

ON THE FIRING LINE

ARTICLES & RESOURCES

by J.P. O'Connor

Note: Links are to .pdf documents or websites. Thanks to [Scott Pilkington](#) and Pilkington Competition for graciously hosting these items. Author bio and link at the bottom of the page.

Resources

Ambercise – Balance, Strength, and Stability Workout – Modified by Dan Durben and Sommer Wood November 2006 from the program originally developed by Amber Darland for the USA Shooting National Rifle Team.

- [Training Work Out](#)
- [Competition Warm Up](#)

[Front Aperture Selection](#) — Selection chart for minimum allowable size. Don't just randomly pick based on how it looks. Be sure it is at least this size, or larger.

[Shooting Outlines](#) — When Dr. Dan Durben rewrote the curriculum for the CMP Three Position Air Rifle Camp program in 2004, we worked together to incorporate new training and teaching methods, while also significantly changing the structure. The results were three outlines which formed the structure of the camps. Ten years later, much of this structure and content could still be found in the curriculum.

- **The Shot** – A solid shot process outline applicable to all athletes. Note there are two possible successful outcomes of a shot process.
- **The Session** – The session presents a strategy for mentally jumping the gap between sighting shots and record shots.
- **Training** – This high level training outline is the first written use of my Physical, Technical, Mental, Emotional (PTME) concept.

[Natural Point of Aim](#) — A robust technique for accurately finding and setting NPA.

Book Suggestions — Found on the [resource](#) page of [my blog](#).

On The Firing Line

A series of target shooting sport articles by JP O'Connor

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As of August 2014 – 58 Articles

The “On The Firing Line” series is published by the national governing bodies for Olympic shooting in Japan and the USA, and has been adapted for archery as “On the Shooting Line” published by USA Archery. *Olympic Coach Magazine*, the National

Association of Soccer Coaches, and others have referenced selected articles. The entire series is available online from this page.

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Annotated Contents

- [The Competition](#)
A beginning athlete shares her thoughts on competition in a school assignment. (Not part of the series. Published in 2005 in *USA Shooting News*.)
- 1. [Flowing in The Zone](#)
An athlete discovers, after the fact, that his training was so thorough that the performance of his sport was effortless enjoyment – and at levels far beyond his expectations or dreams. This provides insight into how one should train.
- 2. [Choosing and Using a Coach](#)
When an athlete and a coach collaborate, they can achieve incredible things together. A number of thoughts and ideas on this theme are presented.
- 3. [Back to Basics](#)
An Olympian learns to trust herself and we learn about some of the fundamentals of the critical moments as a shot is delivered.
- 4. [Preparation Begins Now](#)
Preparation is more than just settling into position. What it really means and why it is so important are addressed.
- 5. [Eights are Your Friend](#)
How to handle a “bad” shot is critically important. This classic article presents an approach that allows the athlete to actually improve their game using “bad” shots, rather than destroy their game in anger.
- 6. [Practice or Training](#)
The difference between practice and training is critical. True training will drive your performance to new levels.
- 7. [Football Ballet](#)
Continuing the theme of doing true training, we learn a lesson in unique training methods from the great football coach Gerry Faust of Cincinnati Moeller High School fame.
- 8. [Mental and Emotional Skills](#)
A private chat with tennis legend Arthur Ashe opens the door to insights into sport performance.
- 9. [Critical Moments](#)
A coach’s scolding leads to insights into the critical moments surrounding the delivery of the shot.

10. [Trying Not to Lose](#)
Many athletes “play it safe”, or so they think, and compete to not lose. They invariably lose. Some “go for it” to win. They often do win.
11. [Working to Win](#)
Continuing the theme of the previous article, techniques and examples are presented on effective ways to approach shooting.
12. [Subtle Details](#)
Often, it is the subtle details in our shooting that make a huge difference.
13. [More Subtleties](#)
Additional concepts are presented, including the critical difference between performance and outcome.
14. [Expect The Unexpected](#)
Expecting competition conditions to be “perfect” is unreasonable. One must have a game plan that is solid, yet flexible.
15. [Breathe, Breathe in the Air](#)
The value and incredible power and impact of breathing on performance is discussed. (Yes, the title was “borrowed” from Pink Floyd.)
16. [Getting Unstuck](#)
Overcoming Common Mental Mistakes — “Place the emphasis on improving, and winning will happen.” Based on a presentation by Dr. Sean McCann, Director of Sports Psychology, US Olympic Committee, this in-depth article provides many insights into our training and how to break out of a slump.
17. [Choking](#)
“Elite level shooting is best performed without conscious control.” Summary results of a research project into the causes of choking are presented. This provides a clear path to understand how to “inoculate” athletes from choking in competition.
18. [Choking Cures](#)
“Intensity training can help inoculate athletes from choking.” Using insights gained from the previous article, specific training strategies are provided to aid in becoming choke-proof.
19. [On Why And How We Shoot](#)
The purpose of shooting... is entirely up to you!” Our daily approach to shooting is often so very different than it should be based on why we shoot in the first place. In this article we talk a walk together and explore a number of thought provoking ideas about our shooting.
20. [Two Shots Away From Being Crazy](#)
“Baggage, it’s what we do.” Continuing our thought provoking journey, we get to the essence of why it sometimes seems so difficult to shoot well.
21. [Coach-Dad-Itis](#)
“When helping hurts.” When an athlete’s parent is also their coach, it can be a very rewarding experience for both. Sometimes, it is quite the opposite. This article explores the topic and provides

specific ideas for ensuring a positive experience. (Though a father and daughter are discussed, the article applies equally to all parents and athletes, regardless of gender.)

22. [Predator And Prey](#)
“Do you make things happen, or merely let things happen to you?” Based on a presentation by Dr. Sean McCann, Director of Sports Psychology, US Olympic Committee, this article explores offensive and defensive mental skills.
23. [Sitting On Your Laurels](#)
“How good do you want to be?” Comparing and contrasting different approaches to training, we find that many are called and few are chosen. Yet, it is the athlete who decides! Many have desires, few do the work.
24. [A Process For Breaking Out](#)
“Are you committed to your shooting? Or merely involved with it?” Dr. Bob Rotella, eminent teacher in the sport of golf, outlines a process for breaking out of the pack by partnering with a true teacher.
25. [Believe](#)
“We do what we think. We become what we believe.” Before athletes can reach their goals, they must believe it is possible to do so. Examples, including two dramatic true stories, are used to illustrate the power of believing.
26. [Culture of Shooters](#)
“Nothing is broken. Stop trying to fix it.” Changing our frame of reference from “fixing” things that are “broken” to instead being aware of what we are doing transforms our training, our performance, our results, and our enjoyment of the sport.
27. [Fear & Risk](#)
“Dare not. Achieve not.” Fear of failure prevents athletes from taking the risks needed to succeed. Learn how to break the cycle.
28. [Great Expectations](#)
“Give it up, and it will come to you.” Understand the power of expectations and their effect on performance.
29. [Deliver the Shot](#)
“Hold is nothing without execution.” Digging into the concepts of hold and shot delivery in order to create a robust technique.
30. [More on Delivery of the Shot](#)
“Manage the decisive moment and all is well.” Building on the previous article for further understanding and refinement of the shot process.
31. [Attitude Is Everything](#)
“You cannot control what has already happened; You can control how you react.” Our own attitude has a powerful effect on what we can and cannot accomplish. World Championships athlete

- Kirsten Weiss shares her perspective on this topic.
32. [Goals as Motivation](#)
“Virtually every athlete who consistently wins uses some form of goal setting” (US Olympic Committee Sports Psychology Program). A thorough examination of goals, not just as an exercise to appease the coaches, rather as a tool to energize the athlete’s own motivation.
 33. [Learning To Compete](#)
“I shoot well in practice! Why can’t I do it in competition?” Learning the basic technical elements of shooting is easy. Learning to perform when the athlete cares about the outcome is quite another matter.
 34. [Mental Flexibility](#)
“Insanity: Doing the same thing over and over and expecting a different outcome.” Rigid thought inhibits progress. flexible mindset adapts to conditions.
 35. [Intangibles](#)
“There are no such things as intangibles. The so called intangibles are very real.” An eye-opening and thought provoking conversation with a major sports executive from one of the most successful professional sports teams.
 36. [Confidence](#)
“If you think you cannot, you will not. If you think you can, you most likely will.” A discussion of the effect of an athlete’s confidence upon performance. Based on work by Dr. Nate Zinsser, Director of the Performance Enhancement Program, part of the Center for Enhanced Performance at the United States Military Academy, in West Point, NY.
 37. [Self Talk](#)
“Winners say what they want to happen, Losers say what they fear might happen.” A discussion of the effect of an athlete’s self talk upon performance. Based on work by Dr. Nate Zinsser, Director of the Performance Enhancement Program, part of the Center for Enhanced Performance at the United States Military Academy, in West Point, NY.
 38. [Asleep On The Trigger](#)
“Sleep? Who needs sleep?” Guilty in the past of shorting himself, and sometimes others, on sleep, the author explores the topic with surprising results. Athletes have a lot to learn about sleep.
 39. [Breaking Out Of The Matrix](#)
“It takes guts to stand out from the crowd. You must trust your instincts over the voices of dissent, including your own.” Borrowing concepts from pioneer W. Timothy Gallwey and other sports psychology experts, we learn about a number of interesting and powerful concepts: The Performance Equation, Your Two Selves, Improving the Results, and The Three Levels of Performance.
 40. [On Stepping Up](#)
“It’s the Olympics. If you aren’t nervous, you aren’t human!” Olympic medalists

Matt Emmons and Jason Turner share insights on topics including humility, positive thinking, dark moments, focus on the journey, and gaining the perspective needed to win at the top levels. The concept of “stepping up” to the Olympics triggers discussion of the powerful and eye opening idea of “no levels” and “challenge cycles” in competition.

41. [P-R-N-D](#)
“How it works we do not know; Though we sure do love to make it go!” An exploration of “automation” as we bring together a number of concepts from the previous two articles.
42. [Put the Cork in the Bottle](#)
“At the end of training, When you are tired and ready to quit, You must do one more hard thing every time.” Insights from a World and Olympics champion on one’s training mindset, and examples of drills to build mental toughness.
43. [Not Really Athletes](#)
“Sorry, was that supposed to be funny?” A bad joke provokes thought about the “athlete mindset” and how to think, act, train, and compete like a true athlete within our sport – and why it matters.
44. [Knee Deep In Brass](#)
“Amateurs practice to get it right; Champions train until they cannot do it wrong.” An exploration of the value of volume training – instead of mindless volume practice.
45. [Not Shooting Not Tens](#)
“The fastest way to raise your score: Do not shoot bad shots.” Are you involved, or committed?
46. [The Conflicted Athlete](#)
“I am so frustrated I want to quit! Yet I love this so much that I cannot quit!” Identifying and addressing various obstacles and conflicts.
47. [More Conflicts](#)
“You are not being paranoid if they really are out to get you!” Dealing with internal and external conflicts.
48. [Statics & Dynamics – Part 1](#) —
“That which is Still has Movement. That which Moves has Stillness.” Exploring issues of static and dynamic stability.
49. [Statics & Dynamics – Part 2](#)
“The Pieces are Static. The Whole is Dynamic.” True NPA, committing to the shot, and a natural progression of the shot process.
50. [Statics & Dynamics – Part 3](#)
“Dynamically Static” Becoming “still” and delivering the shot with confidence and commitment.
51. [Faith](#)
“Faith is taking the first step, even when you don’t see the rest of the staircase.” What would you attempt to accomplish if you knew you could not fail?

52. [Where Are You Looking – Part 1](#)
“But I must have a precise reference!” Exploring visual topics, and discussion of the pistol sight picture.
53. [Where Are You Looking – Part 2](#)
“I have a team full of shooters with a world class hold; and almost none of them can deliver the shot!” Additional visual topics, and rifle front aperture selection criteria.
54. [Christmas Tens](#)
I’d never had that floating peaceful shooting feeling carry over at ALL, let alone so strongly into the NEXT DAY!”
What is really going on in “those” amazing shots?
55. [Physical-Technical-Mental-Emotional – Part 1](#)
“I thought it was an engineering problem: equipment, ammunition, positions, training, and done. That was only the beginning!” Exploring the physical aspects of our sport.
56. [Physical-Technical-Mental-Emotional – Part 2](#)
“Correct technology and technique are critical to success; clearly necessary, but not sufficient by themselves.”
Exploring the physical aspects of our sport.
57. [Physical-Technical-Mental-Emotional – Part 3](#)
“The happiest travelers are the ones who roll with the punches.” Exploring the physical aspects of our sport.
58. [Physical-Technical-Mental-Emotional – Part 4](#)
“Heroes and cowards feel the same fear; heroes just act differently.” Exploring the physical aspects of our sport.

Based in the Atlanta, Ga., area, JP O’Connor ([email](#) and [blog](#)) is involved in shooting as a competitor, official, and coach. He is a former Assistant National Coach – USA Paralympics Shooting Team and ISSF Judge, serves on the National Coach Development Staff in both rifle & pistol, and is Coach Emeritus of the NCAA rifle and intercollegiate pistol teams at the University of North Georgia. He enjoys working with a number of pistol and rifle athletes and junior club teams from around the country, ranging from beginners to the highly advanced, in training sessions, clinics, and one-on-one private coaching. Previous installments of this series, additional resources, and book suggestions may be found at <http://www.pilkguns.com/jparticles/jpcontents.htm> and via his [blog](#). Email questions and suggestions to jpoc@acm.org.

(Biographical information as of August 2014)

U.S. Shooting Team Balance, Strength and Stability Workout

Training Work-Out

*Modified by Dan Durben and Sommer Wood November 2006
from the program originally developed by Amber Darland
for the USA Shooting National Rifle Team*

**Exercises should be performed to the maximum extension/contraction

Static Back

Starting position: Lie on back with legs bent 90 degrees at the knees and lower legs resting on a chair, palms of hands up.

Action: Breathe deeply and relax. **5:00 minutes**

Supine Elbow Curls

Starting position: Lie on back with knees bent and feet flat on the floor. Place knuckles on the temples of your forehead with thumbs pointing down towards your shoulders. Pinch your shoulder blades together to bring your elbows to the floor.

Action: Keeping wrists straight and rotating on the knuckles bring together and then apart down to the floor. **30-40 reps**

Pullovers

Starting position: Lie on back with knees bent and feet flat on the floor. Extend arms straight above chest and interlace fingers.

Action: Keeping arms straight, lower hands toward floor above your head and then back toward your waist. Repeat back and forth. **20 reps**

Static Back Crunches

Starting position: Lie on back with both hips and knees bent at 90 degree angles so that your lower legs are held out as if resting on a chair. Place hands behind head with elbows back. Keep your chin off your chest by keeping your eyes focused on one spot on the ceiling slightly behind you.

Action: Contract abdominal muscles while lifting shoulders off the floor, then relax. Repeat up and down. **25-50 reps**

Active Frog

Starting position: Lie on back with knees bent, feet flat on the floor and the sides of the feet touching each other.

Action: Bring knees apart toward the floor and then back up together. Repeat back and forth. **20 reps**

Ruep Kicks

Starting position: Lie on right side with both hips and knees bent at 90 degree angles. Support your head with your right arm, keeping your head and neck in a straight line with your spine.

Action: Bring your left knee toward your chest, then straighten out your left leg so that the left hip is fully extended with foot, knee, hip and shoulder all in a straight line. Repeat back and forth, then flip over and repeat with the right leg. **20 reps each leg**

Static Back Splits

Starting Position: Lie on back with both hips and knees bent at 90 degree angles so that your lower legs are held out as if resting on a chair.

Action: Bring knees and feet together, then spread knees and feet apart. Repeat back and forth. **20 reps**

Shoulder Bridge

Starting position: Lie on back with knees bent and feet flat on the floor with both knees and feet at hip width.

Action: Squeeze glutes, raise hips and the lower-back off the floor and hold. Concentrate on squeezing glutes and keeping back relaxed. **Hold for 1:00 minute**

Active Shoulder Bridge

Starting position: Same as Shoulder Bridge - lie on back with knees bent and feet flat on the floor with both knees and feet at hip width.

Action: Squeeze glutes, raise hips and the lower-back off the floor, then drop back down. Repeat up and down. **20 reps**

Lower Spinal Floor Twist

Starting position: Lie on back with left leg straight and resting on the floor. Bring your right knee up so that your hip and knee are both bent at 90 degree angles.

Action: Keeping your right arm flat on the floor palm up, grab your right knee with your left hand and pull it across your body toward the floor and hold. Repeat on other leg. **Hold 1:00 minute on each leg**

Frog Kicks & Reverse Frog Kicks

Starting position: Lie on back with legs straight and hands under glutes.

Action 1: Pull your knees straight to your chest, then spread your legs apart. Keeping your legs spread apart, straighten them out below you. Finally, bring the legs back together to the starting position. Repeat back and forth in a smooth motion. **20 reps**

Action 2: Immediately reverse the frog kicks by first spreading your legs apart, then pulling your knees up to your sides, then drawing your knees together above you chest, then straightening your legs back to the starting position. **20 reps**

Pelvic Tilts

Starting Position: Lie on back with knees bent and feet flat on the floor.

Action: Keeping hips in contact with the floor, arch lower back off floor, then press lower back into floor. Repeat back and forth. **10 reps**

Hip Lift

Starting Position: Lie on back with both hips and knees bent at 90 degrees so that your lower legs are held out as if resting on a chair.

Action: Place right ankle on left knee and hold. After 30 seconds lightly pull the left leg toward your chest about 2-3 inches while pressing right knee away from chest, then hold. Repeat with other leg.
Hold 1:00 minute each leg

Flutter kicks

Starting position: Lie on back with legs out straight, thighs tight and toes pulled back. Raise head off the ground so you are looking at your feet.

Action: Keeping thighs tight and legs straight alternate kicking legs up and down 6 inches above the floor. Half way through your reps point your toes forward. **25 reps with toes back, 25 reps with toes pointed forward**

Supine Diva

Starting position: Sit upright with a slight arch in the lower back. Place soles of feet together with knees relaxed down. Invert the position of the right leg so that the inside of the right leg is now resting against the floor, the right foot is behind you, and the sole of the left foot is on the right thigh.

Action: Lie onto back, allow right knee to come off the floor. Once on back squeeze the right glute muscle and hold. Reverse the directions to repeat on the other side. **Hold each side 1:00 minute**

Kneeling Active Clock

Starting Position: Kneel with hips directly over knees, arms relaxed by sides.

Action 1: Lift arms out in front to the 12 o'clock position straight overhead, then back down.

Action 2: Lift arms halfway between overhead and straight out from sides to 10 and 2 o'clock.

Action 3: Lift arms straight out from sides to 9 and 3 o'clock.

20 reps each

Kneeling Roller Coasters

Starting Position: On hands and knees walk hands out slightly past the shoulders. Sit back toward your heels keeping your arms stretched out and the palms of your hands flat against the floor.

Action: The following motions should mimic a roller coaster. Bend elbows sliding forward dipping face so that nose skims just above floor, followed by hips. After face passes beyond hands begin to arch body up in a U motion, straightening your arms to raise your chest. Lift hips while returning back to the starting position. Repeat in a smooth motion. **10 reps**

Cats & Dogs

Starting Position: On hands and knees with hands under shoulders and knees under hips.

Action: Arch back up and pull chin to chest while breathing out. While breathing in, lower back toward floor and raise head to look up. Repeat back and forth. **10-15 reps**

Hand Leg Opposite Holds

Starting position: On hands and knees with hands under shoulders and knees under hips.

Action: Raise and straighten your right arm and left leg simultaneously until they are both straight and parallel with the floor and hold. Switch to left arm and right leg and repeat. **Hold for 10 seconds, 5 reps each arm/leg**

Downward Dog

Starting position: On hands and knees with hands under shoulders and knees under hips. Curl toes under feet.

Action: Straighten legs by lifting knees off the floor, pressing heels toward the floor, and raising hips toward the ceiling creating an arch. Keep thighs tight, press chest toward legs and hold. **Hold for 1:00 minute**

Active Downward Dog

Starting position: On hands and knees with hands under shoulders and knees under hips. Curl toes under feet.

Action: Straighten legs by lifting knees off the floor, pressing heels toward the floor, and raising hips toward the ceiling. Keep thighs tight and press chest toward legs. Next, lower the knees to the floor, then come back up. Repeat up and down. **15 reps**

Kneeling Bridge

Starting position: Kneel with knees under hips and feet with heels up and toes on the ground under heels. Reach back and grab heels with hands so that thumbs are inside of heels.

Action: Squeeze glutes, push hips up and forward and hold. **Hold for 1:00 minute**

Hero Squats

Starting position: Kneel with knees under hips and feet at hip width. Place hands on hips and sit back as close to ankles as is comfortably possible while keeping shoulders directly above hips. Gently arch your lower back inward. Avoid leaning forward.

Action: Raise your hips all the way up until they are directly over your knees, then go back down. Repeat up and down. **20 reps**

Hero Leans

Starting position: Kneel with knees under hips and feet at hip width. Place palms on lower back with fingers pointing down.

Action: Keeping stomach and back tight, lean back as far as is comfortable, then come back up. **10-20 reps**

Spread Foot Glides

Starting position: Stand and spread legs apart, as far as you can comfortably go while keeping your toes pointed forward. Bend over with your arms hanging straight down.

Action: Keeping your left leg straight, bend your right leg while gliding to the right, as if you are sitting back into a chair. Then switch, smoothly gliding to the left by straightening the right leg and bending the left leg. Alternate side to side. **20 reps**

Spread Foot Roller Coasters

Starting position: Stand and spread legs apart, as far as you can comfortably go while keeping your toes pointed forward. Bend over, walk your hands out in front of you and spread your hands so they are slightly wider than your shoulders.

Action: The following motions should mimic a roller coaster. Bend elbows sliding forward dipping face so that nose skims just above floor, followed by hips. After face passes beyond hands begin to arch body up in a U motion, straightening your arms to raise your chest. Return to the starting position by lifting the hips into the air and shifting weight back toward your feet. Repeat in a smooth motion. **10-20 reps**

Static Lunges

Starting position: Stand with hands behind head. Place right leg out in front of you and left leg behind you, keeping your feet in line with each other.

Action: Bend both knees allowing your left leg to drop straight down toward the floor. Next, raise back up straightening legs. Repeat up and down. Switch legs and repeat. **20-40 reps each leg**

Roller Coasters

Starting position: Stand with feet straight and shoulder width apart. Bend over and walk your hands out just past your shoulders.

