the general population with a minimum of training.

Apparently, the VPC plan is to use a public health and safety approach as the means by which handguns may be restricted to specific persons, or banned outright.

"The key question the public health and safety approach asks of any consumer product is, what are the product's relative risks and benefits? If a product inflicts more harm than is reasonable compared to the good, the inquiry then is whether the cause of harm is a defect in design or some factor inherent in the nature of the product. If the source of harm is a design defect, like a motor vehicle with a tendency to roll over on curves, it may be possible to correct the design. Some products, however, like highly toxic pesticides, are so inherently dangerous that no amount of design modification can make them reasonably safe. In such cases, the product may either be restricted to specific persons or banned outright."

P&S and the P&S finger rest aiming aid, may be the answer to meet and resolve that approach.

End.