

**On the Firing Line** (Thirtieth in a series)

## **More on Delivery of the Shot**

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### **Manage the decisive moment And all is well.**

*"In marksmanship competition no problem is fought with greater mental agony than pulling the trigger."* These timeless words from multiple World and Olympic rifle champion Gary Anderson are as true today as when published in 1964, and capture the essence of the challenge. Almost anyone can learn to perform the actions of a sport. Learning to perform well in the heat of competition is the real journey! In shooting, the delivery of the shot is where everything comes together.

The previous article in this series provided a quick glimpse into a world of shot delivery that is robust and stands up to the pressure of competition. Seemingly mysterious to many who seek such a style of shooting, the "secret" is not so much in the individual ingredients as it is in how they combine into a single holistic performance. In the end, there are no secrets.

This article will explore a few more of the critical elements and their integration into the complete performance. Both articles are, of necessity, severely limited in depth and breadth by space restrictions. Still, insights may be found to assist you on your own journey of discovery.

**Stability is Relative** – There are excellent athletes who have a hold that isn't as good as some intermediate teenage athletes. They perform well because they have learned to accept and use their hold to great advantage because they know that delivery of the shot is even more important and yields the desired results. Most elite athletes do have a truly world class hold, yet only those who can decisively and smoothly deliver the shot perform well. Each athlete has defined for themselves what "stable" means in the context of their hold.

Few things increase the confidence of a shooting athlete like having a hold they feel is very stable. Learning to establish a solid hold was covered in detail in the previous article. Often, a coach will have an athlete perform a drill or exercise that is designed to do nothing more than allow the athlete to discover – or re-discover – just how good their hold truly is. Ultimately, as in all aspects of competition, it comes down to trust.

**Trigger adjustment** – The way that a particular trigger operates and feels is critical to facilitating or destroying the potential for excellent performance. Regardless of the style of trigger – one stage or two, crisp or rolling, long or short travel – the actual adjustment and weight is of paramount importance.

One of the most common problems in events that have no minimum trigger weight is setting the weight too low. This is often done because the athlete "freezes" and cannot release the shot. Once the athlete drops the trigger weight, they are often able to perform quite well in training. In the heat of battle, the technique breaks down and the performance falters. Sensitivity is reduced by the athlete's psychic energy level and the subtle triggering technique that worked so well in training escapes them when needed most. Instead, if the trigger weight is set to a "normal" or somewhat higher weight, the athlete is able to develop a triggering technique that stands up to the heat of battle. More on this will be presented in the next section.

Many target rifles and pistols have a 2-stage trigger. It is imperative that the weights of the 2 stages are optimized to work together properly. Once the weight of the first stage is taken

up, all that the athlete can sense about the second stage is the difference in weight between the first stage and the total let off weight. Thus, if a trigger has a first stage weight of 50 grams and a total shot release weight of 80 grams, the athlete only feels the 30 gram difference. Rare is the athlete who can reliably deal with this small weight difference in a tense competition. The athlete will accidentally “pull through” and release the shot prematurely. One of the “cures” for this problem that is sometimes suggested is to switch to a single stage trigger. This does not solve the “problem”. It merely compensates for or masks the real issue – the inability to sense the trigger. Instead, set the trigger weights such that they are 1) not too light, and 2) have a significant weight difference between the two stages.

A typical example is a rifle trigger with 50 to 60 grams on the first stage and an equal amount of additional weight on the second stage for a total of about 100 to 120 grams. Many athletes have found that triggers set up this way, or even heavier, are conducive to excellent and effortless performance. One athlete set her rifles to 100 plus 100 for a total weight of 200 grams and never again thought about her trigger. Even with her heart pounding so hard she wondered if she could even hold on the target during the finals, she was able to perform confidently and win very pressure-packed championships. The actual weight is not as critical as the difference between the two stages. On a single stage trigger, a weight of 60 to 80 grams is well worth an experiment.

Free pistol shooters often set their trigger quite low. With a great deal of training, one can learn to use this trigger setup quite well. It takes extensive training and unwavering discipline. Many would be well advised to instead work for some time with a much heavier trigger to see what they discover.

**Trigger Technique** – Why the obsession with anything other than a light trigger? After all, in training very good performances may be obtained with a very light trigger. As previously mentioned, in the heat of battle the athlete is often less sensitive and unable to discern slight changes in pressure on the trigger. If their technique depends on this sensitivity, as with a very light trigger, they are often forced to switch to an unfamiliar technique in competition with disastrous results.