Action: The following motions should mimic a roller coaster. Bend elbows sliding forward dipping face so that nose skims just above floor, followed by hips. After face passes beyond hands begin to arch body up in a U motion, straightening your arms to raise your chest. Return to the starting position by lifting the hips into the air and shifting weight back toward your feet. Repeat in a smooth motion. **10-15 reps**

Bear Crawl

Starting position: On hands and feet.

Action: Crawl forward by first bringing your right hand and left leg forward, then your left hand and right leg. Keep your back flat and your knees under your body in line with your hips. **10 steps each leg**

Inchworms

Starting position: Stand with feet hip width apart. Keep legs straight and bend over at the waist and reach out until your hands are flat on the floor.

Action: Keeping your legs straight, walk your hands out in front of you as far as comfortable. Next, keeping legs straight, use your toes to “inch” your legs up to your hands pressing heel towards floor with each step. **5-8 reps**

Air Bench

Starting position: As if sitting in a chair, stand with back against wall so that knees are bent at a 90 degree angle and thighs are parallel with the floor. Make sure that knees do not go past ankles.

Action: Keep weight on heels, press lower back into the wall and hold. **Hold 1:00 minute**

Standing Stork Walk

Starting position: Stand with hands behind head,

Action: Pull left knee up to a 90 degree angle keeping foot under knee. Point toe towards floor, then lower leg back to starting position. Repeat with other leg. **20 reps each leg**

Cats & Dogs (Repeat)

Starting Position: On hands and knees with hands under shoulders and knees under hips.

Action: Arch back up and pull chin to chest while breathing out. While breathing in, lower back toward floor and raise head to look up. Repeat back and forth. **10-15 reps**

Forward Hang

Starting position: Stand with feet shoulder width apart.

Action: Bend over at waist and hang, let arms and head relax down. Hold and then roll up to starting position. **Hold 30 seconds**

**U.S. Shooting Team
Balance, Strength and Stability Workout**

Competition Warm-Up

*Modified by Dan Durben and Sommer Wood November 2006
from the program originally developed by Amber Darland
for the USA Shooting National Rifle Team*

**Exercises should be performed to the maximum extension/contraction

Static Back

Starting position: Lie on back with legs bent 90 degrees at the knees and lower legs resting on a chair, palms of hands up.

Action: Breathe deeply and relax. **5 minutes**

Static Back Splits

Starting Position: Lie on back with both hips and knees bent at 90 degree angles so that your lower legs are held out as if resting on a chair.

Action: Bring knees and feet together, then spread knees and feet apart. Repeat back and forth. **15 reps**

Pullovers

Starting position: Lie on back with knees bent and feet flat on the floor. Extend arms straight above chest and interlace fingers.

Action: Keeping arms straight, lower hands toward floor above your head and then back toward your waist. Repeat back and forth. **15 reps**

Lower Spinal Floor Twist

Starting position: Lie on back with left leg straight and resting on the floor. Bring your right knee up so that your hip and knee are both bent at 90 degree angles.

Action: Keeping your right arm flat on the floor palm up, grab your right knee with your left hand and pull it across your body toward the floor and hold. Repeat on other leg. **Hold 30 seconds on each leg**

Cats & Dogs

Starting Position: On hands and knees with hands under shoulders and knees under hips.

Action: Arch back up and pull chin to chest while breathing out. While breathing in, lower back toward floor and raise head to look up. Repeat back and forth. **10 reps**

Dog Push-Ups:

Starting Position: On hands and knees with hands slightly forward of shoulders and wider than shoulders, knees under hips.

Action: Bend arms, drop chest straight down between hands and back up. Repeat up and down. **10 reps**

Downward Dog

Starting position: On hands and knees with hands under shoulders and knees under hips. Curl toes under feet.

Action: Straighten legs by lifting knees off the floor, pressing heels toward the floor, and raising hips toward the ceiling creating an arch. Keep thighs tight, press chest toward legs and hold.

Hold for 30 seconds

Kneeling Clappers:

Starting Position: Kneel with hips directly over knees, arms straight in front of chest, palms together.

Action: Sweep arms straight back keeping them at shoulder level as far as they will go, pinching shoulder blades together. Then return and repeat. **20 reps**

Spread Foot Squats:

Starting Position: Stand with feet slightly wider than shoulder width.

Action: Bend knees and squat as far as comfortable, keep shoulders over hips and knees behind toes. **10 reps**

Spread Foot Glides

Starting position: Stand and spread legs apart, as far as you can comfortably go while keeping your toes pointed forward. Bend over with your arms hanging straight down.

Action: Keeping your left leg straight, bend you right leg while gliding to the right, as if you are sitting back into a chair. Then switch, smoothly gliding to the left by straightening the right leg and bending the left leg. Alternate side to side. **15 reps**

Forward Hang

Starting position: Stand with feet shoulder width apart.

Action: Bend over at waist and hang, let arms and head relax down. Hold and then roll up to starting position. **Hold 30 seconds**

Front Aperture Selection - Millimeters - DRAFT - Subject to revision.

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These are **minimum** starting sizes for the front aperture.
 Using a size that is 0.1 to 0.5 larger (or more) is perfectly fine,
 based on athlete preference. Aperture size is in millimeters.
 Using a size that is only 0.1 too small is fraught with peril.
 Doing so usually causes insidious problems in shot delivery.

Eye Dist. in.	ISSF Air 10m	ISSF SB 50m	USAS SB 50ft	USNRA SB A-36 50ft	USNRA SB A-17 50ft	USNRA SB A-7 50ft
28	3.5	2.9	2.8	2.7	3.0	3.1
29	3.6	3.0	2.9	2.8	3.1	3.2
30	3.7	3.1	3.0	2.9	3.2	3.3
31	3.8	3.2	3.1	3.0	3.3	3.4
32	3.9	3.3	3.2	3.1	3.4	3.5
33	4.0	3.4	3.3	3.2	3.5	3.6/3.7
34	4.1/4.2	3.5	3.4	3.3	3.6/3.7	3.7/3.8
35	4.3	3.6	3.5	3.4	3.7/3.8	3.9
36	4.4	3.7	3.6	3.5	3.9	4.0
37	4.5	3.8	3.7	3.6	4.0	4.1
38	4.6/4.7	3.9	3.8	3.7	4.1	4.2
39	4.7/4.8	4.0	3.9	3.8	4.2	4.3
40	4.9	4.1	4.0	3.9	4.3	4.4
41	5.0	4.2	4.1	4.0	4.4	4.5
42		4.3	4.2	4.1	4.5	4.6/4.7
43		4.4	4.3	4.2	4.6	4.7/4.8
44		4.5	4.4	4.3	4.7	4.9
45		4.6	4.5	4.4	4.8	5.0
46		4.7	4.6	4.5	4.9	
47		4.8	4.7	4.6	5.0	
48		4.9	4.8	4.7		

Apertures are often selected with only "visual precision" in mind, and are smaller than optimal as a result. This chart takes into account factors that are far more important; primarily the athlete's psychological state resulting from the differing visual inputs as the aperture size varies. Apertures that are too small often cause the athlete to hold too long, have "flutter finger" (indecision), poor triggering, and poor follow through.

Athletes who are taken through an experiment protocol that allows them to experience many different sizes (from absurdly small to absurdly large, and everything in between) generally choose an aperture that exactly matches this chart. Interestingly, the chart was constructed based on theoretical research, yet is validated by extensive field work. Results may vary in some cases and additional study is needed for those cases.

This chart is not a magic solution. It is only one critical component in a much broader program that allows an athlete to reliably and repeatedly reach ultimate performance levels. Despite being only one piece of the larger puzzle, this is a critical component. Do not use an aperture that is smaller than this chart!

Please send your comments and observations.

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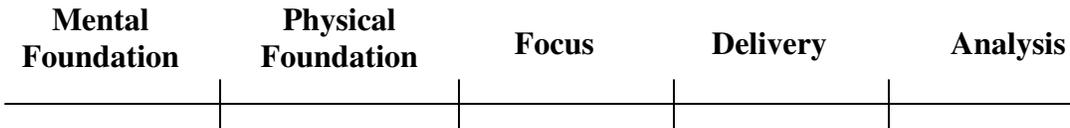
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“The Shot”



Start of Shot....

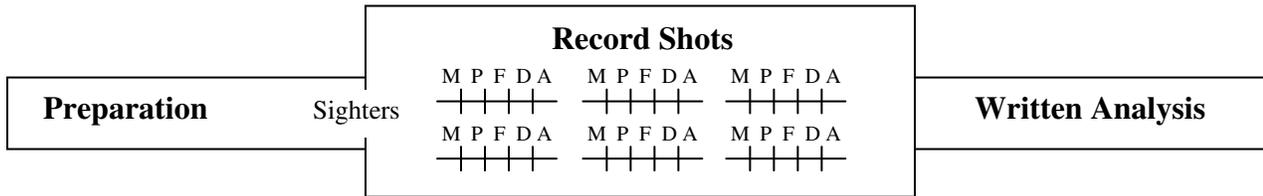
1. Establish Mental Foundation
 - a. stop, breathe to relax (Note that 1.a and 1.b make up the “Three Steps To Relax”.)
 - b. proper thoughts, positive self-talk
 - c. mentally rehearse shot
2. Establish Physical Foundation
 - a. set up position (outer position, look butt plate into shoulder, visual checks)
 - b. check balance (inner position)
 - c. check natural point of aim (relax specific points)
3. Establish Focus – No “checking” things
 - a. cue word
 - b. quiet mind – Present Moment
 - c. trigger preparation (This is the most critical element other than smooth trigger release.)
 - “Four Steps For Trigger Preparation”
 - All must take place before moment when both: a) on target and b) aiming.
 - 1) Mentally Ready – Focused on task – other thoughts already cleared.
 - 2) Emotionally Ready – Committed regardless of outcome – I’m ok.
 - 3) 1st Stage Taken Up – Once and for all – reject if trigger comes forward.
 - 4) Pressure on 2nd Stage – Be bold and decisive – no pulsing or flutter.
4. Delivery
 - a. on target, let it point, quiet body, quiet mind, quiet eye, Present Moment, just “Be”
 - b. smooth release – let “it” shoot
 - c. focus through – no physical, technical, mental, emotional change from on target
5. Analysis
 - a. of performance
 - b. of location on target
 - c. plan for next shot

End of Shot

Comments:

1. Emphasize the importance of the preparation.
2. Two possible outcomes of each Shot done right; both equally valid and correct:
 1. A hole in the paper
 2. Rejection part way through (Must start over at beginning: Step 1.a)The goal is to (a) recognize and (b) execute the correct outcome for each shot. On some shots, the right thing to do is put the gun down – this is not a “wasted” shot, but a shot done right. This approach helps develop the ability to confidently put the gun down when needed. Either outcome is done automatically. Both are successes.

“The Shooting Session” (Training, Match, or Final)



Structure of a Shooting Session

1. Preparation

- a. Physical preparation (warm-up, light stretching – an hour before)
- b. Equipment preparation (equipment set up)
- c. Mental Preparation
 - Set/review the goals/plan for the session
 - imagery/relaxation
- d. Position preparation (Range command: “Your Preparation Period Begins Now”)
 - build position (outer position)
 - sense and tune balance of position (inner position)
 - sense and tune natural point of aim – let it point where it wants to
 - optimize position, balance, and natural point of aim together
- e. Shot preparation
 - shot rehearsal: mental rehearsal, holding, dry-firing
 - beginning of sighters: settling in, sighting in, working on specific task (like trigger control)
- f. “Ready to Go”

2. Record Shots

- a. Last few sighters shot just like record shots, including rhythm, timing and following “The Shot” plan.
(This is critical and done after 1.f “Ready to Go”, sets the stage for record shots)
- b. Follow “The Shot” plan for each shot (or, in training, work on a part of it).

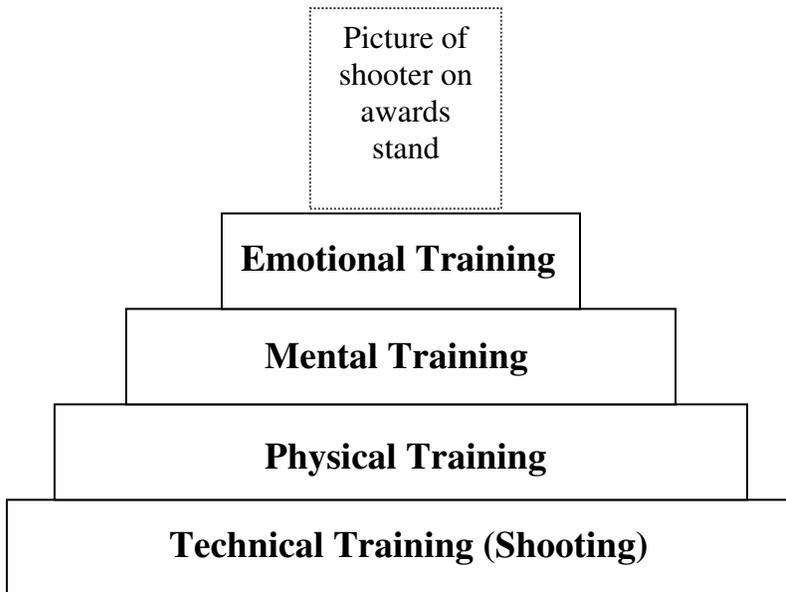
3. Written Analysis

- a. Observations on today’s shooting, goals met, goals not met, successes, breakdowns.
- b. Items to explore or work on in next training sessions.

Comments:

1. Emphasize preparation
2. Sighters act as transition from preparation (first few sighters to get settled and sighted in) to record shots (last few sighters should be just like record shots).
3. In Match, sighters begin after “Start” command but not until after the rest of the preparation has been completed – don’t have to start shooting immediately after “Start”

“Training – The Champion’s Steps to Success”



Training

1. Technical Training (Shooting) – develops:

- a. Technical proficiency (positions, trigger control, etc.)
- b. Tactical proficiency (developing techniques, following Shot plan)
- c. Match proficiency (performing well in matches)

Accomplished through:

- on-range shooting
- dry firing (can do at home)
- match experience
- equipment (proper adjustments)
- becoming student of the game (seek out resources, information, ideas)
- intensity training – training where outcome matters

2. Physical Training – develops:

- a. Stamina
- b. Strength
- c. Suppleness
- d. Sensitivity
- e. Stress Adaptation

Accomplished through:

- aerobic training
- strength training

- flexibility training/stretching
 - exercises and activities that emphasize balance, general coordination, hand-eye coordination, kinesthetic awareness, timing and rhythm
- (Note: also helps prevent injury)

3. Mental Training – develops:

- a. Attention Control (stay in the present, concentration & focus)
- b. Energy Management (handling pressure, arousal control, relaxing or psyching up)

Accomplished through

- relaxation
- imagery
- rehearsal
- cue words
- reading/hearing/studying sports psychology resources

4. Emotional Training – develops:

- a. Motivation (inspiration, commitment)
- b. Confidence (self-image, self-worth)
- c. Attitude (emotional maturity, acting like a Champion, faith & belief in yourself)
- d. Self-honesty, taking responsibility

Accomplished through:

- goal setting (outcome vs. task)
- self-talk
- having your life in order (the “do well in school” part...)
 - o family, friends, school, work, spiritual, social, relationships
- reading/hearing/studying sports psychology resources

5. General

- a. Time management
- b. Planning training (including rest, tapering)
- c. Training cycles, stress & recovery, phys/tech mix, breaks

Comments

1. Emphasize what each type of training can improve (related to shooting performance), then discuss specific training that addresses these areas
2. Discuss how training leads to success in matches (handling pressure, preventing “choking”, benefiting from bad days)

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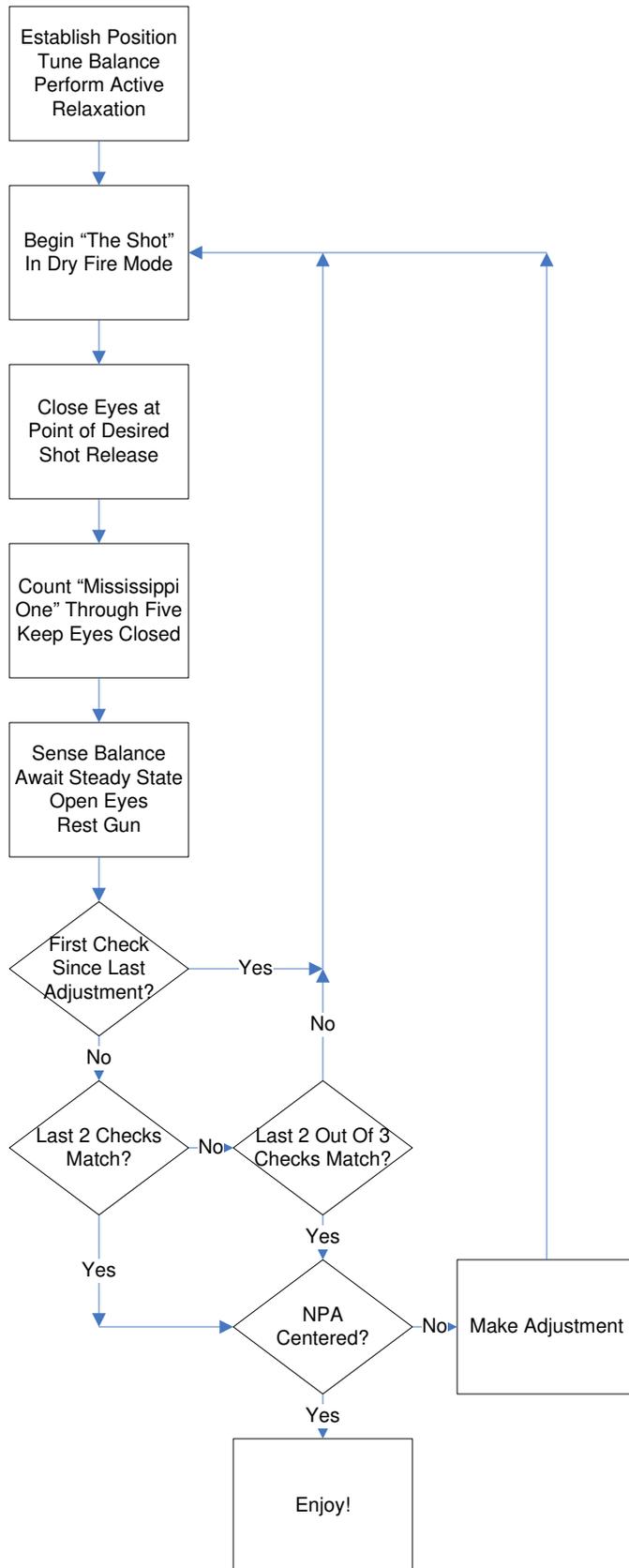
Yoda's NPA Routine

1. Establish Position & Relax Body, Mind, Spirit
 - a. (many things here)
2. Sense and Tune Balance
 - a. (many things here)
3. Determine and Adjust NPA
 - a. Begin complete (dry) shot process (Use "The Shot") – exactly as if shooting (lungs at normal exhale point for entire process, whether shooting or doing NPA)
 - b. At point where shot would be released, close eyes
 - c. Count "Mississippi One..." through "Mississippi Five" – keep eyes closed
 - d. Sense balance and wait for steady state
 - e. Only now may you open your eyes, note where gun is pointed – make no adjustment
 - f. Place gun in rest position
 - g. Repeat all previous steps (a. through f.) a second time
 - h. If both checks point at same spot – make adjustment and start completely over (steps a. through g.)
 - i. If checks point at two different spots, do third check (steps a. through f.) – should match one of first two checks – make adjustment and start completely over (steps a. through g.)
 - j. Repeat entire process (a. through i.) over and over until gun "wants" to point at exact center of aiming mark

At first, or when rushed or tired, this seems like a lot of work. As the athlete learns this process and as their awareness of inner position, balance, and NPA grows, it becomes second nature and goes much faster and is much more accurate. For 12 bull targets, establish NPA on top bull, and develop a way to work down the column that provides accurate NPA without the long checking process.

There are many, many other ways to check and adjust NPA. None are as accurate. Establish NPA using any other method. Then immediately do it this way. If the other way matches, I want to know the method! So far, none has been found that is as accurate. Having NPA out where the shot would score 9.5 isn't even close.

Why bother making NPA that exact? If 1) the position is physiologically sound and provides a true (not perceived, but a true) solid foundation, and if 2) the balance has been thoroughly sensed and tuned, and if 3) NPA is adjusted so that the gun wants to point at exactly the center of the aiming mark, and if 4) the athlete thinks of "hold" as a noun rather than as a verb (that is, allows the gun to settle and point instead of actively working to "hold" it still), and if 5) the athlete is in the proper frame of mind to perform, then the gun will come down on the area of aim and actually appear to stop. Seemingly effortless strings of excellent shots are the result. Athletes report that they can tell when they have all the elements in place because the hold shrinks to a much smaller and slower movement compared to what they usually see and that the gun often and reliably seems to stop right on the correct area of aim.



Yoda's NPA Routine		
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Only this NPA routine has proven to allow alignment of where the gun wants to point (NPA) with where we want it to point (target) to the degree of accuracy demanded by the sport. If a faster routine with the same accuracy appears to be found, please tell me so that we can explore it!

If the two points (NPA and target center) are off, even if only by a few millimeters, the hold will be much less steady than it could be and needs to be. If the two points are the same, the gun will often come down on the area of aim and seem to stop right on center, if the athlete is treating "hold" as a noun and not as a verb. Athletes often report being able to discern a profound difference whenever Position, Balance, Relaxation, and NPA are truly accomplished and optimized together.

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The Competition

©2005 Michelle O'Connor

As I arrive I look all around
This is the day I have feared for a while now
There are butterflies in my stomach
And thoughts racing through my head
“You’re not good enough to compete with these people”
“What if you embarrass yourself?”
All negative
None positive
My coach can see the fear in my eyes
“Just do your best and have fun”
Is all he said
He has so much faith in me I fear letting him down

While I set up I have conversations in my head
“You are capable of great things; you should be here”
“You’re nowhere near the others. Just go home!”
I begin to remember
The things my coach had said
I am good enough to be here
I can do this
Just get in the zone and let it flow
My confidence begins to rise
I am finally convinced
All I have to do
Is just have fun

During the match things go smoothly
I am blocking out all the self talk
Going on inside my mind
I have a song stuck in my head
But that’s a good thing
I’m shooting well and going with the flow
I’m letting things happen
Rather than try to force them
I am competing against myself
And no one else
Thirty shots done with ten to go
I start to doubt whether I’ll compare to the others

Now I'm thinking more about the other people
And less about myself
I can feel the worry building up inside of me
And notice the gun won't steady
I'm holding longer and begin to wait for the perfect shot
I'm not in the flow anymore
Forcing shots
My scores are getting worse
Five shots left
I decide to stop and take a break
I have to calm down
There's always next time to place well

After some sips from my water bottle
I slowly begin to have control
Of my thoughts
And the self talk
"Just have fun" is all I can think of
And that's exactly what I do
Four shots left
That was pretty good
I'm having fun again
Three shots left
Now two
I just scored a personal best

I started out great
I was steady and focused
Bound and determined
To just have fun
And I did just that
Until the self talk took over
It hindered my ability
To perform the way I had in the beginning
I recognized the anxiety
And took control of the situation
I came out on top of all my thoughts and doubts
And I am overjoyed!

Michelle O'Connor, age 18, has just completed her freshman year of college. She is just beginning to shoot air and sport pistol, although her national level competition experience in other pursuits is apparent.

(Contact via JP O'Connor – jpoc@acm.org)

On the Firing Line (First in a series)

“Flowing in the Zone”

©2001 JP O’Connor

A warm sense of comfort and serenity enveloped the athlete. All was calm and peaceful. His body anticipated every move needed to control his equipment, as if the equipment, his body, and his subconscious mind were one. A serene sense of “feel” told the athlete that everything was working just as planned. No sound or sight penetrated his consciousness except the cues needed to adjust his performance. His mind was quiet, with no chatter of self-talk, no concern for the outcome of the competition, no attempt to control his movements, no conscious thought at all.

Spectators, coaches, and officials could see the large number of determined competitors working shoulder to shoulder toward the same goal. They could see the nervousness on the faces of many of the athletes before they started, while other athletes seemed to show no outward sign of anxiety at all. In the midst of this frenetic activity the athlete remained calm, even in the face of mistakes that could have grave consequences. He focused only on his own private performance, carefully honed through years of training. Afterwards, other competitors and coaches shook their heads when talking about this athlete’s accomplishment that day.

Analyzing his performance later, the athlete discovered that, in addition to performing the movements and techniques he had studied, he had also used skills he had never been taught. Because of his dedicated training and his knowledge of the sport and his equipment, his confidence was high, and he was able to absorb these new methods intuitively. He watched – almost as a detached spectator would – as his body and mind worked together with the equipment to take his performance to a new level. The athlete made special note of these insights and recorded them for future reference, to reinforce what he had learned that day in competition.

What has just been described? Is it an Olympic shooter in Sydney, Australia, this past year? It’s possible. The story certainly could be a description of a shooting competition. Knowledgeable athletes and coaches realize it could be a description of an athlete in any sport. Actually, it is a description of what one athlete felt during a motorcycle road race. Triple-digit speeds, sliding tires, other competitors just inches away, deafening noise, stifling heat, and the ever present danger of injury or death ... that’s the competition environment. Makes shooting sound easy by comparison, doesn’t it? How can an athlete perform under such conditions?

It is both simple and complex, and is the essence of ultimate performance, taking years to master. Our road racer had trained many hours every week for four years. He was patient with the process, and he allowed his technique to mature slowly over time. He read books, magazine articles, and interviews about his sport. He ensured that his equipment was in perfect condition since there was never any room for error. Yet he never thought about the danger. After checking his equipment before each ride, he then forgot about it and “felt” the machine, the road, and his body.

Oblivious to the fact at the time, he was training much the way a champion does, even though he thought he was just having fun. (Aha!) He had trained so much that his subconscious mind knew how to control – even anticipate – everything, and his confidence in those skills allowed him to quiet his mind to let his experience take over. When he pushed faster on the racetrack and discovered both tires were sliding in the turns, he quickly learned (“felt”) how to make subtle steering adjustments with the throttle to maximize his speed and use the sliding as an advantage. Only because the equipment was set up perfectly, only because he had developed a

deep understanding of the dynamics, and only because the training had given him great confidence could he perform that day. Had he been unfamiliar with the sport or the equipment, or not understood what was going on with the tires, he would have been afraid of the sliding machine, increasing his fear of crashing and worsening his performance. In fact, riders who fear crashing usually do. Similarly, shooters who fear a bad shot instead of allowing a good one to happen generally get the bad one. The brain has a subtle but extremely powerful control over everything we do. Harness and direct the power, and excel – ignore or fight the power, and flounder.

What the road racer did was no different from what the very best shooters, gymnasts, divers; indeed all athletes do to achieve ultimate performance. Train the body and the mind, trust that training, and then allow the performance to happen naturally. It sounds simple, but there is much more to the story, and many ways to go about it.

In this series, we will take the journey toward ultimate performance. We will explore specific mental, emotional, physical, and technical skills and the effect they have on each other, training techniques, and ways of thinking about and growing in this or any sport. Each article will typically focus on one or two elements that will help you become a better shooter. Additionally, I welcome and solicit your comments and suggestions.

So, who was the motorcycle road racer? Me. It was the first time I had ever seen a track.

The “On The Firing Line” series is published by the national governing bodies for Olympic shooting in Japan and the USA, and has been adapted for archery as “On the Shooting Line” published by USA Archery. Olympic Coach Magazine, the National Association of Soccer Coaches, and others have referenced selected articles. The entire series is available online at www.pilkguns.com.

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(Biographical information as of October 2009)

On the Firing Line (Second in a series)
Choosing and Using a Coach

©2001 JP O'Connor

Beginning shooters start with a coach by default: Mom or Dad, a sibling or older competitor, the club coach, a camp counselor, scout leader, or other program coach such as in 4H or Jaycees programs. Intermediate athletes who wish to excel learn everything they can from their coaches and fellow competitors and diligently practice what they have been taught while beginning the process of learning on their own.

Advancing and elite athletes face a different type of situation. They have progressed to the point where possibly their current coaches are no longer able to help them increase their knowledge and level of performance. In other cases the athlete may never have had a coach and instead learned on their own. Many advancing athletes prefer to do their training on their own. Others, however, wish to find a teacher – a guide – to lead them on the journey to ultimate performance. How do these athletes determine if a particular coach can assist them? What questions should they ask? What are the important factors? What makes a good teacher?

A teacher is a guide: some know the first part of the path while others know the whole way. The best know their own weaknesses thus having insight into their student's weaknesses. They know both the obstacles and the interesting spots along the way. If a guide insists on one fixed path... they have limited knowledge. You want a guide who can assess your unique qualities and who can find the best way for you. A wonderful teacher filled with natural awareness can be a beacon to help light your way to ultimate performance.

An average teacher teaches physical and technical skills. A genuine teacher also conveys the lessons and skills of life through the teaching of mental and emotional skills. Beware of coaches who "win" while smothering their athlete's freedom and enjoyment of the sport. Choose carefully; an inspired teacher will be a positive influence for life.

Teaching is the art of communication – the coach must be able to convey knowledge to the athlete in a form that is understandable and useful. A dissertation couched in theoretical and obscure terms does not teach, nor does it impress; rather it wastes time and energy. The important factor is not what the teacher knows – it is what the students know. They have either obtained their current body of knowledge from this coach, or learned enough from their other coaches to know that this coach can take them to higher levels of performance and enjoyment in the sport. Is this coach able to relate to you in a manner that you understand and that enhances your knowledge, enjoyment, and confidence? If not, look elsewhere!

Gifted teachers may be found in unexpected places. Just because a person is or was a gifted competitor does not ensure that they will be a great teacher. Many are, but at least as many aren't. Conversely, just because someone has not excelled on the world stage in our sport does not mean they cannot be the very teacher you need. They may have excelled in another sport, though they usually do need some sport specific experience in order to fully understand the issues that you will face. The very best coaches do far more than teach shooting; they teach a way of thinking and being while imparting skills to last a lifetime.

Athletes must remember that coaches are human beings who will make mistakes from time to time. As long as the coach is aware of these limitations and open with their athletes there is no problem. Similarly, coaches must be patient with their athletes – they will make mistakes! In fact, teaching patience with the process of learning and improving is one of the most important lessons a coach can convey. Actions teach profound lessons.

How does one find a coach? Ask fellow competitors if they work with a coach. Contact local clubs. Ask at major competitions. If you still come up empty, ask the USAS National Team coaches or Junior Programs Director whom they might suggest. You may also contact organizations involved in shooting competition or training. For rifle and pistol you might also contact the NRA coaching program since they and USAS jointly run the coach certification program for these two disciplines. Once you have some suggestions, contact each coach and discuss your needs and their experience, background, and approach to the game. Determine if they are interested in working with you and under what terms. Also discuss whether or not there will be any monetary considerations. All of this will help you assess their ability and availability to assist you in your journey. Ask who else they assist. You may know one or more of them yourself, or ask the coach if they could put you in touch with them. Asking these students about the coach may help you make your decision. For example, does the coach always “tell” you what to do or what you did wrong, or does the coach ask lots of questions to provoke thought and provide plenty of information about the game? Is the coach a collaborative “partner” who motivates with a positive attitude or a dictator who barks orders and extinguishes enjoyment of the sport? Does the coach show favoritism to certain students to the detriment of others? You need to know.

Regardless of whether the coach is paid or a volunteer, athletes need to remember that the coach has a lot of time and effort invested in their success. A “thank you” now and then goes a long way! Don’t ask a coach to work with you if you expect their teaching to be a substitute for your diligent effort... they will likely demand more effort, not less, on your part. If you have a concern or disagreement, be open and honest with your coach. A good coach will respond appropriately to positive criticism – just as an athlete should. A master guide is a partner!

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(Biographical information as of October 2009)

On the Firing Line (Third in a series)

Back to Basics

©2001 JP O'Connor

“Yeah, it’s so easy. Just pull the trigger!”

We both laughed a bit at her sarcasm but her frustration was obvious. She had put the rifle down three times in a row after very long holds, without being able to break the shot.

“You are trying to make it a perfect shot, aren’t you?” I asked.

“Yes, I am,” she admitted.

Is this a conversation with a beginner? Hardly! This was an Olympian and competitor used to making finals and winning medals at world cups, but her recent average of 390 in air rifle hadn’t been nearly up to her expectations or past performances.

Using a video camera and a Noptel electronic trainer, we could show her the long holds and let her see how good the shots would have been if she were more confident and decisive. Instead, she wasted really good holds and ended up forcing shot delivery. On a number of shots, we could see a 10 – “take it anytime you want” – but then it would degrade or the trigger would be jerked, and either way, there was a 9! Her follow-through wasn’t world class either, but the long holds were the biggest issue.

The next day, she fired a 397 in competition. When asked what the difference was, she said it was because of what she had learned the day before. She said she was much more confident, trusted her hold, and allowed the shots to go smoothly after holding for a shorter length of time.

When we first start shooting, we don’t pay much attention to the process. We just shoot, have fun, and improve. Then we start to do better. We press for higher scores and start to think about things. “I need to really concentrate on each shot and make it perfect!”

Well, not exactly. Trying for absolute perfection is the kiss of death to ultimate performance.

In some respects, the basics never change: stable position mechanics, inner feel, breath control, visual skills, sight alignment, aim, smooth trigger release, and follow-through. It’s very simple actually, but as we improve, we often tend to complicate it. We start a vicious circle of reduced confidence, longer holds, forced shots, and it doesn’t get better. An optimum shot delivery performance must begin and end within a certain and fairly short amount of time. Long holds generally cause a number of additional problems. Why is this?

As we prepare to deliver a shot, we start a sequence of actions that must take place correctly and consistently in order to achieve the desired results. Many of the functions involve the use of the human body. We are asking it to assume a position that is somewhat unnatural and uncomfortable, holding a heavy object, making the body and the object very steady and still, using our eyes to evaluate a very precise picture, and then gently moving one finger in a very smooth fashion without upsetting everything else. This burns a lot of oxygen. As the oxygen levels deplete, a part of the brain starts noticing that it is time to breathe. If the athlete holds the breath too long, a sense of urgency sets in, resulting in poor trigger control and little or no follow-through.

During long holds, each steady state becomes shorter and less still as the muscles tire, and the hold deteriorates. Eyesight weakens as the chemicals in the retina become depleted, so that the image sent to the brain for processing may not exactly match reality. The target may blur and the eye may actually hurt from the strain and dropping oxygen levels. The athlete doesn’t

want to put the gun down (thus having to “start over”) and forces the shot, sometimes with great results, but more often not. Worse still, getting away with some forced shots tricks us into thinking we can do it all the time. Then the bad shots erode our confidence and we wonder what happened.

What’s really going on is that we don’t trust ourselves. Oh sure, shooting is fun, but we want to do better and that means we have to consciously control and manage the shot process. We believe that to do better we must pay attention, use our eyes, and control it with our conscious mind. Unfortunately, that is not entirely correct. Certainly, there are shooters who do use these techniques, long holds and all, but the ones who are the most successful – the ones at the very top of the game – rarely do. The conscious mind and the eyes simply cannot perform at the level that the subconscious mind and body can. Bring the gun up and allow it to shoot almost as though by itself as the aim steadies.

Your very first hold is the steadiest. Many shooters waste that hold because they aren’t ready or don’t trust it. So they wait a few seconds as the gun moves around a bit and then settles again. Then they still aren’t ready, or they want to make it visually perfect, so they waste that hold as well. By now six to eight seconds have gone by, the muscles are getting slightly more jittery, the eyes are getting tired, oxygen levels are dropping, and the shooter continues to hold. Each steady state is shorter and looser, and the optimal time to shoot has passed.

Even if the athlete takes the shot earlier, the procedure is often to wait until the athlete sees a steady gun and perfect aim before starting to pull the trigger. But once you see the perfect shot it is *too late*. By the time you are able to react, the gun is already moving again.

In training, experiment with delivering the shot within eight seconds of arriving on target. Put the gun down even if the shot hasn’t been delivered. Shoot all your shots in one bull so you can’t score them. You can deliver really good shots within several seconds of finding your natural point of aim. Really work with this exercise. It might be rough at first, but be patient with yourself and the process. Eventually, your 30-second holds will seem like an eternity. Your eyes will stop hurting, the target will stop blurring, your problems with running out of time will go away, many trigger control problems will disappear, you won’t tire as easily, and you’ll have more fun!

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(Biographical information as of October 2009)

On the Firing Line (Fourth in a series)

Preparation Begins Now

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The familiar range command “preparation begins now” signals the period of final preparation for an event. Shooters make last checks of their equipment, take their position, and begin to settle in for the competition. There are a number of things an athlete can do prior to hearing this command to ensure a good performance in the event.

Preparation in one form or another actually begins days, weeks, months, even years ahead of time. Using a carefully crafted training plan, schedule, goals plan, and coach consultation, the athlete actually begins to prepare long before the day of competition. As the competition nears, training is tapered down a bit, and the athlete focuses on relaxation, hydration, sleep, planning for their approach and handling of the upcoming event, and lighter training to keep sharp and confirm that everything is working well. This is how your training program works, isn't it? Or is yours more haphazard and less well planned and executed?

For the majority of competitors, shooting is a hobby. As such, any time available for the sport is generally used for competition or range training. “There isn't time for the other stuff,” the competitor will say. Yet, their enjoyment of and improvement in the sport would be enhanced by taking a bit of time out for equipment and ammo checking, planning, goal setting, seeking out good advice, and working on broader and deeper aspects of sports performance rather than merely showing up for practice and shooting. Break things down into small steps. Focus on intermediate steps and work through them and revise as needed. Almost without noticing it, you will discover that your performance has improved in time.

The very best athletes have learned how to learn. This allows them to understand the various aspects of the sport and to constantly refine their performance. Understanding that becoming a world class athlete is a process – and that learning is a part of that process – the very best athletes constantly evaluate their game. They may not change something right away, yet they are evaluating it for possible future change. They understand that it takes lots of time and properly focused effort to reach their goals. In a broad sense, this is part of their preparation.

Whenever something is seen as too difficult it is only because it is that way in relation to the level of preparation. Winning a national event is difficult for someone who has not prepared fully. This takes time, of course! Winning an international championship seems almost easy to most who have achieved that level of success. It is because they were well prepared in all aspects of their game. Any roadblock or failure is always the result of improper or insufficient preparation. Good athletes work on some aspects of the sport, especially those they are good at doing. Great athletes work on all aspects of the sport, especially those they are worst at doing.

Finally, the time has come for competition. Have you arrived early enough so that you are not rushed? For major events this means arriving early enough for light training the day before. If you are crossing many time zones, you will want to arrive even earlier. Even small details like when to fill your air cylinders are important – wait too late and it can prevent you from training before the competition. You have already decided which ammo to use, haven't you? Now is not the time to make this choice. Train only for a short period of time... all you are doing is making sure you understand the range conditions and confirming that you are ready for the competition the next day. Do not fire a full match or do any other shooting for score. Merely remind yourself of the “feel” of good performance. This will allow you to approach the competition with confidence.

Each time you set up or pack your equipment, have a system. If you are haphazard, items will be misplaced and steps forgotten. This increases stress before, or during, the very time when you desire decreased stress. Have a place for everything and a sequence in which you complete each task. There is a reason that the master does not allow the apprentice to prepare the utensils for the tea ceremony, the brushes and canvas for the painting, or the bow for the archery contest. This is part of the preparation and helps place your mind in the mode for competition.

Athletes who constantly chat right up to – and sometimes beyond – the preparation period are already at a disadvantage. It takes time for the mind to enter the proper state for the competition. Give it a chance! Some elite and highly experienced athletes may disagree with this. Most athletes do not have the level of training and control required to ignore this step – and even some of the most elite could gain additional benefit by returning to this habit.

Now the time has come to take position for the event. Do you just step to your spot and pick up your firearm? Hopefully not. Carefully check the placement of your feet and the positioning of your body. Then become aware of your balance and refine it so that you are as steady as possible that day. Carefully check the relationship between your body and the target. For rifle and pistol this is the natural point of aim or static position where the body will naturally tend to point the firearm. For running target and shotgun, the athlete must ensure that the dynamic body position will naturally move to and beyond the spot where the athlete expects to engage the target.

Once the competition begins, the sighting shots are still part of the preparation. While called “sighters” because they are used to confirm that the shots are going where desired, they could also be called “settling” shots. Use your sighters to make the final mental transition into competition mode, establish your rhythm, and get the body working the way it needs to. Some events have a fixed number of sighting shots. In the events where the number of sighters is at the athlete’s individual discretion, a well prepared athlete rarely needs more than about 10 to 15 shots. Much less than this doesn’t allow everything to be fully ready for most athletes. More than this is counterproductive except in rare cases.

When you hear “preparation begins now” it merely signals the beginning of the last little phase of preparation for an event. Plan your activities accordingly and you will find that the sport is even more enjoyable and your performance will improve more than you expected.

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(Biographical information as of October 2009)

On the Firing Line (Fifth in a series)

Eights are Your Friend

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The phrase “Eights are your friend!” usually evokes confused looks from those who have never heard it before. After all, the goal in the shooting sports is to hit the target each time – hopefully in the center for a “perfect ten” or the powdery bust of a clay target. The phrase is a way to highlight two critical components of training and competing. One of the most important aspects of improving performance is the ability to keep positive energy flowing in the face of difficulty – especially in competition. Equally important is the ability to learn from mistakes rather than angrily forget or ignore them.

Often, when a shooter misses a target or has a bad shot, they are told to forget it and move on. This is only half true. Yes, the miss itself or the low scoring shot – that is, the score or result – must be forgotten. However, the underlying performance of the shot must be analyzed if one is to systematically improve their game. One must also reset and refocus (not “just forget”) so that the error is not repeated. Many times a bad shot will be duplicated on the very next attempt!

Notice that the emphasis is on performance rather than on score. You can't do anything about the score... it is there. You can't “fix” it. Focusing attention on score pulls your attention away from the very thing that will provide a good score: your performance. By performance, we mean your shot process, your technique, your position, indeed all aspects of preparing for and delivering the shot. All of this happens on the firing line within your mind and body – not downrange at the target. The target and score are distractions!

When a beginner makes a mistake, they usually are unable to sense the differences in their performance between the good and bad shots. As they develop, they begin to “feel the difference” between them yet are unable to understand, much less predict or correct the errors. Eventually, an athlete can learn to sense the bad shots – “I could tell the moment I pulled the trigger!” – and finally then to predict them. In these latter stages of development, the athlete can begin to understand the causes of the bad performances and work to correct them or they can give up on the shot (no follow through, etc.), react angrily, and never learn how to resolve the problems.

The developing athlete works toward better performances – the master athlete eliminates bad performances by allowing good performances to take place.

When a bad shot occurs, stay with the shot to completion with good follow through. The time after the trigger is pulled gives you a great deal of evidence that can be used to understand what went wrong. Then, see if you can determine what was different... how the gun moved, what muscles had different tension, how the position differed, how the technique or shot process differed, and so on. In some cases you will discover the cause right away while in others you will only be able to gather evidence that you or your coach can eventually use to find the root problems. As you build the habit of actively working on understanding what happens as you fire a shot, you will be able to improve your game and enjoy it more instead of suffering the frustration and anger of yet another bad shot caused by an unknown problem that you can't ever seem to find and correct.

This approach will also make it easier to maintain positive feelings and thoughts! Anger and frustration are blocks to the flow of positive emotion. The anger and frustration become the

focus and cause even worse performance. Embrace the process of learning as a journey of self-discovery and growth.

Here is an example of this technique at work – before and after. Last year, we met an advanced young athlete at a selection match. It didn't take long to notice that she was having difficulty because of her angry reaction to scores that were below her expectations. This pattern usually repeated itself after each event and position. She was unable to recover and resume a good performance nor was she able to understand what was going wrong in the first place. Worst of all, she sometimes accidentally disturbed other competitors because she was so worked up. This was discussed with her on a couple of occasions but the problem wasn't really solved.

She asked for my assistance with some technical issues in her game and the search for answers was on in spite of the fact that we live hundreds of miles apart. Of course, my plan was to also solve the “attitude” situation! In discussions with the national team coach and an OTC technology specialist, information was gathered about the athlete's shot technique based on testing done by them on the athlete at the OTC using their electronic trainer system. This allowed me to learn about her error modes since she wasn't fully aware of them – because she was upset each time the occurred.