With a “normal” to “heavy” trigger, the athlete is able to build a robust technique that stands up in competition. It is quite common for an athlete to take up the first stage of the trigger, maintain a very slight pressure against the second stage, and then perform the final release. One of the challenges with this technique is that holding the first stage against the “stop” of the second stage (with no appreciable additional pressure) is physically and psychologically static. Getting the trigger moving again is a daunting task at best.

Once the first stage has been taken up, the athlete must then add and maintain a fair amount of pressure on the second stage. (On single stage triggers, the technique is essentially the same: touch the trigger, then add and maintain appreciable pressure.) This is physically and psychologically dynamic. When first asked to experiment with this technique, athletes often describe it as being downright scary! After a few trials, the athlete recovers from the adrenaline rush and starts to discover how powerful the technique can be. Sometimes they also discover that they are not truly ready for or committed to the shot delivery. This is a powerful insight.

Adding and maintaining pressure on the second stage of a two stage trigger, or on the only stage of a single stage trigger, requires that the trigger be set up properly as previously described. Otherwise, many premature shots will result. This technique initially demands courage on the part of the athlete. Very quickly, however, the technique becomes very comfortable. It is a robust technique that can stand up to the pressure of competition. One athlete

used this technique to great effect in winning a world cup with a world record setting performance and later in an Olympic final.

Admittedly, there are other techniques. In pistol, for example, in an attempt to maintain a smooth trigger release with undisturbed sight alignment, one technique calls for starting the trigger movement and completing it in one continuous motion with no interruption. This causes the shot to be released quite smoothly somewhere within the area of hold. For an athlete who “tries” too hard to make a perfect shot, this can be a powerful antidote. It does not address the root issues, so is not always a panacea. Instead, if the proposed technique is explored, the athlete may well find it to be a more robust technique.

**Hold, Aim, and Triggering as One** – Each of these three topics are generally discussed and presented as separate activities that are to be integrated (along with other factors such as breathing) in order to ultimately deliver the shot. In some cases, they are even described as being completely separate. In that scenario, one transitions from focusing on the aiming to focusing on the triggering (while maintaining an awareness of the aiming).

If we allow the hold to be what it is (having already optimized position, balance, and natural position or aim), relinquish perceived control on the part of the active thought part of the mind, and allow the deeper parts of the mind to take over, then aim and triggering take place within the hold and all three become one activity. Not three separate activities: one integrated activity.

**Outcome vs. Performance** – One of the most important aspects of shot delivery takes place in the mind and heart of the athlete. That is to separate outcome or result – over which the athlete has no real control – from the performance or the doing of the activity. Thought must be on merely allowing the doing to happen. If thought is on the outcome, or on “controlling” the performance, then the performance itself is destroyed. The athlete must “be” in the Present Moment, have a fierce determination and force of will to have a quiet mind and eye, and allow the deeper parts of the mind to calmly and confidently “run the program” of the performance. Relinquishing perceived control is a scary proposition for most athletes. Those who have the courage to allow the deeper parts of the mind to “run the program” are stunned by the ease of shot release and the incredible results. This can be quite terrifying!

**Final Thoughts** – Athletes who are highly analytical during their performance and/or who tend to exert a great deal of perceived “control” of the performance are very uncomfortable with the process described here. Many athletes and coaches avoid this style of shot release at all costs and close off a large realm of possibility. It is simple enough to teach a beginner and robust enough for all levels of competition, as already proven in international competition.

The key to understanding this method is to think about all of the elements as a dynamic whole rather than as a set of discrete components that must all be present. Everything affects everything. You are encouraged to be bold and to thoroughly experiment with this style of shooting. Your observations and questions are welcomed.

## References

Anderson, Gary, "**Firing the Shot**", American Rifleman, May 1964, pp 30-35 – Despite the evolution of the sport in the 42 years since this article was published (such as the rise in use of aperture front sight inserts), it remains a timeless and eminently valuable reference for rifle and pistol athletes alike.

Piddubnyy, Anatoliy, "**The Vital Problems of Pistol Shooting - Parts 1 & 2**", ISSF News, 2003 #1 & #2, and as found on the Pilkington Competition web site, [www.pilkguns.com/anatoli.shtml](http://www.pilkguns.com/anatoli.shtml) and [www.pilkguns.com/anatoli2.shtml](http://www.pilkguns.com/anatoli2.shtml) – This pair of articles is quite insightful and thought provoking. Rifle athletes are well advised to study these articles as carefully as pistol athletes should.

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(Biographical information as of October 2009)