We discussed awareness, performance, learning from mistakes, positive energy, and the negative effects on her performance of the old behavior pattern in a phone call. At this point, the athlete was given an “experiment” to perform that would facilitate a better performance and asked to observe what effect it had on various aspects of her technique. It was also explained that the experiment would likely result in much larger groups (lower score) which was fine since this was a training drill – not a match. This was an attempt to eliminate the negative aspects of low score in order to let the drill work correctly and to give her a “safe” drill that would allow her to experience a stress free performance. Sure enough, she was able to explain with great detail and clarity the changes in her technique in terms of hold time, aiming accuracy, trigger control, visual comfort, and overall confidence in the shot as the experiment's steps were performed in sequence. She even laughed about a couple of shots that “got away” since there was no score to upset her and since she could tell why they had happened.

Although the experiment was useful in solving a technical problem, it was purposely constructed in a way that allowed her to discover for herself that she was capable of handling an error in a positive way that allowed her to learn more about her game and thus improve it. She had heard “Eights are your friend” previously from me, but now understands it through her own experience and works on maintaining that attitude. Be nice to yourself and do the same.

You will learn more from one bad shot than from nine good shots.

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(Biographical information as of October 2009)

On the Firing Line (Sixth in a series)

Practice? ...Or Training?

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The notes are as clear in my memory as when they were last played thirty years ago. Masterfully played on the piano by my mother, Ernesto Lacuono's Malagueña is a complex and wonderfully moving piece of music. She would sit down and, without a thought or any music in front of her, launch into a performance of the full version worthy of a concert pianist. The dynamics and tempo changes to fit the music were beyond compare, and the passion and feeling of the music - indeed the music itself - flowed from her fingers into the instrument and out into the room. One could not listen without being moved.

Years later, while exploring aspects of ultimate performance (music, dance, ice skating, swimming, weight lifting, pole vaulting, shooting - it's all the same), I discussed her piano performance with my mother. In the course of the conversation she made a most interesting comment: "I was never a great pianist. I was just well practiced."

She went on to explain that she had worked hard to learn a number of difficult pieces very well, which allowed her to perform them expertly. However, if handed a new piece, she would have had to work laboriously to bring it up to the same standards - unlike a master pianist who would do it rather quickly and easily.

Have you ever seen a football game? Have you ever seen a football practice? How about a baseball or basketball game and their practice sessions? Have you ever seen how these athletes train? Does their game look like their practice? Of course not! Have you ever seen a shooting competition? How about a shooting practice? More often than not, they look the same! What's going on here?

The vast majority of shooters, at least in this country, spend most of their practice time doing exactly what they do in a match: get into position and shoot for score. They are "well practiced" shooters. The "well practiced" performer knows how to do certain things very well. Regardless of whether it is music at the piano or shots toward a target, one can repeat the process over and over and, through trial and error, eventually learn to perform fairly well. This is a time consuming and frustrating process.

This also results in the performer reaching a plateau that limits their potential. It becomes impossible to reach higher levels of performance without completely relearning the techniques and approaching the game from another perspective. Athletes who are already on a national team or competing on the international level are not willing to "break" their game and rebuild it all over. The problem is that it is possible to reach these levels while being only well practiced.

The few athletes that seem to be so much better than most often have a much different understanding of the game and much more knowledge of it. You know that you need to be balanced, but do you know how to check it and actually set it up right? You may have been told about inner position, but do you really know what it is and how to sense and use it? You know correct natural point of aim (NPA) is important, but do you know how to really and truly check it? (If you don't know those first two, then you don't really know this one!) You know it is important to remain calm and relaxed, but do you know how to calm and relax yourself - physically, mentally, and emotionally - in a matter of moments in the heat of the match - or while the clock is running down on a finals shot? Do you tire easily in the course of several matches? The list goes on and on.

As for practice time, do you merely practice or do you train? Do you ever do drills to build your awareness of balance, inner position, and NPA? What about drills that allow you to focus on consistency and feel rather than score? How about drills that build your confidence while increasing your ability to break a shot automatically after a very short hold? We give lip service to the fact that our sport is 90% or 95% (or some large percent) mental. Yet, what do we spend 90% or 95% or 100% of our practice time on? The physical and technical game! Are you a conscious control shooter? Do you believe that is the way to Olympic gold? After all, in our culture we are taught from a young age to “pay attention” and “concentrate” when we want to do something perfectly. Yet that is not the way to do it! Cultural pressure often prevents us from finding better ways. Instead, do you trust yourself enough to relinquish conscious control to your inner self and allow the shots to unfold? Do you know how to do this - or even believe in it?

Admittedly, some of these ideas are controversial. After all, there are any number of shooters who are well practiced, who utilize conscious shot control, and who usually only shoot for score in practice that have done well. Some even make the national team and win medals in international competition. Some of these are rare individuals who just happen to have the right mix of skills to go along with their hard work; for others it’s just hard work and determination.

Yet we watch groups of shooters from other countries (China, Korea, Germany, among others), and an occasional shooter from our country, dominate the medal standings. What is the difference? The dominant shooters usually have a deeper understanding of the game. They have come to understand the concepts being discussed here and find ultimate performance to be almost effortless, even in an important match. They do drills that build skills, skills that translate into improved and more consistent performance, performance that translates into higher scores. They never work on score. They almost always allow their shots to happen for them - almost as a detached spectator - rather than with conscious control that strives for a “perfect” shot. The conscious mind is too slow!

Deciding that becoming a better shooter is just a matter of “more practice” is the slow, unreliable, high risk path to ultimate performance. What got you to your current level may not be - indeed probably is not - what you need to get to the next level, or the next several levels. Even among my own students, I see some who understand this and others who look at me like I’m nuts!

As a national team coach said to me during a discussion about a number of up and coming young shooters, “The ones that make the changes now are the ones that will do well in 2004 and 2008.” Are you working to be a great shooter?

Or are you merely well practiced?

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(Biographical information as of October 2009)

On the Firing Line (Seventh in a series)

Football Ballet

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“Coach Faust wants to see you in his office.” The three sophomores looked nervously at each other. Although he frequently spoke with them on the field and in the locker room, the varsity coach didn't usually call JV players into his office unless they were in trouble.

They were relieved when they heard: “You three have done a great job on the JV team this year. Also, your leadership and attitude are outstanding,” he told them. “However, your abilities and skills as they stand now are not going to get you on the varsity team next summer unless you enhance them with the training that I'm going to propose to you.”

They were shocked to hear him propose that they take ballet because this would enhance the particular weaknesses they had and ensure them a place on next year's team. They reluctantly agreed, though didn't advertise this to their friends. The following August, all three not only made the team, they earned starting positions – on a championship team that had three or four players at every position. There was a stampede of football players to the ballet studio after everyone heard how these three had suddenly improved so much. These three athletes held their starting spots all through their last two seasons. Coach Faust's teams went on to win several state and national championships.

In last month's article, we made a distinction between two major types of preparation: merely shooting a match program (practice) and doing drills to improve skills (training). The terminology (which is often interchanged) is less important here than the difference in activity. Sending football players to ballet in order to improve their kinesthetic awareness certainly is an extreme example; yet entirely reasonable. Other teams couldn't understand how this team could beat them so thoroughly. One of the many reasons was because they had built skills through a variety of training methods.

A rifle or pistol athlete who is at least to the intermediate level can usually shoot a tighter group on a completely blank target than they do on regular targets with an aiming black. The vast majority of shooters don't know this or the insights it can give. Most give us a funny look when the drill procedure is first explained. We have them shoot a ten shot group on a completely blank card. Since there is no aiming mark, the athletes are instructed to feel a consistent position for each shot. If the target isn't all black, we explain that “aiming” at the developing group will defeat the purpose of the drill and to trust their feel of the position. We prefer to use an all black card, however.

After the group has been fired, the athlete is surprised at how small it is - usually a single hole about 6 to 8mm across for air rifle and usually not all that much larger for air pistol. When asked how it is possible for them to do this they often have no idea. Of course, it is because their body and subconscious mind are so used to the routine that without the visual input they still place the body in the exact same position for each shot. It is this inner position or kinesthetic feel that enables world-class performance.

The athlete that takes advantage of this effect does far better than the one who constantly changes their position and equipment and never builds a pattern of consistent position, shot process, and performance. The blank card drill is also useful in building excellent trigger control and sight alignment skills. The idea is always to build skills and skill awareness.

To reinforce the reliance on inner position or feel, and to reduce body sway in training and competition, we have the athlete stand in position without their gun as if preparing to shoot

and close their eyes. At first they move quite a bit since the eyes are one of the most important inputs to the balance process. We ask the athlete to feel the ebb and flow – or rhythm – of their movement and to feel if they are falling forward and correcting back up to center, or if they are falling back and correcting forward up to center. Then, through slight adjustment of the feet, they are taught to tune this sway out as much as is possible for them at the time. They notice that there is a natural rhythm of steadiness and sway, like waves at the beach.

This drill enhances inner position feel and reduces body movement, which helps in the athlete's confidence in their hold. We then add the gun and have the athlete repeat the process. Some of my students use this drill every time as part of their setup process to shoot and at least one has been observed starting all over with it again when having difficulty in the middle of a match. Better to fix problems now than to waste the rest of the match!

Do you think your natural point of aim (NPA) is carefully checked as part of your routine? If you close your eyes for only 2 or 3 seconds you aren't checking anything! Try ten full seconds, wait until you feel a steady state (as in the balance exercise) and then open your eyes. Surprise! Now adjust by moving the entire body and do it again until you find that you are still on target. If you adjust merely by moving a foot slightly, as is often taught, you detune the balance from the previous step. This often takes several iterations the first time or two you do it.

Athletes who have no trouble with the blank card, balance, and NPA drills are introduced to another interesting drill. Happy that we have now restored the target for them to aim toward, they are surprised to hear that we are going to have them shoot with their eyes closed! The athlete is instructed to go through their normal shot routine and, at the moment that they would be ready to release the shot, they are told to close their eyes for several seconds and feel their movement, just as in the balance drill. When feeling a steady state, they are to release the shot. What a heart stopper this is for them! Of course, we are closely watching to see that they stay safely on target and have a large, safe backstop area. Groups fired this way are often tighter than the already small blank card groups.

When it comes to competition, I often tell my students to “dance the dance” or “sing the song” without thinking about it, or to “just shoot” as one student said to me. For example, at the 2000 NRA Collegiate Pistol National Championships, the women's air pistol team championship (three to a team) was won by Ohio State University. The third member of that team had only been introduced to shooting three or four months earlier. It was clear to see, however, that she had a number of highly refined skills. In discussions with her it became obvious that her training in dance had developed a number of physical, mental, and emotional skills. All she had to do was add the technical skills of shooting to the mix. She equated the performance of the shot sequence to performing a dance. Many shooters only develop the technical skills and miss the other three.

Most shooting practice that we have observed involves score just as in a match. Instead, we need to build skills: hold duration and quality, hold technique, trigger technique, sight alignment, shot process details, especially the mental process or program for a shot, inner position, emotional maturity and skills, balance, setup and preparation routine, inner position or feel, and a myriad other details need to be part of the shooter's “automatic” routine.

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(Biographical information as of October 2009)

On the Firing Line (Eighth in a series)
Mental and Emotional Skills
©2001 JP O'Connor

**Mental and Emotional skills
May be learned just as certainly as
Physical and Technical skills.**

Many years ago, I had the distinct pleasure and privilege to meet and chat one-on-one with Arthur Ashe. He was the first black athlete in professional tennis and devoted his later life to numerous causes. Some say the pinnacle of his tennis career was in 1975 when he defeated Jimmy Connors for the championship at Wimbledon. Others say it was his spectacular win in the U.S. Open in 1968 – as an amateur. Since 1997, the U.S. Open championship finals are played in a stadium that bears his name. He was very well read, thoughtful and articulate, and an international ambassador for his sport and country.

A model of decorum, his demeanor on and off the court was above reproach. He said that some of the keys to his success were the mental and emotional skills that he had learned. He firmly believed that these skills could be taught just as certainly as physical and technical skills.

Because of his race, he developed in the sport under constant scrutiny. Thus, he was taught at an early age by his father and by his first coach to always maintain his composure. For 8 summers, starting at the age of 10, he saw a sign on the wall that read: “Those whom the gods wish to destroy they first make mad.” He also came to understand that he could learn from his mistakes and rattle his opponents at the same time. He embodied the concept of our sport’s “Eights are you friend.”

[Dr. Johnson] instructed Arthur and his other young charges to ... smile at their mistakes. Ashe still does. It drives teeth-gritting, racket-throwing opponents to distraction. "They think I must be goofy," Arthur says. [SI 1966]

Ashe learned his tennis lessons – and his life lessons – under a system of strict discipline. And he thrived. He knew that to excel he had to learn and work hard.

He was taught some basic strokes by a young player named, magnificently, Ron Charity. What Arthur received from his father wasn't quite encouragement. Call it surveillance. Once, having thrown his racket in frustration, Arthur heard the screen door slam and looked up to see his father bearing down on him. He has yet to throw his second racket.

Ashe never chafed under his father's rules or under those of his coach, Dr. Robert Walter Johnson Jr., of Lynchburg, Va., who took him in during summers after Arthur was 10, adding him to a stable of young black players. Johnson insisted that in tournaments his boys play any shot that was an inch or two outside the line as if it were in. Johnson shaped much more than Ashe's game. [SI 1992]

He learned to go above and beyond and he learned the value of remaining calm.

"We were taught table manners and the strictest etiquette and that unshakable Oriental calm," says Ashe. "But I also noticed that control was [darned] effective. Other players' fathers were always telling Dr. Johnson, 'My son was going to pieces. Your player never changed expression.'" [SI 1992]

Paradoxically, we often dwell too much on our score or performance between shots – especially the poorer ones – and do not apply enough calm determination, focus, and will power to the actual shot delivery. Nor to our planning and training. One cannot think clearly, solve problems, and perform if angry or upset.

Ashe was the best at leaving every shot behind. He played each stroke as if it were for life and death and then instantly abstained from regret or celebration because there was another shot to play. It was inefficient, even self-destructive to waste energy raging at himself or his opponent or the umpire, even though to do so is wholly human. Too, he learned early that his unnatural cool was often so unsettling that it could be a tactical weapon.

So at his best he was a wonderful paradox. Compared with the antics of his racket-throwing, blaspheming opponents, Ashe's blithe shrugging off of errors and injustices seemed almost lackadaisical, as if he didn't care. Yet his was the truer picture of focus. He cut his losses and moved on, unharmed by them. [SI 1993]

Ashe cared about his image, not out of vanity, rather out of a sense of pride and respect for those from whom he had learned and for those who had gone before him. We do well to emulate his example. Displays of anger or profanity do not become the athlete or the sport.

Are there differences between mental and emotional skills? Mental skills include focus, awareness, and visualization while emotional skills include calm, positive energy in the face of adversity, and confidence. Though closely related, they are as separate from each other as are the closely related, yet different, physical and technical skills.

Remember the new competitor on the Ohio State University women's air pistol team that was mentioned in the previous installment of this series? At one point in practice, at the 2000 NRA Collegiate National Pistol Championships, she fired a 3. She turned around and her coach gave her a big, beaming smile! Later, she would tell me "...when I saw that smile I knew everything was fine." She returned to her shooting as if she had fired a 10.

Tennis, anyone?

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(Biographical information as of October 2009)

On the Firing Line (Ninth in a series)

Critical Moments

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My ears burned and my face was red. Erich Buljung's voice was raised and his words were quite firm and direct. I hadn't been scolded like this in years, especially not in front of others. We had been shooting air pistol at the Master's Camp and I was due for some strong "corrective action" from the coach. Paraphrased, part of it went something like this: "You bring back one target with a pair of deep tens right on top of each other, and then the next target has two sloppy eights! And the target after that has tens again! What are you doing! I'll tell you: You aren't giving each shot the same level of intensity and focus! You are wasting your time if you shoot that way!" Though it only lasted a couple of minutes, it felt like it lasted for days!

Swallowing this bitter pill took a few hours – which made shooting free pistol rather interesting that afternoon – yet I realized that he was right on the mark in his assessment. Focus does not always come easily to me and he had gotten my attention! The next day's shooting, and all subsequent shooting, now had a rather different approach! Later, Erich made sure that I understood that his method of delivering the message was not a personal attack... instead, he realized that he needed rather strong medicine to get my attention so that I would truly hear and understand his message. I learned a few critically valuable lessons – both as an athlete and as a coach – from that experience!

Significant amounts of time, money, effort, and thought go into the selection of our shooting equipment and in the development of solid shooting positions. We spend countless hours on the range practicing our shooting. What are we really practicing?

The most critical moments in our sport surround the delivery of the shot. Clearly, this is affected by the state of our equipment and our positions. However, how our shot process is constructed, and how we think about it is even more critical. Yet we give this little thought.

Have you ever noticed that sometimes the shots seem almost effortless, while at other times they seem so difficult? In the latter case, it often seems as if we dread the shot and then are scared to see how it turned out. Have you ever noticed that on the days you are confident you usually shoot well? Have you wondered why this varies from day to day or even within one session?

The answers to these questions revolve around the fact that, while we realize the importance of equipment, positions, and other aspects of the physical and technical game, we do not give the mental and emotional aspects of the game nearly enough thought. Our attitude about a shot has at least as much to do with its outcome as does any other aspect of our shooting.

For example, on the first day of the 2001 Field Target Nationals, I was squadded with the eventual winner. Upon arriving at one particular target, he exclaimed: "I hate this target. I always miss it!" Instantly, a thought crossed my mind: "He will miss it here, too." And he did. "What is your favorite target?" I asked. "Not this one!" he replied. "Actually, the target you are about to shoot is your favorite. Then you will hit it!" I responded. He smiled as the idea took hold.

In the same vein, many of the kids I work with joke about 2 of my famous questions asking them what their favorite gun (air or .22) and favorite position is. Each has fallen into the trap of coming up with all the wrong answers and they delight in watching someone new fall into the same trap! The answer of course is: "The one you are shooting now is your favorite!" Tell yourself that! The same is true in outdoor prone or field target where different targets and distances are involved. The current one is your favorite!

Some will argue that you are lying to yourself, which causes additional stress on the mind. I don't mean literally that the gun or position one is shooting must become their favorite. Rather, it is a way to focus on positive thoughts. "This is my favorite gun, position, distance, target, or whatever... and I will do well with it!" Even if one did not do well last time, they have at least given themselves the opportunity to do well this time. What do you suppose the outcome will be if they instead say: "I hate this position! I always mess it up and shoot poorly!" What is going on in your head? Will those thoughts enhance your ability to perform well?

Similarly, a young shooter from Ohio told me that she and her friends often joke about my saying "Eights are your Friend!" at practice because they follow it. They realize that the phrase is not meant literally – rather it is meant to remove focus from score, emphasize the learning value of less than perfect shots, and keep positive thoughts and energy flowing, which are critical to ultimate performance. Of course, this learning can happen only if one has an open mind and will embrace the mistake as the learning opportunity that it is. Practice now becomes more fun and improvement is facilitated by the positive attitude and energy.

What should be going on in the critical moments? Ideally, a focused, quiet, calm, intensity is present. No chatter, no fear, no concern, no stress, no tension, no word, no thought. Just quiet awareness – almost as a spectator – as the shot unfolds. The eye and conscious mind are far too slow to perform at the levels we strive for. Yet many shoot this way. The body and subconscious mind must be given control. They are trained much more than we realize since we so seldom let them take over and show us their capabilities. We must trust ourselves... our inner selves. One drill we use to enhance this has shooters delivering shots with their eyes closed (in a carefully controlled drill for obvious safety reasons)... they break the shot only when everything feels right. The groups are usually very tight and right on target.

One of the biggest mistakes we make is not putting the gun down and starting the shot process over when we need to. Have you ever noticed that sometimes a weird "sixth sense" tells you not to deliver the shot and instead start over? How often do you ignore it? Trust that sense! Many people feel that once they are on target, they are determined to deliver a shot "no matter what." Others will hold a very long time to make the shot "perfect". You cannot make a perfect shot – you can only perform correctly and the reward will often be a perfect shot. This is a subtle yet huge difference.

Although psychologically difficult at first, one can learn to break off the shot program and start over. Champions do not avoid bad shots – they strive to make only good shots. Put the gun down, reward yourself ("That would have been a nine or an eight."), and then go on to the "next" shot and perform. This is also helpful when you have a string of tens going and you get nervous about it... each time you put the gun down would have been a nine. Congratulate yourself for not making that shot and move on with confidence.

One of the other athletes at the Master's Camp didn't want to change anything about their routine: "No, this is how I always do it." was the reply. Yet the scores had plateaued. Are you stuck in a rut? Do you "...always do it this way..." and wonder why you aren't improving? Do you take full, complete, and total responsibility for your shots? Or do you have a closed mind about how to shoot well and have lots of excuses for why they aren't all good shots? How good do you want to be? Hard questions, I know. My ears were burning! Are yours?

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(Biographical information as of October 2009)

On the Firing Line (Tenth in a series)

Trying Not to Lose

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There is a saying in our sport that in order to win the gold, one has only to follow a two step process: 1 Shoot a ten, 2 Repeat number 1. Tim Conrad of the USOC Sport Science and Technology Department has a slightly more technical version: 1 Point at the target, 2 Pull the trigger, 3 Go back to number 1. We laugh at both of these for their simplicity, yet there is a nervous edge to our laughter because we know it really is that uncomplicated. Of course, still waters run deep! There is much going on beneath the surface and we rarely master it.

Are you shooting to win? Or are you shooting to not lose? There is a huge difference! In downhill skiing, for example, the champion is attacking the course and is on the edge of control. No thought of the consequences of failure – just focused determination on execution, thus shaving hundredths of a second off of each gate and run. Some of the others are merely trying to get down the hill without running off the course or crashing. They are skiing to not lose – to not finish last. How might this manifest itself on our sport? Let us begin by looking at a couple of athletes.

Athlete #1 has worked hard at her game. Her positions are fundamentally sound, using bone and ligament as much as possible instead compensating with muscle and tendon. She has trained her balance and learned how to tune the natural body sway to a minimum. She knows how to find and check her true natural point of aim – her natural position – and checks it throughout a competition or training session.

Her equipment is properly adjusted and in perfect working order. Her ammunition is of good quality and matches well with her gun. Her sights are configured correctly (very large front aperture for rifle – wide front blade and very wide rear notch for pistol) and her trigger is adjusted to facilitate optimal performance (50gm 1st stage and 100gm total 2nd stage for rifle – 300gm 1st stage and 500gm 2nd stage for air pistol, with equivalents for others – 40 to 80gm or more for men's free pistol). As a result of these things, she never gives equipment or ammunition a single thought while training or competing.

She uses a physical training program that builds muscle tone and endurance rather than just raw strength. It is a balanced program that builds the lower body to improve stability and allow her to stand through a match without pain or fatigue, her trunk for lower back stability and to prevent injury, and her upper body to allow her to lift and hold the gun with steadiness and minimal fatigue. She has developed a strong kinesthetic awareness and is acutely aware of her “inner position” and how it facilitates ultimate performance.

Her training also involves mental training, reading (within and outside of our sport), dry fire, holding exercises, balance work, and various live fire drills. Her holding, dry, and live work involves blank targets and control or training targets to isolate and work on aspects of her technique, in addition to work with traditional targets. She has coaches that really understand her and her game, who she consults with regularly. They, in turn, aggressively seek answers to any of her questions that they don't already have. It is a partnership. She uses an electronic trainer with her coaches to isolate specific issues that need attention. She is willing to alter her technique rather than stick with old habits when they stand in the way of improving her performance.

As important as all of these items are, they merely set the stage for her flawless and effortless technique. She is psychologically ready to take a shot and the first stage of her trigger is already fully taken up before she ever arrives on her area of aim. Thus, she is willing and able

to deliver the shot on her very first steady state, even if this is only a second or two after arriving on the target. Her eye is focused on the center of the target (rifle) or on the center of the front sight blade (pistol) and she allows her subconscious mind to handle the rest. Yes, she (her conscious mind or self) allows her subconscious to perform for her. The conscious mind is way to slow. Often, she will arrive on target and, just at the instant that the gun completely stops moving, it seems as if the gun goes off by itself – almost as if she were a spectator.

When faced with adversity (“bad” shot, range conditions, target malfunction, etc.), she remains calm and positive. When she makes a mistake, rather than becoming angry, she forgets the score and analyzes the failure mode to facilitate correction in future shots. She takes her shots within the first three steady states in her hold (often in the very first one as just described) and never holds on target more than about 8 seconds. While holding, she allows her subconscious to slowly and steadily build pressure on the trigger. She never has “flutter finger” or “chicken finger” which are both symptoms of lack of confidence and point to fundamental errors elsewhere in the technique and/or mental approach (and sometimes in equipment setup – usually with the sights.)

She always addresses the target with confidence. She focuses solely on herself and her game and allows nothing to enter her space. There is never a thought about score, winning, losing, what others think, other competitors, or any other external influence. She confidently applies a fierce determination, intensity, and will while remaining serenely calm in her approach. She trusts herself and shoots to win.

Athlete #2 spends almost all his training time shooting on the range. He tinkers with his equipment in search of a quick fix for the latest problem. He holds a long time to “make sure” that the sight picture is perfect. In his quest for perfection, he runs his eye around the tight little front sight ring (rifle) or at the target and either side of the razor thin rear sight gap (pistol). Triggering is haphazard at best. When he arrives on target, he is not ready to shoot and does not have the trigger ready... he doesn’t trust himself (though is not aware of this and wouldn’t admit it anyway) and needs to see the first steady state before starting his shot process for real. He “gives up” on shots and forces them instead of putting the gun down and starting the shot over. His fits of anger over a bad shot or low score are legendary. He doesn’t like using coaches because “...they make me do crazy stuff. I want to do things my way.” Of course, he wonders why he is still in that slump! His quest for perfection is shooting to not lose.

Although we made Athlete #2 look pretty bad... there are lots of athletes who are much closer to this style of shooting than to the style of Athlete #1. Athlete #1 is very rare in the world, and even rarer in this country. She wins a lot! The biggest difference between the two is that Athlete #1 trusts herself, does the “hard” work, has an open mind, and allows her subconscious to do most of the work. Athlete #2 does not. Study Athlete #1. More on this next time!

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(Biographical information as of October 2009)

On the Firing Line (Eleventh in a series)

Working to Win

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In the previous installment of this series, we described two different athletes – one that is very successful and one that is much less so. The critical differences between them provide insight into how to train, how to compete, indeed, how to deliver each shot.

The successful athlete is not obsessed with the mechanics of the game. The unsuccessful athlete is obsessed... to the exclusion of all other considerations. He “controls” his shooting using the conscious mind. Why is this method unsuccessful?

Have you ever driven somewhere and realized that you were never conscious of the act of driving? “I don’t remember driving home!” Maybe you raced cars, motorcycles, or bicycles and discovered that you were unaware of what you had just done. Your conscious mind was preoccupied or silent and was not participating in the task at hand... yet you were able to accomplish it. If you are a musician, I dare you to play a scale at full speed while thinking about each individual note. Every musician that I have asked to do this has said it cannot be done. They state that they don’t think about the notes and just play the scale. When they perform, they think about the music... almost by “feeling” it. They do not think about the notes, or their difficulties with certain passages, or about what the audience might think. To do so is to invite disaster! A touch typist cannot think about each individual letter or keystroke. Instead, they hear or see the words in their mind and they flow onto the page through their fingers almost as if by magic. Of course, there is no magic – they are not trying to think about or control the process with the conscious mind. It seems so obvious and clear in these everyday examples. Why do we insist that it is different for shooting? One must trust oneself and “let go” to allow the great performance.

The successful athlete is always looking for weaknesses in her game and for ways to correct them. The unsuccessful athlete shows up to practice, shoots awhile, practices the same mistakes as last week (or last year), complains about his score, and goes home. How will he ever improve? Are you willing to change the way you shoot? If you do the same things the same way... how is that ever going to improve your performance (and thus your score)?

Do you really want to improve, or do you give it lip service? Are you willing to break off a shot process and “start all over” when a shot isn’t going just right? Or do you just shrug your shoulders and vow to “do better next time”? Lip service! When you are having problems in practice, do you apply extra effort or give up? What about in a match? “Here we go again, I’ve blown it so why bother?” “But I want to be good, coach!” Lip service! Nancy Johnson had a rough time in practice at the 2000 Olympics and again during her match. She didn’t give up or start worrying about her problems. She stuck to her task, talked to her coaches, maintained composure and positive energy, focused on her performance, and ended up with a gold medal! The champion makes good shots. The others just shoot their shots and hope they are good. The champion isn’t afraid to put the gun down – sometimes a lot – in order to eliminate the “bad” shots and deliver a shot correctly every time.

Another part of the difference is willingness to change. “I’ve always done it that way!” Yet the athlete never wins. “But I want to win and I’m working on it!” Lip service! In watching a videotape of one of the finals in the 2000 Olympics, it was obvious that one shooter was making fundamental mistakes that had been pointed out repeatedly by the athlete’s National and Olympic Team Coach, myself, and others – two full years earlier! This athlete never learned to change. “I want to win!” Lip service!

What needs to change? It varies for each individual of course, but a pattern emerges. Sometimes fundamental position mechanics are in need of adjustment. Without these changes, there can be no improvement. Usually, however, it is in the subtle nuances of the shot process that one finds the most improvement. And those nuances often lead right back into the athlete's attitude... how they think about themselves, their game, and their shot process. Open your mind and you will open doors!

One cannot just flip a switch and get "in the zone" merely by willing it. One must set up their mindset, their positions, their equipment, and their shot process to allow themselves to get "in the zone". It's sort of like fishing: no matter what we do, we cannot "make" the fish bite. However, if we do the right things (right time of day, good location, right bait and technique, etc.) we can facilitate the process to maximize the chances of the fish starting to bite. In shooting it's a bit more straightforward: if we do the right things, in time our mind will take over and – almost without realizing it – we discover that we performed well and often did experience "the zone".

What is your job when on the firing line? "Shoot a ten!" No way! "Well, ok, just shoot!" Wrong again! Your job is to do things the correct way. Focus inward. Train toward understanding what is correct and what isn't. Stop yourself when you sense problems or catch yourself doing something incorrectly – instead of being lazy, giving up on the shot, and pulling the trigger. In some ways it is really simple... short holds, break off the hold when that "sixth sense" says something is different, attack the competition with confidence, quiet the conscious mind, and let it unfold. We just seem to want to make it so complex!

The champion performs only good shots. The champion only allows good performances. Think like the champion – be like the champion.

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(Biographical information as of October 2009)

On the Firing Line (Twelfth in a series)

Subtle Details

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Advanced athletes need insight and assistance from coaches or other athletes, just as they did when they were beginners or intermediate level athletes. What they need often differs, however. By the time an athlete has reached an advanced level of performance, most all of the big details have been pretty well taken care of. Usually – though not always! More often than not, as an athlete progresses, it is subtle details that make a difference. Often, these are discovered when someone else looks closely at the athlete's physical and technical game. Similarly, finding, exploring, and resolving subtle details in the mental and emotional aspects of the game require the "assistant" to really understand the athlete's approach – and a real rapport and communication between the athlete and the teacher.

To have an impact on an advanced athlete's game, a coach or training partner must take time and effort to really understand what is going on. They must also understand how the various aspects of the sport work together. Making a change in one aspect of an athlete's "program" almost always has an effect in other aspects. This can work against the athlete, or to their benefit.

In working with a young air pistol shooter, it was discovered that she had limited ability to call her shots. She said that she could not tell where they were going and that she couldn't seem to find out what errors she was making. The athlete was reminded of the basics, including to really look at the center of the front sight, was asked to do some shooting, and was watched very carefully. Right away, we found that, like many young air rifle and air pistol shooters, she was not using any hearing protection because the noise was so slight that she felt that it didn't bother her... and the earmuffs did. No great revelation so far. Watching closely, a blink was noticed on each shot. Closer examination showed that the blink was not an anticipation blink – rather it was a reaction to the noise of the air pistol being fired. She was asked to use the earmuffs as an experiment, again reminded of her basics, and fire a few shots. After each shot, she was asked to call the shot before being shown the target screen. Imagine her surprise when she called the very first shot accurately! ...and all subsequent shots. There was no great surprise here (except to the athlete) since the ability to call one's shots involves a number of inputs, with the visual "evidence" being among the most important. She just needed someone to take some time and really look at what she was doing. Only by taking time to really look at what is going on can one find and fix subtle (yet often seemingly obvious) details like this one.

A classic example that sometimes gets knowing nods when mentioned, yet is often given lip service when it comes to actual shooting, is the effect of front aperture size on many aspects of the shooting performance. When introducing a 15 year old to the shooting sports in 1997 (on a one-time "try it" basis), this fact was made blatantly obvious to me. Sarah had asked to try both rifle and pistol. I expected her to do quite well since I had seen her compete in swimming since she was 12 and was quite impressed with her approach. Indeed, with the air pistol and a sporter air rifle, her performance was amazing. However, on her very first shot with a precision air rifle, she uncharacteristically gave the trigger a huge jerk. Without comment, I quietly asked her to hand me the rifle so that I could "check something". After a few moments of thought, I realized that the last user of the rifle was quite a good shooter and that he liked small front apertures. I changed the aperture to the largest size I could find and, without comment, handed the rifle back to Sarah. The very next shot, and all that followed, were delivered with flawless trigger control. By not tipping her off to the "problem", it was fixed as rapidly as it had developed without her

being concerned with it. (As a “one-time” shooter, there was no need or benefit to discussing the topic at that time. Of course, with an athlete in training I would have had a discussion to allow the athlete to learn from the situation.) Watch the athlete carefully, notice what the symptoms are, find the root cause, and fix it. Don’t just “try” things.

Becoming an Olympic champion requires constant learning, refinement, and improvement. Coaching athletes on the journey toward that goal requires the same. The very best athletes and coaches all seem to regard themselves as students of the game and are in constant “learning” mode to improve and refine their knowledge and skills.

In this sport and in this country (and possibly in other sports and countries), when many athletes make a national team, or especially an Olympic team, they effectively stop listening to others and often stop learning. They don’t think this is the case and would protest; yet the evidence is clear in their approach. Even national team coaches have commented on this phenomenon. Other athletes realize that they have just taken one more step toward their goals and work even harder to learn, refine, and improve. These are the ones that are open to input and are willing and unafraid to work on the subtle details. They are the ones that win the big events!

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(Biographical information as of October 2009)

On the Firing Line (Thirteenth in a series)

More Subtleties

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Continuing our theme from last month, we explore more examples of “fine tuning” an athlete’s performance – another example with aperture size (we don’t pay enough attention to this one!) and then a bit into the mental and emotional parts of the game.

A young member of the National Team had trigger control that was legendary – for all the wrong reasons. In fact, at the 2001 Coach’s College a computer plot recording of her “control” as recorded in late 2000 was shown (without giving her name) as an example of really bad trigger control. This is not a criticism of the athlete... she had never been taught how to resolve the problem. Earlier that year, Wanda Jewell had told me that this athlete “really needs to work on her trigger control” and Tim Conrad mentioned that her front aperture was “way” too small. Based on my observations with the first time shooter (mentioned in the previous installment of this series) and other experiments, the connection seemed clear to me – at least as a first hypothesis. After speaking with the athlete on the phone, the evidence (hold times, follow through, low confidence in shots, etc.) supported the hypothesis. She was taken through an experiment procedure (shooting on blank cards, both white and then black, then at a target while using no front aperture, then with a huge aperture, and successively through smaller apertures) and asked to be aware of whether or not there were any differences in her shot delivery and, if so, what the differences were. Notice that she wasn’t told what to expect since it would affect the outcome. That discussion came after she had performed the experiment.

After her next training session, an email arrived with the subject “Bigger is Better”. She noticed that, as the apertures became smaller, her hold time went up, her follow through started to shorten and then disappear, her confidence in the shot delivery plummeted, her hold seemed worse, and... lo and behold... she noticed that her “trigger problem” came back. (Some athletes also get “flutter finger” at this point.) It seems that, upon reflection, she realized that the “problem” had suddenly vanished in the early parts of the experiment! She chose a larger aperture that day! We then discussed the results, what the effects were, and why things turned out as they had. Additionally, after explaining the results of this to Dan Durben, he and I designed an experiment that has now been given trial runs with rather dramatic results.

As mentioned last month: Watch the athlete carefully (or, in this case, learn a lot and analyze), notice what the symptoms are, listen carefully, ask leading questions, find the root cause, and fix it. Of course, trigger control is affected by a number of other factors and this athlete is making very good progress as other causes of poor trigger control and reduced confidence are identified and resolved.

How “carefully” should one watch? Look at when the first stage of the trigger is taken up, what happens with the trigger finger after the shot breaks, determine if the athlete blinks and when (anticipation or reaction – different causes and solutions), watch the movement pattern and timing of the hold and follow-through. Recently, I surprised an advanced high school athlete by describing to her what was going on with her hold and sight movement. I had been watching her front sight as if I were shooting the rifle so I could “see” the same things she was observing. This gave me insight into what she was seeing and therefore the effect of that visual input on her thoughts and feelings during the shot process. It made it much easier for us to analyze and adjust what she was doing mentally. Subtle details make the difference. They aren’t just picky nits!

Recently, I discovered myself having conversations with three collegiate shooters (including the one mentioned above) and a high school shooter along a roughly common theme. Some of them were having a hard time with shooting not being “fun anymore” and expressed frustration with their scores. In one case, the athlete and her coach were both frustrated by being unable to find anything to “fix” in her technical or physical game. In another, the athlete was feeling pressure to produce because her scores weren’t too much higher than the walk-on shooters were posting and she had been on a plateau for many, many months.

In each case, we explored the athlete’s feelings and attitudes (mostly by asking them open ended questions and then just listening and analyzing) and, among other things, discovered an emphasis on outcome... score... to the detriment of a focus on performance. It’s a silly game we have... we determine the winner by adding up the score... yet focusing on score ensures that it will be low! Of course, every sport is like that – that’s the true test! Additionally, too often we hear the “Don’ts” with a long litany of things we are not to think about. So what do we think about? We worry about “not thinking about the things we aren’t supposed to think about”!

We discussed the differences between outcome (over which the athlete has limited or no control) and performance (which the athlete totally controls). If the athlete will turn their mental focus inward, be aware of balance, inner position, natural position, and movement rhythms, and exist only in the present moment through that mental focus, the shot process becomes rather effortless. Once they understand that they cannot produce a score... only a performance... and shift their mental focus accordingly, they will find that the score will take care of itself quite nicely! We give the athlete something positive to focus on, thus filling the void left by the “Don’ts”. These conversations were much more in depth of course, but a bit of the approach is evident here.

Because of the rapport between athlete and coach in each case, and a willingness on the part of both to invest significant time and effort in the important yet subtle details, “hard” problems often are much easier to solve.

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(Biographical information as of October 2009)

On the Firing Line (Fourteenth in a series)

Expect The Unexpected

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The pair had skated magnificently. Though other competitors had skated extremely well, none had done so with quite the same level of ease and artistry as they had. Yet, the gold medal wasn't theirs. This was certainly unexpected, given how the competition had unfolded. How would they react on the world stage of the Winter Olympics? Jamie Salé and David Pelletier of Canada reacted with disappointment, yet with grace. Then events unfolded which were even more unexpected: an official admitted irregularity in the judging and duplicate gold medals were awarded as a direct result. One never knows what to expect in competition!

A well-rounded competitor is prepared for "anything and everything" that possibly could happen with a competition. Merely preparing for a "perfect" competition will leave the athlete unprepared to handle situations that deviate from "normal" situations. The athlete must even be prepared to handle situations that were completely unforeseen.

At a World Cup, someone tripped over the leg of a competitor who was about to deliver a shot in from the prone position. Luckily, the shot didn't go off! How did the athlete react? This athlete was very experienced and, after ascertaining that the error was a freak accident not likely to be repeated, turned back to the task at hand – performing quality shots. Had the reaction been one of anger, the athlete would have allowed the problem to get into their head and it likely would have taken them out of their game. What if the shot had been fired? Again, a calm reaction and discussion with an official would allow the situation to be resolved properly and the athlete would return to the competition with minimal distraction.

Dr. Robert Walter Johnson Jr., of Lynchburg, Va. used to teach his tennis athletes, including the young Arthur Ashe, to play every ball that was a few inches outside the lines as if they were inbounds. Why? Because he knew that many of the out of bounds balls would be called in due to the racial discrimination that took place in that era. The athletes came to expect the unexpected and were able to play accordingly. Not only did they make the shots – they were able to remain calm and not allow the biased officiating to get into their head and ruin the rest of their game.

Of course, most times, the officials are not part of the problem. There are other sources of excitement! Each athlete must preplan how to handle a myriad of problems that can surface in competition. What to do if a gun malfunctions, which malfunctions are allowable – and which are not – and how each is handled and scored is not something to learn at the moment it happens. Targets will malfunction sometimes. What type of challenge is best for each particular type of problem? When are additional sighting shots allowed and when are they not? When is additional time allowed and how much? How will the weather or other conditions affect the competition? Knowing what to do in each case can often make the difference in the outcome of the competition.

At the Championships of the Americas, a rather unusual target problem appeared which affected a couple of athletes in one of the 50-meter events. Due to a software bug in a new release of the ROM chips that control the electronic targets, left and right were reversed so that a shot at 3 o'clock would show up on the monitor at 9 o'clock! When an athlete usually shoots shots close to the center, it can be hard to figure out that this is happening. "Did I really miss the call on that shot or did the wind really change that much?" might be going through the athlete's

mind. After losing time and cranking the sights the “wrong” way, the problem became clear. How should it be handled?

If an athlete contests the value of a shot, they risk losing an additional 2 points if the challenge is not upheld. However, shot value (score) is not the issue here. The athlete should tell the official that they believe the target is not functioning properly. There is no penalty for this, even if the official disagrees with the assertion. The athlete should be moved to another target and additional time should be granted – possibly up to the full amount of time elapsed so far in this particular case. (The malfunction was present from the beginning and affected the athlete’s game from the outset.) Hopefully, the athlete will catch this early in the event. Unfortunately, the first time this happened, it took time to become clear and thus confused the athlete and the officials. The athlete ended up not receiving enough additional time to complete the event in a normal manner. This was an example where the unexpected caught athletes and officials off-guard.

It is clear in many situations that the rules will have a major effect on the outcome of the event. One expects the officials to have a thorough understanding of the rules and their appropriate application in each situation. Although officials work very hard to handle things in the correct manner to ensure a fair contest, they are human as well. Ultimately, it is the responsibility of the athlete to understand the rules. To what degree should they know the rules? One could argue that the athletes must understand the rules for the events they compete in to the same degree that the officials are expected to. After all, it is the athlete who is affected if the rules aren’t appropriately applied to a particular situation. Athletes need to understand not just the rules... but also the rulebook itself and which rulebook. Rules can be taken out of context, situations occur which the rulebook does not address, rules appear to be contradictory (usually a context problem, not a rule problem), and more than one rule – sometimes in different parts of the rulebook – may apply to a situation. One must be very familiar both with the rules and the structure of the rulebook. There is one and only one correct answer to any rule question: “Let’s look it up.” One must know how to do this quickly, correctly, and completely! Merely finding one rule that appears to apply to the situation at hand may not be sufficient.

Have a plan for the unexpected. Specifically plan for things that can be foreseen such as a gun or target malfunction, weather conditions, crossfires, or other common problems. Also plan how to handle the truly unexpected. Remain calm, communicate with the officials, deal with the situation – regardless of its outcome – and resume your game.

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(Biographical information as of October 2009)

On the Firing Line (Fifteenth in a series)

Breathe, Breathe in the Air

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One of the first exercises we do in clinics is called “Learning to Breathe”. Of course, the athletes have quizzical looks on their face and say, “But we’ve been breathing all our life. What do you mean?” After sharing a laugh, we explain. Infants and very young children breathe very naturally with their belly being drawn down and slightly out as the diaphragm is lowered in order to fill the lungs. Sometime in childhood, as the stress and rush of modern life takes its toll; the natural belly breathing is replaced by a breathing technique that uses upper chest expansion to draw air into the lungs.

In natural belly breathing, the lungs fill in roughly three stages. First the lowest part of the lungs begins to fill as the diaphragm is drawn down and the belly is pushed down and slightly out. Then the middle part of the lungs fill as the lower rib cage expands slightly. Finally, the upper part of the lungs is filled as the upper chest expands. In the more typically observed upper chest breathing, only about 30% of the lung capacity is utilized. Belly breathing has significant positive effect on both the body and the mind.

In one recent clinic, this was made clear to the athletes by their own observations. After teaching the technique and having them quietly stand with eyes closed and comfortably belly breathing, they were asked what they had observed. The answers couldn’t have been better if they had been scripted. One said, “I was very relaxed.” Another added, “My mind became very quiet.” A third said, “I was able to stand much steadier than usual.” Of course, all three of these answers illustrate conditions that we wish to be in as we shoot.

Breathing links physical, mental, and emotional aspects of our being in strong and interesting ways, which we can use to our advantage. The interaction with emotion is seldom thought of and used. The three primary blocks to positive emotional energy flow – anger, sorrow, and fear – are each characterized by an imbalance in breathing. Anger often produces rather weak inhalation with strong, forceful exhalation. Sorrow manifests itself in very weak exhalation coupled with fitful, spasmodic inhalation. Fear causes tension in the body and often causes breathing to be reduced to almost nothing or to stop completely for a few moments. Recognizing these breathing patterns allows the athlete to stop and take corrective action using comfortably slow and deep belly breathing. This will actually take some control over the emotions and conscious mind while also relaxing the body. Because we have much more control over our bodies than we do our thoughts and feelings, breathing this way has a profound effect on our ability to indirectly control and calm emotional and mental activity. Even when positive emotional energy is flowing, the same breathing technique still has mental and physical benefits with quietness of mind and relaxation of the body. Break the cycle of tension with breath control.

“Tense, Shake, Breathe, and Relax: Deliberately tense your whole body as tightly as you can for three to five seconds, while holding your breath. Then gently shake your body. Next, stand tall, as if your head were suspended in space from a string, and breathe slowly, deeply, and evenly from your lower belly. Let the breath bring a sense of deep relaxation.”

“Undoing emotional habits formed over the years isn’t easy, but it can be done. In any moment, you have the capacity to breathe deeply, relax, and let go. Allow rather than resist what arises in the present moment – inside or out. Let it be interesting rather than good or bad. In this way, you reawaken true emotion and the energy to act. [Millman]”

Yogis, Zen masters, and martial artists place great emphasis on breath control and the individual's awareness of breathing and its effects. Deep belly breathing with slow, full, relaxed, and balanced inhalation and exhalation are seen as fundamental to any activity.

Understanding breathing and its effects can be used to advantage in other ways. Many rifle and pistol shooters understand that it is easier to raise the gun on inhalation and then let it – and the body – settle upon exhalation. Breathing also helps with pace and rhythm. For example, in sport pistol and center fire pistol, the second phase of qualification competition requires 5 shot strings delivered one shot at a time in alternating periods of seven seconds pause and three seconds to lift the gun and deliver a shot. This seven-three cycle is often timed with the breathing rhythm. This frees the athlete's mind to remain quiet and allow the string to progress in a natural manner.

At the 2001 Georgia High School State Championship (a 3 position air rifle event), Carra Landrum utilized breathing skills to her benefit. With two shots remaining in the standing phase of qualification she began her usual shot process and, while settling into position, discovered that her trigger finger – indeed her entire right hand – was shaking uncontrollably. Rather than allowing “match nerves” to destroy her performance, she stopped the shot, returned the rifle to her shooting stand, and called on the breathing and relaxation skills that she had learned. Although her mind raced and fear tried to well up, she controlled the situation by stopping to take several comfortably slow belly breaths. This allowed her to regain control of herself – physically, mentally, and emotionally. After delivering an excellent shot, she repeated the breathing in order to compose herself for the last shot, which was also delivered very well. Later she reported, “I was shaking so badly I was afraid that I couldn't even hit the target!” Instead of missing the target, she made the final. At the 2002 state championship, she again called on her breathing skills to do a very good job in the standing position, relax and calm herself for an excellent kneeling phase performed entirely in a Zen-like zone, and to cure “flutter finger” at one point in the final.

Breathing is yet another powerful tool for the athlete's toolkit. Add it to yours!

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(Biographical information as of October 2009)

On the Firing Line (Sixteenth in a series)

Getting Unstuck – Overcoming Common Mental Mistakes

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“Place the emphasis on improving, and winning will happen!”

Athletes will have periods in their development when their performance reaches a plateau, sometimes for extended periods of time. This is very frustrating and the performance stagnation becomes a familiar habit that negatively affects self-image and becomes more difficult to break over time. Athletes eventually leave the sport in frustration if the fundamental issues are not identified and resolved. By identifying and resolving these issues, the athlete's love of the sport is rekindled and their performance reaches new heights.

These issues, especially in less experienced athletes, may be physical (such as a fundamentally unstable position) or technical (such as poor holding or triggering technique). While these do impede the athlete's progress, they are usually somewhat easily identified and resolved. The really tough sticking points are mental and emotional. These are more challenging to identify and resolve and constitute the majority of performance stagnation issues in athletes at the intermediate level and above.

In October of 2001, Dr. Sean McCann, Director, USOC Sports Psychology, held a “lunch and learn” presentation at the Olympic Training Center for a number of coaches and athletes. It was most informative and useful, as are all of his presentations. We were happy to be able to hear him again at the shooting coach's conference that weekend, where he focused his talk specifically on shooting. This article is based directly on his presentation outline [McCann, 2001] and expands upon them.

Foundational Issues

Lack Of Self-Awareness – Can you honestly see your strengths and weaknesses (physical, technical, mental, emotional)? Where do you get your data? How current is it?

Awareness is the first step in problem resolution. A problem cannot be solved unless it is identified. Often, fundamental causal problems are overlooked because one is merely attempting to solve symptomatic issues (which appear to be “the problem”, but aren't) without working on the foundational problems themselves. Solving the actual problem will clear up the related symptomatic ones, or at least open the way to resolution of them.

Solution: Identify as many means of collecting data as possible, get the data, and get with experts to analyze the data. Data is only of value if it is accurate and if it changes behavior!

There are numerous sources of data available if one will seek them out. The observations of coaches, teammates, and opponents often prove insightful, as do those of a sport psychologist and sports science researchers. Examine your competition results and trends. Look at performance patterns: Is the last record shot always weaker than average? Are the last several shots weaker than average? Is the first record shot overly dramatic? (...or traumatic!) Is the first string terrible? (And then, with the “pressure” off, the remaining strings are strong?) Are most shots delivered after 2 or 3 or 4 or more holds per shot, on every shot, even if earlier holds are excellent? Are all shots delivered only on the first hold, even if sub optimal? Are poor ten shot strings characterized by 7 or 8 great shots and 2 or 3 horrible shots? Or are ten shot strings usually just 10 mediocre shots? Are you tentative or aggressive? Do you have long holds? Do scores vary widely from string to string and/or from event to event?

What do physiological assessments show regarding strength, endurance, and other aspects of physical performance? What do psychological assessments show regarding attitude and adaptability to competition stress? What are your mental and emotional patterns in the face of competition stress? Do you have one bad shot and then sabotage your subsequent shots? (“Here we go again! I’m blowing another match!”)

Use video and computer technology, such as the Noptel trainer and video cameras to record and analyze training sessions for analysis as needed. Finally, when shooting, are you aware of what’s going on, or are you clueless? Note that focus and awareness are very different. Although one must quietly focus inward and allow the performance to unfold, one must still be aware of what is going on. Gather data, actually pay attention to it, analyze and understand it, and make appropriate changes.

Lack Of Consistency – This area has a number of diverse causes, any one of which can derail performance. Key among them are:

The “one time wonder” or “naturally talented” athlete starts out shooting very well and progresses rapidly... but only to a point. Often, they never progress beyond this point and often leave the sport after a relatively short career. “But they have so much talent! What happened?”

Solution: Get over yourself. Elite talent is more work than a genetic gift. Anyone can shoot a 10 or break a clay target. Many can shoot 85% very quickly. Moving to 95% and beyond UNDER PRESSURE takes more work than gift.

One of the best of the currently active rifle shooters in this country is proof of this. Frustrated for years by not winning the big events and seeing others who didn’t work as hard, or who had more “natural talent”, standing on the podium, she stuck with it and redoubled her efforts. Now often winning the biggest events, she dominates most competitions. Another athlete who proves this theory is Nancy Johnson. She, too, saw others consistently beat her. Encouraged by her coaches, she kept up her effort over a number of years. She came into her own in 1999 and 2000, culminating in winning the gold medal in women’s air rifle at the Olympics in Sydney, Australia.

One must be patient with one’s own development. Athletes who are “naturals” or fast learners must especially learn to do the hard work of really learning to shoot. The physical and technical parts come easily and the mental and emotional parts work well enough... at first. The “hard” work of top level shooting is training mentally and emotionally.

Expectations are another huge issue. It is easy to perform when “it doesn’t matter” and when there are no or low expectations, whether internally or externally driven. It is easy to act like “there’s nothing to lose” when there isn’t. When something is on the line, that is when things get interesting!

Solution: One must recognize that expectations, however large, are just another distraction. During the critical moments of firing the shot, expectations cannot and do not aid the performance, they only distract and impede.

Athletes must separate external outcome from internal performance – that is, separate things they cannot directly control from things they can. If you “try” to shoot a ten or break a clay target, you might. If you “just shoot” properly, you will shoot well, and do so more easily and reliably, even under pressure.

Athletes must also manage the expectations of coaches, parents, and friends. If this is an issue for you, have a frank talk with your coach, or your parent, or whoever the source of the expectations is. It may not do any good at the time (or so you might think), but at least you put them on notice and got them thinking about it. This can be a huge issue for teenagers when the parents have “invested so much money” and “it’s time for some return by winning”, or when the coach thinks that the way to winning is to focus on winning. Either way, this is the kiss of death. (Note to parents, coaches, and others: Even if we don’t say anything directly, our body language, facial expressions, and other comments betray our feelings and the kids DO read these signals quite clearly. What messages are you sending your athletes?) Yes, it ultimately comes down to winning, but we don’t get there by “trying harder” and being told or encouraged to win or “try harder”. Athletes don’t train hard to not win. They know all too well what’s at stake.

We improve, or win, or achieve whatever our goal is, by focusing on improving our game (all aspects of it), not by focusing on winning. This is a very critical point. However, this is not an excuse for lackadaisical training or competing.

Manage expectations, yours and those of others, and leave those expectations behind when you go to the firing line. Like any skill, this takes time to develop, but it will develop if you will work at it. At some point in your development, you will find yourself in a situation where expectations become a real issue for you. The larger and more important the competition is to you, such as a state championship, the more likely it is to become a factor for you. Not surprisingly, it is a huge factor at the Olympic level. Understand the role of expectations and learn the skills necessary to handle them.

Goals play a significant role in consistency as well. Lack of goals manifests itself in a number of ways, which eventually degrade performance and impede improvement.

Solution: Understand why goal setting works (direction, feedback, support). If you still can’t change your behavior, work with someone to help you. Don’t give up on this skill without understanding you are giving up on yourself.

The young rifle shooter mentioned earlier does not have a current, complete set of written goals, at least not that any coach has seen. Often “encouraged” to do so throughout her career, she is very private about her goals and does not keep a detailed, written list. Regardless, she does have very detailed goals that cover all aspects of goal setting (including short, medium, and long term time frames and task, performance, and outcome goals). Through occasionally sharing some of these goals with one or more of her coaches, it becomes clear that she uses goals as one of the things that help her constantly strive for improvement.

The issue here is not whether or not the goals are written. (Though having them in writing is a powerful way for most folks to formulate and use them. This athlete is the exception to the rule.) The key idea is that her goals are well thought out, detailed, constantly updated, and used to direct her training and competition activities and plans.

Goal setting is something you do for yourself, not for others. It is a mechanism that helps you evaluate and direct your activity and aids in motivation. Goal setting is a very important area and will likely be covered in depth in a future article.

Individual Personality Factors

Perfectionism – This factor stands in the way of performance. Instead of allowing yourself to perform, are you worried about making things perfect? Perfectionism can take

different forms: positive perfectionism (wanting to be great) and negative perfectionism (not wanting to be bad).

Solution: Understand your own myths about perfectionism. Ask not if you can be mistake-free. Ask instead WHICH mistake you are willing to make. What's best... the mistake of holding too long or of being too aggressive? Fear of the latter will cause the former, as is commonly seen. Yet, being more aggressive is usually the correct course of action!

You must give yourself permission to make mistakes. Fear of making a mistake, that is, fear of not being perfect, stands in the way of your performance. One cannot "just shoot" while fearing the outcome. You cannot be perfect, you can only allow yourself to perform... and "perfection" will come.

Pessimism – One who believes that bad things will happen will always be correct... "bad" things do happen. This attitude poisons your shooting. You are creating an unconscious roadmap for failure. The moment something "bad" happens, such as a poor shot, the old pattern kicks in: "Darn, it's happening again".

Solution: Is your glass half full or half empty? Who cares! Just drink it! Optimism and resiliency are keys to success and to a long-term career in sport... and in life. A negative attitude does not affect an athlete or team or relationship or your own life; it infects them. Break the pattern and look to the positive.

Understand that pessimism cares more about being right than winning. Understand that learned helplessness drains motivation and becomes a self-fulfilling prophecy. The hopeful athlete goes for it, and sometimes, but not always, she gets it.

Anxious Personality – Do you get anxious in competition? More importantly, how do you react? Do you cave in and let the bad performance happen to you and become a victim of it (prey response) or do you take the nervous energy and channel it into intense focus and determination to attack aggressively (predator response)?

Solution: You need to move from a prey response to a predator response. Understand your specific phobias: finals pressure, first record shot, last record shot, the first shot following a bad one, or...? You need to develop a way to face your anxiety. You probably need to work with someone else (such as a sport psychologist or coach who is knowledgeable in this area) to develop an effective strategy. This topic will also be addressed in a future article.

Challenges Of Competitive Pressure

Meltdown – Do you have a mental thermostat? Can you bring your body and mind under control when the pressure is on? It isn't easy!

Solution: Practice your relaxation skills and USE them. Slow, deep breaths starting from the bottom of the lungs calm both the body and the mind. There is an amazing connection that is accessed through the breathing. Many athletes use this as a "secret weapon" to calm themselves when others are melting down.

Practice shooting while feeling outcome pressure. Use competitive games to get the adrenaline flowing and the heart pounding! This is important. It provides you with opportunities to learn how to apply coping and calming skills and provides confidence as you discover that it is possible to shoot well when things aren't "perfect". More on this in the next section.

Practice shooting with movement. Detune your balance slightly... or a lot. Other times, offset your natural point of aim a tiny bit. Force yourself to only allow good shot performances;

do not return to bad habits. Notice that, while more effort is required, that it is eventually possible to shoot quite well under such circumstances if you will allow yourself to do so. For the really adventurous, shoot while standing on a set of wobble blocks. It can be done quite well!

Choking – Often, competition scores will be significantly lower than training scores. This is most frustrating!

Solution: The single most effective “treatment” for choking is to train under pressure, as mentioned briefly in the previous section. Once you learn how to perform well in such situations, you will be almost immune from choking. The very next article in this series will discuss choking in great detail: its nature, the actual failure mechanism, “inoculation”, and other strategies for addressing the issue, as borne out by significant research.

Do you understand the power of your own language? Monitor and control your self-talk. Do you understand the power of your own images? Monitor and control your imagery. Develop a method of tracking thoughts and images. Work with someone to insert helpful words and images where harmful words and images are now residing.

Losing Faith – Confidence is a job. Do you take responsibility in this area? Your self-talk and self-image have a huge effect on your performance. If you have no faith in yourself, it holds back your progress and enjoyment of the sport, even diminishing the value of training.

Solution: Develop an “Achievement Log” that forces you to recognize how much work you do, and how good you are. This could be a section in your shooting journal. (You are using one effectively... aren’t you!)

Understand that just shooting 100 shots isn’t always an achievement. It is less important that the shot is a deep 10 or a nice bust of a clay target than it is how you actually performed the shot and what your awareness told you about your performance. What did you learn today? How will you change your behavior to take advantage of the knowledge gained?

If you have already progressed to at least an intermediate level, never ask yourself if you are “good enough” to do this sport. In time, you will discover that you are no different than even the very best in the sport. They started off just like you did, full of doubt and limited knowledge, but filled with interest and excitement at learning a new game. Almost anyone can excel at this sport. It’s mostly a matter of work!

Understand the difference between confidence and trash-talk. Quiet confidence, kept to oneself, is a powerful. Bragging aloud, even if it’s true, is both rude and can backfire on you! One athlete asked this author about confidence and cockiness. After discussing the topics, we decided that confidence, even cockiness commensurate with the athlete’s level of ability, was just fine if kept private. This athlete is very humble, even when winning a big match, and was at first a bit uncomfortable with the idea of being so cocky, yet had these feelings inside.

Channeled as quiet confidence, and coupled with external quiet in keeping with the athlete’s own personality, the athlete was now free to go to the line with the idea that winning any match was well within reach, while still staying true to their own personality. When later asked the difference between a day when ten points were dropped and when only two points were dropped, the reply was: “It’s really only a matter of how much confidence I bring to the line. It’s almost that simple now.” Years of quality training, and lots of it (more than most), have given this athlete a great deal of confidence.

Losing Focus – Focus is an aspect of the human existence that doesn't usually come easily. We tend to be easily distracted by the myriad sensory inputs available to us. We concern ourselves with ideas and thoughts of the past and future.

Solution: When distractions easily take your focus away from the task at hand, it is generally because you are concerned (thinking) about distractions, and/or your focus on your shooting is very weak. Learn to focus only on the actual shooting and you will discover that your distraction control has improved.

Stay in the present moment. This is a huge issue, especially at the Olympics. It is a powerful technique. Within the present moment, there is no external outcome, only the here and now. A powerful calm is often experienced in this state, even in such frenetic activities as motorcycle road racing, and certainly in the shooting sports.

You must have a competition plan. One cannot merely show up at a competition and expect to shoot well. Understand what you need to do well. How much preparation, how much sleep the night, and week, beforehand, when and why you will take breaks in the competition, how you will handle situations within the competition, how you will handle and recover from a "bad" shot, and so on, are all important considerations. As you grow and change as an athlete, your competition plan must change with you.

Challenges At The Top

There Is Something To Lose – When working toward winning an event, there IS something to lose. This is quite different than shooting with no expectation of winning.

Solution: Only a mature self-educated competitor can be a relaxed and aggressive athlete in a very tense environment. You must be willing to lose before you can confidently and reliably win. You must be mentally strong to medal in the Olympics. Sometimes this takes multiple Games, and it often takes long work with a sport psychologist.

Staying Motivated – Long hours, days, weeks, months, and years of training present a real motivational challenge.

Solution: Staying motivated will require an investment of time and energy. You cannot expect motivation to just show up. To have the time and energy, you need to keep your life simple, and be physically and mentally recovered from training and competition.

Use goal setting effectively. This helps in keeping yourself sharp even when "dull" wins most of the time. One must have "fire in the belly" or a passion for the next goal. This really works, if you will use it.

Use both intrinsic and extrinsic motivation. "I want to be my best AND I want to beat them."

Performance Plateaus – Many an athlete faces this challenge in their shooting career, usually many times. If not addressed, frustration will mount and the athlete may even leave the sport prematurely.

Solution: You must maintain a vigilant attitude for new weaknesses. You must know your opponents; know what it will take to win. You must be willing to get worse before getting better. You must have an open mind to new ideas and changes. You must have confidence in your new approach.

"How good do you want to be?" Although this question was copied verbatim from Dr. McCann's notes, many of this author's students already knew it by heart, having heard it many

times in training sessions and conversations. When presented with a particularly challenging exercise in training, they often smile and say: “I know; ‘How good do I want to be!’” It’s true. Ask yourself the question. Do you have an answer?

On that note, do you want to merely raise the level of your own game? Or do you want to raise the level of the entire game? Michael Jordan and Tiger Woods are different for a reason. They work harder and they think differently. And they believe in themselves. Develop the courage to go against the grain. You will amaze yourself!

Conclusion

This author has been privileged to closely observe the Lassiter High School Trojan Marching Band (Marietta, GA), directed by Alfred Watkins, and the Moeller High School Crusaders football team (Cincinnati, OH), coached by Gerry Faust, both during their developmental and national championship years. In both cases, the coaches and band directors were highly trained, knew their craft, properly instructed their staffs and their students, set lofty and achievable goals, showed the way to reaching those goals, planned and executed long, frequent, and intense training sessions, used the proper training techniques of work and rest recovery, and placed the emphasis on having the athletes working only on learning skills, improving, and allowing themselves to do their best. Nothing more.

Notice that winning was not in the day to day equation. But they both dominated their competitions, had fun doing it, and did it with sportsmanship so good that their opponents and fans welcomed them and their fans. Nice guys and gals do finish first!

Place the emphasis on improving your game, and winning will take care of itself quite nicely.

Acknowledgement:

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Reference:

[McCann, 2001] – McCann, Dr. Sean, *When Athletes Get Stuck – Solutions to the Most Common Mental Challenges in Shooting Sports*, unpublished presentation notes, 2001.

The “On The Firing Line” series is published by the national governing bodies for Olympic shooting in Japan and the USA, and has been adapted for archery as “On the Shooting Line” published by USA Archery. Olympic Coach Magazine, the National Association of Soccer Coaches, and others have referenced selected articles. The entire series is available online at www.pilkguns.com.

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rifle and pistol teams at North Georgia College & State University. He enjoys working with a number of pistol and rifle athletes from around the country, ranging from beginners to the highly advanced, in clinics and one-on-one private coaching, all on a volunteer basis. He also works with musicians and athletes in a variety of sports.

(Biographical information as of October 2009)

Choking

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“Elite level shooting is best performed without conscious control.”

Stories of great athletes suddenly performing poorly and failing to win a major competition are legendary. Examples include the golfer who gets the “yips” while putting and blows the lead on the last day of the British Open, the speed skater who falls for no reason in Olympic medal races, and the shooter who throws a wild shot in the finals competition. Intuitively, we understand that these athletes have “choked” under pressure.

What is choking, how does it work, and can anything be done to prevent it? Research performed at Michigan State University, and published by the American Psychological Association, sheds significant light on this question. [Beilock, 2001] Selected key findings of the research and how they may be applied on a practical basis will be explored in this article.

First, a few terms need to be defined. Then foundational concepts and major findings will be discussed. Finally, very specific application of the results to shooting training will be presented in the next article.

“Performance (outcome) pressure” is the anxious desire to perform at a high level. It is thought to vary as a function of the importance of the outcome that the performer feels. For example, an athlete will generally feel more pressure to perform well in the Olympics than at a local match on their home range.

“Choking” is performing more poorly than expected given the athlete’s level of skill. This tends to occur in situations “fraught with peril”. That is, those situations where the athlete feels significant performance (outcome) pressure. This is particularly noticed in tasks that utilize sensorimotor or action-based skills, such as in golf or target shooting.

There are two predominant theories attempting to explain the failure mechanism in choking:

The “distraction” theory holds that the performer shifts their focus to task-irrelevant areas, thus creating what is called a dual-task environment. This has great effect on tasks requiring decision-making and or attention to task details that are held in short term memory.

The “explicit monitoring theory” holds that the performer’s attention is fixed on process details and step-by-step control of the process. This has greatest effect on tasks that are compiled as mental or motor programs (or procedures) that are best performed without conscious control.

As part of the research, two well known characteristics of a performer’s ability to recall a procedural or motor-based task were used to determine a test subject’s level of “automation” of their performance of the skill.

“Generic memory” is the ability to generically describe the steps required to perform a complex task. Experts are typically very good at this, having learned the task quite well, while beginners are not very good at this, having not memorized, or even learned, all of the requisite steps in great detail. Experts also spend much more time (i.e. describe more steps) on evaluation and preparation than the novices, who tend to start their descriptions with actual performance of the task. Experts also tend to use much more imagery.

“Episodic memory” is the ability to specifically describe the step-by-step unfolding of the steps of a particular performance (episode – or shot) of the task. Beginners are very good at this because they have to think through the steps of the task in order to perform it at all. Experts have very poor recall of how a particular performance unfolded because they do not think about the steps involved; they “just do it” because the task has become automatic.

As one part of the research, the equipment used by the performers was changed such that all test subjects had to partially relearn their task. This had little effect on the novices, as their performances were at a lower skill level and based on attentional step-by-step control. Experts showed a large negative effect initially, as they, too, had to revert to step-by-step control in order to learn the new procedure. As soon as they had mastered (automated) the new version of the task and no longer had to pay attention to the specific steps of the procedure, their performances returned to a very high level.

The experts had heightened episodic memory while relearning, at higher levels than even the novices, and then reverted to significantly diminished levels of episodic recall as the task became automated again. This shows that attentional control of a step-by-step procedural process, though required to initially learn a process, causes a reduction in performance of the process itself for accomplished athletes.

Three training strategies were then explored to determine if one could “inoculate” the performer from choking.

In ordinary “single-task” training, there were no distractions and no outcome pressure. This is typical of the training environment when a skill is being learned or evaluated. Even for elite athletes, a significant amount of training in the shooting sports is done under these conditions. This is the control group for the testing.

In “dual-task” training, a task-irrelevant activity requiring working memory was added to the training. This prepares for testing the distraction theory of choking.

In “attentional control” or “self-conscious” training, attention to the process and outcome was placed on the activity. This caused self-conscious attention within the performer in order to induce attentional control of the process. This prepares for testing the explicit monitoring theory of choking.

Test subjects who trained in the “single-task” and “dual-task” training environments were found to be highly susceptible to choking. Those who trained in the “attentional control” environment performed at similar or even higher levels under stress than they did in training.

With complex, sensorimotor tasks, the failure mechanism that manifests itself as choking is thus quite clear:

...performance disruption occurs when an integrated or compiled real-time control structure that can run as an uninterrupted unit is broken back down into a sequence of smaller, separate, independent units-similar to how the performance was organized early in learning. Once broken down, each unit must be activated and run separately, which slows performance and, at each transition between units, creates an opportunity for error that was not present in the integrated control structure. [Beilock, 2001]

In simple terms, the athlete does not trust their process, training, or even their own self. The athlete attempts to “take control” of the performance to monitor, manage, and “check” the process at key points. This slows the process and destroys the timing and rhythm of the performance. It actually introduces many opportunities for additional errors that would otherwise not have occurred. The resultant outcome is at a much lower level than it would have been if the athlete had just allowed the action to unfold on its own.

Thus, the “explicit monitoring theory” explains choking for complex, sensorimotor tasks such as target shooting. Accordingly, elite level shooting is best performed without conscious control of the actual shot process. Full details of the research methods and results may be found in the referenced paper.

Experienced athletes and coaches alike will already perceive the implications of these results and be able to imagine training strategies based on them. The next installment of this series will present additional findings and then describe specific, practical application of the results in training, which will help to “inoculate” the athlete from the choking syndrome.

Reference:

[Beilock, 2001] "On the Fragility of Skilled Performance: What Governs Choking Under Pressure?"; Sian L. Beilock, Ph.D. student, Departments of Psychology and Kinesiology, and Thomas H. Carr, Ph.D., Department of Psychology, Michigan State University, East Lansing, Mich.; *Journal of Experimental Psychology - General*, Vol. 130, No. 4. (American Psychological Association, December, 2001)

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(Biographical information as of October 2009)

Choking Cures

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“Intensity training can help inoculate athletes from choking.”

The previous installment of this series discussed research into the nature of performance breakdowns, commonly known as choking. [Beilock, 2001] The research also explored possible methods to reduce or eliminate this effect.

The previous installment described choking this way: *In simple terms, the athlete does not trust their process, training, or even their own self. The athlete attempts to “take control” of the performance to monitor, manage, and “check” the process at key points. This slows the process and destroys the timing and rhythm of the performance. It actually introduces many opportunities for additional errors that would otherwise not have occurred. The resultant outcome is at a much lower level than it would have been if the athlete had just allowed the action to unfold on its own.*

Additional interesting information was referenced in the study:

- *Heightened anxiety and/or arousal levels induce self-focused attention, as do concern with external outcome pressure.*
- *Increments in arousal prompt individuals to turn their attention inward on themselves and current task performance in an attempt to seek out an explanation for their aroused state*
- *Pressure caused choking when participants had not adapted to performing in self-awareness-heightened environments*
- *Decrements in performance could be alleviated through the use of a distractor (in this case, counting backward from 100) during real-time performance*
- *Attending to the distractor during on-line performance under pressure prevented participants from focusing attention inward on skill execution processes, thus alleviating the possibility of choking*
- *The notion that performance pressure induces self-focused attention, which in turn may lead to decrements in skill execution, is now a reasonably well-supported concept for proceduralized skills*

It is interesting to note that, in one study, the use of a distractor during the performance did not disrupt the task performance, but did distract from, and thus reduce or eliminate, placing attention on the process of executing the performance. In some cases, this technique in competition may be a useful adjunct to “attentional control” or “self-conscious” training.

In the research, it was found that training without pressure did not help athletes learn to perform well in competition. Training with or without distractions didn't help either. Athletes who trained under “attentional control” or “self-conscious” conditions did not suffer from choking and in some cases performed even better than their norm in competition. This is a key finding and provides insight for practical application of the research results.

The vast majority of shooting training is done without pressure of any kind. Indeed, athletes will often let themselves “off the hook” in training when things don't go as planned. Based on the results of the research, and on observations of the very best athletes in our sport, it is important to have a good portion of the training planned to cause “outcome pressure” or “self-

conscious” feelings within the athlete. At first, the athlete is very uncomfortable and results may actually become worse than average... groups may open up, scores may drop, and so on. This is typical whenever a change is made to the shooting technique or to the training routine. The athlete (and coaches!) must be disciplined enough to realize that improvement will come through proper training, which sometimes involves, or even requires, a temporary reduction in score. This improvement will not happen merely by just practicing the same old easy way and attempting to “preserve” a certain score level.

Training in the face of outcome based pressure allows the athlete to learn to transfer their focus from executing the task in a self-conscious manner to instead focus on their approach to the shooting and allowing the performance to unfold on its own. Having athletes train while being self-conscious, whether in front of spectators or under a coach’s critical eye, often provides a similar benefit. The goal is for the athlete to learn to “just shoot” when they are in a situation that normally causes them to attempt to control the process instead of just allowing it to run on its own.

There are a number of training strategies that can be used to help athletes learn to perform in competition. Some techniques will cause considerable stress while other techniques may cause little or no stress, depending upon the individual athlete. The idea is to use techniques that cause the athlete to go out of their normal “safe” routine and feel stress, just as in competition. Listed here are a few examples. Each is designed to make the athlete self-conscious and/or make them feel outcome pressure. Having a prize (e.g. others sweep brass for the winner) adds to the outcome pressure. There are any number of variations and other kinds of training activities to achieve the same goals. I would love to hear your ideas!

Coach Scrutiny

Video Tape – Video tape a training session with the athlete’s knowledge that the coaches, and possibly an out of town coach, will study the tape. The out of town coach may be no different than the local coach... just the fact that he or she is far away makes them seem like an “expert”, thus raising the athlete’s self-consciousness or anxiety.

Electronic Trainer – In addition to their many uses as a “window” inside an athlete’s performance of the technical shot process elements, electronic trainers are also useful as a different form of “video camera” to record a training session for later review by local and/or out of town coaches.

Close Observation – Close, direct scrutiny of the athlete is an excellent way for the coach to discern areas for improvement and also raises the athlete’s self-consciousness. Stand 2 or 3 feet away (or closer) to the side of the athlete and watch, really watch, what happens with the trigger finger. Do the same from behind and watch the athlete’s approach, hold, and delivery.

Time Pressure Training

Lift and Shoot – Require the athlete to either deliver a quality shot, or reject the shot, after 10 seconds. Progressively work this down to 8 and then 6 seconds. Either the shot is delivered or the shot is rejected when the time expires. With appropriate shooting techniques (to be discussed in future articles), the times can, and should, be brought down to 4 and 2 seconds.

Stress Match – With all equipment packed, announce the beginning of the ten minute preparation period for a 40 shot air rifle training match. For pistol, this might be a one or two minute preparation period. It is interesting to watch the different approaches athletes take, and to see how many forget to post targets on ranges without target carriers!

Quick Final – Run a final allowing only 15 or 20 seconds for the shot. Other times, allow only 10 seconds.

Multi-Shot Final – Run a final allowing 40 seconds per cycle. Require the athletes to shoot a shot, reload, and shoot a second shot in the 40 seconds. Do this for ten cycles. Other times, allow the full 75 seconds, but require three shots on each cycle.

Competitive Games

First to Five Tens – A very popular game, often causing adrenaline rushes, this has a number of useful variations. In all cases, it is a “race” to see who can count to 5 first. Athletes start shooting and count their shots that score a 10. The count is made out loud so that others can hear it... and feel the pressure of being behind. The winners have their targets scored (no easy grading!!) and if they don’t have 5 shots scoring 10, they are at the bottom of the results! One variation, when time is limited, is to have all shooters racing together. The game ends when three people have reached 5. With athletes of varying skill level, some are allowed to count shots scoring 9 or even 8 for beginners. The game is often used as a single elimination tournament. Athletes are paired by similar skill level and shoot off against each other to advance to the next round. First round winners are paired and so on until two athletes remain to shoot for the gold.

Five and Oh – This game keeps the pressure on for a long time... several hours if two athletes are evenly matched and highly competitive! Other times, a time limit is set. Athletes are paired. After shooting one shot, whoever won that shot (had the higher score) gets a point and leads 1-0. After the second shot, if the same person won the shot, the score is 2-0. Otherwise, if the other person in the pair won the shot, the score is deducted from the leader and the score returns to 0-0. The game is won when an athlete can win 5 shots in a row (for a score of 5-0) against their opponent.

Three Minutes for Score – Fire ten record shots in 3 minutes for score. This is yet another training technique to help athletes find and manage that fine line between rushing and moving along rapidly. This game is often used to set the seeding for First to Five Tens tournaments.

Shooting Golf – Score is kept just as in regular golf... low score wins. Each “hole” has variations. One hole may be for three tens in a row. Each shot counts as a stroke... 3 being par. If it takes more than 4 shots to get the three tens, the stroke count is 5 and the hole is over. Another hole may be to shoot a ten. After 3 shots without getting the ten, the stroke count is set to 5 for that hole. Any number of variations, at any number of difficulty levels, may be imagined and designed to match the athlete’s level of skill.

Training Competitions

Finals – When an athlete makes a final at a competition, they should already be very familiar with how they are conducted and be experienced with shooting finals. Running finals as a normal part of training creates this familiarity. When we began running PTO competitions at the Olympic Shooting Complex in Atlanta after the 1996 Olympics, we invited all competitors to shoot finals as a training and familiarization aid. (Only the top qualification scores have the final scores added to determine ranking.) In the interest of time (and to spare new shooters any embarrassment) only scores of 10.0 and higher are announced. With the closing of the complex, the competitions have moved to Fort Benning where we still have everyone shoot the finals.

King of the Hill or Guts – A popular old game, the guts match is a final where the athlete with the lowest score on each shot, is eliminated until only two remain for the last shot.

The desire to stay in the competition provides outcome pressure. All eliminated athletes attempt to distract the remaining shooters with noise and friendly teasing. (No touching, no covering the eyes, no getting ahead of the shooter... safety first.) While the added element of noise and distraction does not itself help with choke proofing, it does aid in developing skills related to focus and awareness.

Outcome Training

All Tens – Appropriately applied, this can be a very powerful training aid that helps an athlete bring a higher level of determination to bear and learn how to channel that into appropriate ways of approaching their shooting. (Inappropriately applied, it can very easily demoralize and demotivate an athlete. As is always the case, coaches must responsibly and sensitively be aware of their athletes and their individual situations.) The game is deceptively simple... shoot all tens. One young athlete needed to bring more to her 3 position air rifle prone shooting. Assigned to “Shoot a hundred”, she hung a 12 bull target and prepared. With success in her grasp, she “let up” and dropped the last shot for a total of 99. Congratulated on her work ethic and effort, she was told to do it again. Dropping a 9 on the first shot, she was told that the card had to be completed... another 99 resulted while the emotions started to heat up. Without asking, she posted 2 more targets and went back to work. Upset with herself and the situation, she allowed herself to “try harder” and take control of the process... with the expected dismal results. By the end of the 4th target, emotions were running high and frustration was intense! Calming herself, she posted yet two more targets and improved to her earlier form, though still missing the outcome goal of shooting a 100. Sensing exhaustion in the athlete, the coach called a halt to the drill, encouraged her for her effort and they discussed how the emotions had hurt the middle targets and commented on how she had calmed herself for the latter targets. Even though the outcome goal was not reached, much was learned! A few days later, after some thought and “processing” of what she had learned, she self-imposed the same training drill and was able to start shooting clean prone targets.

Competitions – There is no substitute for shooting in competition. Also sometimes know as the “Lones Wigger Mental Management Plan”, he described it something like this: “Shoot in every darned match that you can.” Regardless of skill level and experience, competition provides an opportunity to test what has been learned and trained.

It is important to remember the need to vary the training mix and invent other techniques. The usefulness depends on the athlete caring about the outcome.

These techniques are not a magic solution on their own. One still needs mental and emotional techniques to reach the top levels of this or any sport, such as were discussed two installments ago and will be again in future articles. These training ideas augment a broader training program incorporating physical, technical, mental, and emotional areas. At the elite levels, working with a knowledgeable coach and sports psychologist will enhance the athlete’s progress.

Most shooting training is too “easy” on the athlete. Certainly, it must be that way as skills are learned or problems solved. At some point, however, the athlete needs to take what they have learned, incorporated into their shooting, and ultimately test it in competition. This won’t happen by itself. Doing “hard” training prepares the athlete. Jamie Beyerle and Dan Jordan have both repeatedly said that most training sessions are “not hard enough” if the goal is to perform at the

top levels of your sport in competition. These two athletes (and a few others) have a very high level of knowledge and an unusually strong work ethic. They voluntarily put themselves into “hard” training situations. It shows!

Acknowledgements

Jamie Beyerle described many of these training techniques when we were planning the rifle training camp that we held in July of 2003. Dan Jordan described many other techniques when we were planning the pistol training camp that we held in May of 2004. I am most grateful to both of these athletes, who teach and inspire me with their level of knowledge and achievement in this sport.

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(Biographical information as of October 2009)

On the Firing Line (Nineteenth in a series)

On Why and How We Shoot

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“The purpose of shooting... is entirely up to you!”

When we get stuck on a plateau in our shooting, or otherwise find ourselves in a situation where the results are not as expected, the search for an “answer” begins. Sometimes the answer is nothing more than taking a break or having a chat with a trusted training partner or coach. Other times the answer requires more study and work. An earlier article in this series, “Getting Unstuck”, provides many examples of the kinds of topics that may lead to answers. Still other times, nothing seems to work.

We need to stop, step back, and look at shooting from a much broader perspective than our day-to-day “problem solving” approach provides us. On our journey of shooting and self-discovery, we sometimes need to take what at first appears to be a detour along the way. Interesting possibilities lie ahead of us! We will take such a walk now, and explore a few loosely related ideas.

Initial Questions

Why do you shoot? – Why do you spend so much time and effort? What is it that you really want from it? Common answers given in response to the fundamental question include: Have fun. Be with friends. Meet people. The challenge. Joy of learning and accomplishment. Develop self-confidence. Competition. Something to enjoy for a lifetime. Winning is fun. Develop concentration.

These are only a sampling of the answers one typically hears from athletes. They enjoy the sport, enjoy the journey, enjoy the experiences, and enjoy the self-growth. Hold those thoughts for a moment while we move on to another fundamental question.

What do you want out of your training? – What do you expect from your training, from attending camps and clinics, and from working with your coaches? Common answers include: Improve my score. Learn the game better. Visually pick up the clay target faster. Fix my prone/standing/kneeling position. Learn how to move the shotgun more smoothly to and through the target. Learn more about shooting .22 or air. Handle the pressure. Shoot good finals. Improve my hold, or trigger control, or follow through, or all three. Make better shots. Be more consistent. This list barely scratches the surface.

Have you noticed how vastly different the two sets of answers are? That brings us to our last initial question.

Why the big difference? – It seems that we spend all our training time and effort on things that have nothing to do with why we shoot in the first place. How often do we say or hear, “If I can just (fix or improve something), then I can be really good.” or words to that effect? This is 100% backwards! To be sure, the technical details are critical. However, our fixation on “solving” them prevents us from paying attention to aspects of the game that are at least as important. Let’s get some perspective on this and then explore what we might do about it.

Perspective

Open your mind – Focus on why you shoot and what you want from your experience in the sport. It is not exclusively about all that technical stuff. Those are just little pieces of the

puzzle. Don't overlook the larger pieces in our head and heart that lead to real performance. This is the key to actually mastering all that technical stuff. Any number of athletes can shoot well... when they are alone in training. Why is it that they can't shoot well in competition? Often, it is because their focus is only on the little pieces of the puzzle.

Getting our mind and heart and thought process in the right mode makes the technical stuff so much easier. Yes, a paradox: Pay attention to the mind and heart... and the technical actually works better? Yes, it does. What is the dynamic that causes this?

Three main components of the sporting experience – One way to look at what a person experiences in sport is to examine the various aspects of that experience. These generally fall into three main areas. Performance, Enjoyment, Learning. These are the things that generally describe what we experience in sport. However, our day-to-day activity in the sport often does not match this reality.

The training disconnect – Training usually only focuses on the performance aspect. Actually, it often focuses on the Outcome part of the Performance. We exclude most of what Performance is, and all of what Enjoyment and Learning bring to us. Yet, “Why” we shoot is all about Enjoyment and Learning, not the Outcome! Look again at the answers to the very first question! This “disconnect” carries over into our competition.

Where the time is spent in competition – Think about how much time it takes to release a shot. We will be very generous and assume that the final critical moments take as much as 5 seconds for a typical 10 meter or 50 meter rifle or pistol event. Multiply 5 seconds by the number of shots in the course of fire and compare that to the total time limit. For shotgun, running target, and most 25 meter events, use 2.5 seconds and do the same calculation.

In a 60 shot free pistol event, the time limit is 120 minutes. At 5 seconds each, the “critical moments” take 5 minutes. That means that about 95% of the event time is spent NOT shooting. Yet we focus 95% to 100% of our training on only 5% of the competition.

Clearly, release of the shot is the most critical moment of the shooting and deserves significant training time. But not to the near or total exclusion of other at least equally important aspects of ultimate performance. It is what goes on in the 95% of the competition – the time when we are not shooting – that actually determines how well we will shoot. It is this aspect that resolves choking and other issues that otherwise cause competition scores to be lower than in training.

Possibilities – Consider the possibilities. Instead of fearing the next “bad” shot, consider the possibility that you just might uncork a really good one! It is possible! Why limit yourself? It may not be probable, but it is possible. It is also possible, and quite likely, that you will shoot a good shot. Free yourself from fretting over perfection or fear of bad shots. These are a key to turning things around.

Open your mind and heart to the possibilities. Then, all the technical stuff will fall into place much more easily. Not by magic certainly, but with much less effort, delay, and pain.

Final Questions

What's the worst that can happen in competition? – Possible answers include: Lose. Embarrass myself/coach/parents/friends. Let the team down. Others will think less of me. These and other feelings are commonly felt. Truly, though, how long will these feelings last? Only for a short while... everyone forgets. Who cares!

What's the best that could happen in competition? – Possible answers include: Win. Set a record. Shoot a personal best. Impress others. Help the team. Again, these and other

feelings are commonly felt. How long do these good feelings last? Only for a short while... everyone forgets. Who cares!

What do you really want from competition? – After wading through all the typical answers, we sometimes get down to the REAL answer. What we really want is to shoot a match without fear, to play the game with total freedom and abandon, like a young child. The worst that could happen isn't really so bad, and it is fleeting, so forget it. The best that could happen isn't really so good, and it is fleeting, so forget it. The sense of accomplishment from a great performance – regardless of outcome – is exhilarating and permanent.

Winning isn't everything. It is fun, to be sure, but it isn't everything. Otherwise, why are blowout games so boring? Why are close contests so exciting? It is the close contest that, win or lose, provides a great sense of accomplishment.

Freedom

Released from fear, one is free to “just shoot” and experience the soaring feelings of “effortless” shooting. It is fun. It is seemingly so “easy”, even during the “hard” parts. The performance is astounding to the athlete and the resultant outcome is astonishing to everyone. The athlete feels a deeper and more satisfying sense of self. Spirits soar!

Much is written about the “Zen” or “zone” or “flow” or “subconscious” shot. While that is a topic of later articles, it is something that only comes to athletes who consider the possibilities and allow themselves to shoot with childlike enjoyment. I sometimes describe these shots as being “automagical” since, from the point of view of an actively controlling mind, they seem to happen without active control on the athlete's part... automatically and almost as if by magic.

Here are the thoughts of a female high school athlete after having played the game with total abandon and experiencing the “zone” in her shooting.

“The automagical shots were amazing. It just happened, like breathing, or my heart beating. And there was no need to check the scope, I've never been more sure in my life that I had a deep ten. Wow...”

I went out to shoot smallbore standing for the first time in ages, and with the exception of me not focusing on watching my follow through, things went better this time than ever before. My hold was steady, I used all those techniques you showed us, balance checks, the three steps, four steps, all of it, and it felt great. I've never been more confident before!

I shot a 98 and 96 on a set of air targets last night, but on my 98, the two nines were soooo close!!! pluggable... I lost them because I thought about it. I tried to control the chain of occurrences instead of just letting it happen.”

She went on to experience these feelings in competition and enjoyed her shooting like she had as a beginner. You can, too. The first step is to make up your mind that thought patterns do affect shooting and that you will start now in a new direction.

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(Biographical information as of October 2009)

On the Firing Line (Twentieth in a series)

Two Shots Away From Being Crazy

©2004 JP O'Connor

“Baggage, it’s what we do.”

Have you ever stopped for a moment to ponder what you take with you to shoot? No, not your equipment; what is it that you take with you in your head and in your heart? If you are like most athletes, you approach your shooting, especially competition, with a mixture of excitement and desires, fear and doubt, thoughts about how to handle the shooting session, either optimism or pessimism, and a whole host of other conflicts and feelings. It is quite a mix of baggage, isn’t it? Sadly, it does not help us to perform well at all.

Baggage

Where do all of these feelings come from? What are the essential elements that cause all of our baggage? There are three primary sources of our baggage.

Lack of proper commitment – Most athletes come to their game with only one true commitment: to look good and not embarrass themselves. The desire for the approval of others is so basic and deeply ingrained that they often aren’t even aware of its existence. Because it is so fundamental a part of the athlete’s thinking, it weakens or prevents true commitment to the athlete’s other desires.

Constant judgments – Athletes are full of judgments about everything and everyone. That person is better than me, I haven’t practiced enough lately, it’s too cold or hot or windy to shoot well, my gun or ammunition aren’t up to the job, and a plethora of other usually negative judgments intrude. The constant judgments impede good performance.

On the verge of upset – As if the first two sources of baggage aren’t enough, there is the constant fear of failure weighing on our mind. Oh sure, we may be feeling good today and the shooting might actually be going pretty well. But failure, and the fear of it, are lurking. Sure enough, a couple of bad shots come and we are undone! We are in fear and are always only two shots away from being crazy.

Breaking the Cycle

With a load of baggage like that, it is no wonder we have problems improving and enjoying the sport. As one of my young friends once said, “We have enough baggage in life, why carry any to the firing line with us?” How do we go about breaking the baggage cycle?

Appropriate commitment – Think for a moment about one of the questions in the previous article, “Why do you shoot?” Commit yourself to the enjoyment, the learning, the aspects of the game that appeal to you the most. People will like you just as much, even if you don’t worry about what they think! Commit yourself to the “doing” of the sport. Commit yourself to the “just being” of the sport. Just “be” and “do” and your enjoyment will grow. Interestingly, your shooting will improve right along with! Make up your mind and act.

Extrospection and proper introspection – As discussed in an earlier article in this series, a significant component of choking is self-conscious introspection. Concerned with outcome or other aspects of the competition that are outside the athlete’s direct control, the athlete becomes self-conscious, no longer trusts themself, and takes active control of the process.

This is the kiss of death! Instead, look outside yourself and, paradoxically, also look inside yourself in positive and helpful ways.

Extrospection, though really only a medical term with a very specific meaning, takes on a broader meaning in this context. It is meant to be the opposite of introspection. Look outside yourself. Do you actually notice the range, the other athletes, officials, and others at the competition or training? Take time to talk with them. Take time to notice the weather. Now, take time to actually notice what is going in your preparation, your setup, and in your shooting. Not judgmental, not critical, merely observing without thought or criticism or judgment. Look with the eye of the artist or dancer rather than the eye of the mechanic or technician. Don't just look though, also feel what is happening. Feel it with your body and with your heart. After all it isn't just your body that does the shooting.

Introspection has its place. Not the self-conscious, controlling introspection that stifles the performance. This mode of introspection is so deep, that the athlete doesn't even notice what is happening in their body or mind or heart. Instead, experience the introspection that is aware, free of judgment and criticism and that senses every nuance of your body's feel and your emotions. Experience the mode of introspection that is quiet, calm, and lives only in the Present Moment.

Creativity and acceptance – We are taught, or teach our self, or otherwise develop for our self, a way to shoot. As we improve, we are less likely to deviate from our methods for fear of shooting worse. It is in the trying to always hit the center or break the clay that we limit our self. Get creative and really learn to shoot. Allow yourself to make mistakes and notice what you learn from them. This will lend insight into how to hit the center or the clay even more often.

Shotgun athletes, upon discovering tomorrow's forecast is for high or gusty winds, need to double their training time, not cancel it. Of course many shots will be missed... at first. Allowing yourself to calmly continue without regard to the outcome will open your senses to learning how it all really works. Before long, you will break targets in conditions that leave your competition shaking their heads in wonder. Calm days will become almost boring, but you will enjoy them so much more. On those days, you will "own" the targets! Eventually, you'll "own" them in the wind, too!

Similarly, shoot rifle in the wind without making compensation for the conditions in order to really learn how much the point of impact is affected by each condition. Really learn this and you will do a better job in competition when you really have to hit the center! By always training to hit the center, and focusing on that alone, you limit the possibilities you have of really learning the wind – and learning your real shooting.

In order to do these and many other types of training, you must accept that your score will go down. It is training, you are learning; of course your score will go down! You are building skills. If your score doesn't go down when doing these types of things, you aren't really doing the drill and you are probably cheating yourself of a golden learning opportunity.

Moving Beyond

All these ideas are rather specific. How do we get to the broader perspective?

Stay awake – How often do we "check out" during our training or competitions? What are we missing? How might that have helped us learn and improve? How might it have increased our enjoyment of the sport? Instead of looking for something "wrong" that needs to be "fixed", just notice what actually happens. Then you will really gain insight.

Be open to the possibilities – How often have we thought, “I shot poorly the last time I was at this range or match or competing against this team. I hope I don’t blow it again.” Or maybe the opposite, “I like shooting on this range, I always do well here.” In the first situation, aren’t you already setting yourself up for a fall? Of course you are! In the latter, aren’t you opening the door to the possibility of relaxing too much, or trying too hard to repeat the earlier performance and, either way, diminishing your next performance? Also true!

Your past does not predict your future. To be sure, many play the game that way. They either think about the past bad performance and repeat it, or think about the past great performance and wonder why they can’t repeat it. Instead, shoot as if there is no past or future. Just shoot! You might get a 10.9! You might get a nice bust of that clay... nothing but dust! You might get a run of 25 straight for the first time in your life... or a run of 100! If you instead saddle yourself with all the baggage, the odds are pretty slim that you will achieve these things, and you certainly won’t be able to repeat them when and if they do happen on a fluke.

All of which brings us to the ultimate question of being open to the possibilities.

Why we fear bad shots – Well now, that’s easy to answer, right? Bad shots hurt our score, they embarrass us, they keep us from reaching our goals, they cause us to let down the team or our coach or mom and dad, they cause us to feel bad about ourself and have unmet expectations... ok, I’ll stop now. We may have these feelings and many more, but none of them have anything to do with the real reason we fear bad shots.

We fear the bad shot because we believe it will happen again. At any moment, and likely very soon. This is what we really fear. In our effort to avoid the bad shot, we fall into the traps of low confidence, self-conscious introspection, active control, and choke like crazy.

Many of my students have heard me say, “Champions do not avoid bad shots; they only make good shots. They reject the bad ones before the trigger is pulled.” We aren’t splitting hairs; it really is a different outlook and it does affect our shooting.

If your future is not predetermined by your past and if you can become open to the possibilities of what might happen, imagine what the effect would be on you and on your game. Defensive shooting is already defeated. Defeated by the athlete’s own thoughts about the past. Confident, aggressive shooting in the Present Moment is almost always unbeatable.

Final thoughts –We make this sport so difficult, yet it is so easy. Our opponents don’t slam us into the ground like in football, they don’t throw things at us or run into us like in baseball or many other sports, if our equipment has a glitch, it doesn’t slam us to the pavement and send us cart wheeling and praying for our life at 180 mph like in motorcycle racing, and our target certainly doesn’t shoot back at us. So what is the problem? Baggage! Get over it. Just shoot like you did when you were a beginner, carefree, but not carelessly.

This article, and the 4 that have preceded it, cover a set of inter-related topics on aspects of shooting that are rarely discussed and used in our sport. Take a few moments to review all 5 of them. One of my friends jokingly calls these topics and my related teachings the “fruitcake” stuff. He also sees that they transform the performance of athletes who embrace it.

How open is your mind to these ideas, and to the possibilities?

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(Biographical information as of October 2009)

On the Firing Line (Twenty-first in a series)

Coach-Dad-Itis

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“When helping hurts.”

When a parent becomes their child's coach, officially or unofficially, it often can be very beneficial and enjoyable to both coach and athlete. There are situations, however, where the arrangement is damaging to the relationship and to the athlete's development. Sadly, this latter state is all too common. One of my students (one among many students who suffer from varying levels of difficulty with a parent coach) suggested this topic and even gave the “condition” a name: Coach-Dad-Itis. When I asked her to elaborate on her suggestion, she sent me almost an entire article on the topic! Having obtained permission to do so, her thoughts are now shared with you here.

Symptoms

- Athlete is often (but not always) female.
- Parent coach is often (but not always) male.
- Overactive tear ducts after exposure to sporting equipment.
- Common feelings of self-doubt and lack of confidence.
- A parent often with their child's best interests in mind.

Coach-Dad-Itis is what often happens when dad decides he wants to coach his daughter. Whether it is to promote a closer father daughter relationship, or he believes he is qualified to be a top notch coach to his little girl, or both, it can have negative effects on her enjoyment and growth if not done properly. It often happens when dad and daughter's relationship begins to revolve solely around the sport. Raised voices and tears are a common symptom.

This is a serious mental disorder that has negatively affected countless female shooters. While sort of poking fun at it, this condition is quite serious. It can squash not only a girl's potential in her sport but also her self-confidence and her relationship with her father.

As a shooter who has lived through this myself, and who still suffers from it occasionally, I have come to realize that all the while my father had the absolute best intentions. His little girl wanted to be a state, national, potentially an Olympic champion – and he would do everything that is honest and within his power to get her there.

What the athlete needs to understand:

- You are your father's flesh and blood – he will always love you.
- Your father pushes because he feels it is what is best for you.
- If your father yells when you cry about your shooting, most often it is because he feels helpless because he doesn't know what to do to stop the tears.
- If you still feel like Coach Dad's love is conditional after taking these things into consideration (it isn't, it just feels like it is), think about someone whose love isn't. When things have been rough with Coach Dad, I have been known to train or compete with a picture of my dog on my stand... she really could care less how I do!

What Coach Dad needs to understand:

- Girls are very emotional as preteens and teenagers – they don't know why they are crying either.
- She loves you very much and only wants you to be proud of her... even if she says otherwise.
- Young athletes often internalize their results. They become a measure of their self worth. Yelling about a bad set or for a thrown shot hits them to the core. Instead, try calmly talking it over after everything is said and done. Right after the competition is not a good time. Over a meal the next morning or afternoon is.
- Yelling at your athlete can often have adverse effects (like a slump in scores or quitting the sport altogether) and cause more tears. Yelling is almost never a good idea.

Cures

Although I'm not sure there is a perfect cure for this, and I'm sure every father/daughter relationship is different, here are some things you might try if Coach-Dad-Itis strikes.

- Get mom and siblings involved... make it about the family... not just about dad and daughter.
- Find something in common other than shooting. Do that together as well so daughter doesn't feel like the relationship rides on her scores.
- If opinions and feelings cannot be expressed face to face without raised voices or tears – write letters! You can think about what you are saying so communication is often better that way.
- It may help for daughter do address dad as “Coach” on the range or whenever the sport is being discussed. It makes the relationship on the range less personal and that man that's yelling at her is not dad but coach.

This was written from her perspective as a female athlete with her father as parent coach. Keep in mind that any combination of male or female parent with male or female child can suffer from this “condition.” It has been observed beyond sport as well; music is a classic example.

When granting permission to use her writing, she also added: “What I wrote is in part exaggeration for the purpose of humor. I have also gathered some of this from others while talking about their experiences. Not all of these things describe my relationship with my father. Please also add that I believe that I wouldn't have come as far as I have without having my dad as a coach. I just want others to be aware of some of the difficulties in having dad as a coach and the way to work through these difficulties without having to go through the performance anxiety that can result from this.” She is wise beyond her years!

Oh, and Dad, if you think you know who the student is that suggested this topic, I have two thoughts for you. 1) Your guess is wrong; it isn't her. 2) The fact that you thought it was her means that, without mentioning it to her in any way, you need to give some very serious thought to this topic – right away.

We have all heard of, and often seen, the “little league dad”, or the “soccer mom” who is over the top, yelling at coaches, officials, other athletes, and their own child, pushing their child to win, and who shows more concern about winning than in enjoyment, learning, growth, and sportsmanship. This is demeaning to the child and the parent's overzealousness often causes the child to leave the sport entirely. Even parents who are much more reserved can have similarly

negative effects on their child. Most of these parents are not coaches, but the effects are similar to Coach-Dad-Itis.

Most parents who are guilty of Coach-Dad/Mom-Itis are not aware of it and vehemently deny it... after all, they are “just trying to help” little Johnnie or Susie. It is a sad paradox that, even with top athletes and Olympic hopefuls, one of the hardest jobs of the coach is dealing with a small segment of the parents. Luckily, most parents are supportive in positive ways and many invest a great deal of time, effort, and money in assisting or running grassroots programs.

Athletes, even at top levels in their sport, need to focus on learning, enjoyment, and the thrill of competition. If allowed to do so, winning will take care of itself.

If you or someone you know is having a problem with Coach-Dad-Itis, there are additional resources that will help with numerous specific techniques for handling the issues of the frustrated athlete.

In her book *Sports Her Way*, Susan Wilson addresses many aspects of coaching female athletes, including how male and female athletes differ and how the coach can plan and act accordingly. She also specifically addresses the parent coach situation with a number of excellent suggestions.

The American Sport Education Program (ASEP) has a number of excellent resources. Start with their book *SportParent*. This book is short, easy to read, and full of great ideas for the coach parent. Some coaches make parental participation in a *SportParent* class a prerequisite to accepting their child for private coaching or as part of the coach’s program. The class includes a presenter’s guide, video, and parent’s summary cards.

All coaches should take the ASEP *Coaching Principles* course. It is now available online for those who cannot arrange their schedule to take the classroom course. This course has one underlying principle: “Athletes First”. The very best coaches, regardless of level, “walk the walk” in this regard. It is sometimes a challenge to do so, but in the long run it is always rewarding for coach and athlete alike. ASEP offers a number of excellent courses and certification programs for coaches.

Young female athletes are motivated by love. They want to feel a sense of accomplishment and self-worth. They want to feel that their parents, coaches, and teammates are supportive of them in ways that are positive and helpful. Actions speak magnitudes louder than mere words in this regard. Yes, they do often break out in tears – even they don’t always understand why. Ultimate performance in sport reaches deep within the person and even grown men feel emotions welling up that rarely surface otherwise.

Regardless of their gender, treating athletes with dignity and respect, placing an emphasis on their development over winning the next event, and allowing them a significant decision-making role in their sport participation will go a long way in helping the child mature and in cementing positive relationships among child, parent, and coach – especially when parent is also coach. Enjoy!

References & Resources

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The “On The Firing Line” series is published by the national governing bodies for Olympic shooting in Japan and the USA, and has been adapted for archery as “On the Shooting Line” published by USA Archery. Olympic Coach Magazine, the National Association of Soccer Coaches, and others have referenced selected articles. The entire series is available online at www.pilkguns.com.

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(Biographical information as of October 2009)

On the Firing Line (Twenty-second in a series)

Predator And Prey

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“Do you make things happen, or merely let things happen to you?”

A number of athletes approach a competition with an air of confidence, decisiveness, and a “take-charge” attitude. These athletes are on the offensive and go after their goal. Others have an approach that is better described as being hopeful, tentative, or even fearful. These athletes are on the defensive and attempt to protect themselves from failure. It turns out that an athlete needs a healthy mix of both offensive and defensive mental and emotional skills to provide an optimal performance.

Dr. Sean McCann, Director of Sport Psychology for the US Olympic Committee, makes a distinction between offensive and defensive skills. [McCann, 2003] He asserts that an athlete needs both. Offensive skills are the attributes and techniques that allow an athlete to dominate a competition and to be a great athlete. Defensive skills are the attributes that allow an athlete to handle adversity and to be a consistent performer at the highest levels. This article is loosely based on Dr. McCann’s outline with a number of ideas added.

Offensive skills

Desire to Win – The athlete must have the “fire in the belly”, that is, the passion for the sport and for challenging competition. They must “really want” to win, not just say it.

Competition Plan – Before event and during waiting and rest periods, the time – and thoughts – must not be random. The athlete must have worked out exactly what they want to do, how they will prepare, and determined what they will focus on at each phase of the competition. Within the competition, during the actual shooting, the athlete must have a robust shot plan. Most importantly, they must actually do what their shot plan calls for. Any deviation will cause problems! This shot plan must be robust and not depend on “fragile” techniques.

Visualizing Success – Visualization or imagery or mental rehearsal are underutilized techniques. Even if the athlete cannot “see the pictures”, this rehearsal is critically important since it is the ability to evoke the “feelings” of the experience that is most important and that has the most value. Additionally, the athlete must be able to imagine themselves performing well when they are most under pressure. If the athletes cannot “see” themselves shooting tens, they certainly can’t actually do it.

Supportive Language – Everything the athlete says to themselves must be positive and useful. “One shot at a time.” “I love this pressure.” “I love the feeling of rising to and meeting this level of challenge.” “I think I have the advantage.” “I’m going for it.” “Calm, relax, quiet... yet confident, aggressive, decisive.”

Goals and Behavior – Properly formulated and used, goal sets actually change behavior and provide internal motivation. Many top athletes know this, build their goal sets properly, and then discover their passion being fueled by their goals. Yes, instead of being mountains one has to climb (a sign of improperly set goals), properly set goals actually become the motivators.

Perform Like an Athlete – An accomplished athlete is not timid and does not hesitate. An accomplished athlete acts. Now. The best shooting is performed that same way. The athlete is truly committed to the action and is comfortable with the risk. One must stop thinking about all the bad things that could or might happen and just shoot.

Confidence – True confidence, not mere bravado, is a job, not a gift. Confidence comes from hard work. It comes from the athlete discovering and trusting that their physical foundation is solid, their technique and equipment are excellent, their mental processes are robust and their emotions are in order. This is a process that takes time. In short, as the athlete discovers that they can perform at ever higher levels in ever larger competitions, their confidence grows with them. Without hard work in all areas, this is not possible. Confidence is a job, not because one “must work on” their confidence directly; rather it is a job because it only grows when the athlete is working and growing.

Defensive skills

Training Consistency – When an athlete faces adversity in a major competition, their ability to survive – even thrive is a direct function of the correctness and consistency of their training. If their training is haphazard, undirected, wasteful of valuable range and other training time, and merely practices mistakes, then there is no solid foundation upon which to expect a stellar competition performance to take place. Use training time wisely, use it fully, and fill it with correct, focused activity so that the desired actions become the automatic actions that surface under pressure.

Anxiety Control – It is easy to cave in and give up in the face of all the negative feelings and self-talk that surface when the pressure is on. Our fears are negative and it is easy to find “proof” that they are correct... that last bad shot for example. Anxiety takes hold when we take our focus away from a quiet confident mode of “just shoot.” One cannot be nervous when deeply focused on the task. One must ignore all the “demons” in the head and become, in essence, “bullet-proof” to anxiety.

Impulse Control – Anger, frustration, and impatience are negative blocks to the flow of positive emotional energy. Each is a reaction to external events when our expectations and desires are not met. Interestingly, we can control each of these – and must. The athlete next to you may anger you by some action that disturbs you, or you may be frustrated by a bad shot, or you become impatient with yourself because it is difficult to quiet your mind and heart. You can decide that the situation does not matter and ignore it or properly address it. Or you can become angry or frustrated or impatient because the situation is not what you expect or demand. Guess which reaction just took you out of your game!

Energy Management – Although this topic includes physical aspects of shooting, it really is meant to address mental and emotional aspects. After having “given your all” in the event in order to make the final, do you have enough reserves to reach deep inside and do it again for the final? When you are physically tired or fatigued from travel or illness, can you bring yourself to raise your intensity level to the optimal point as if you were healthy and rested? Do you respond to the competition and adversity in the event, or do you wilt and dream of another day? Today is the day! The event isn’t over until after the final. You cannot sleep on the line... you must force your intensity level higher through your will power. You must decide to seize the day, not let it run you over. Each of these is a choice that is within your power to make.

Resilience – Competitions do not always take place under ideal conditions, nor does everything go the way an athlete wishes it to. One must be resilient in the face of challenging range conditions, equipment failures, bad shots, or even entire bad days. It is not the end of the world and it is not a reflection on the athlete’s self-worth. Those who realize that the “bad” things are part of the process of growth and learning, and who learn from the situations, are those who develop resilience and who always seem to bounce back.

Flexibility – Almost anyone can learn to shoot fairly well in a training environment. Serious competition is an entirely different matter. Conditions may not be ideal, yet this is when and where the athlete needs to produce a solid performance. As the saying goes, “stuff” will happen and the athlete must either deal with it or give up. When the pressure of competition or other factors cause the size of the hold to open up, the athlete either digs deep and trusts their technique, or... deviates from their game plan, “tries harder” and shoots like a rookie.

Focus Amidst Chaos – A determined and well trained athlete can focus so intently on their activity, that all external interference is effectively walled off. The demons may rage, but they cannot penetrate the athlete’s awareness. What is the athlete’s job? Merely to focus on performing this one shot or sequence correctly. Nothing more. Focus on the performance... the “doing” aspects... and everything else will take care of itself quite nicely.

Simple Thoughts – Under pressure, one can only have the simplest of thoughts. A fragile technique that relies on a complex checklist, for example, may work wonderfully in training but cannot hold up in competition. One must have a very simple thought process, trust it, and trust that all the other aspects and actions of the shooting are already well “programmed” or “memorized” deep in the mind somewhere. It is these deeper action memories that will take over in the heat of the moment. Whatever has been most reinforced in training will come out.

Practical Application

In essence, offensive skills get you into the final, while defensive skills get you the medal. An athlete with great defensive skills and weak offensive skills will perform on a very consistent basis but only at a level much lower than their potential. The athlete is generally unwilling to experiment with new techniques or changes to their routine. Change, and thus growth, is not part of their system. Conversely, an athlete with great offensive skills and weak defensive skills will sometimes have an amazingly good performance (usually in training) but never on a consistent basis. The athlete is unwilling to stick with one set of techniques for even a short period of time. Stability, and thus consistency, is not part of their routine.

Athlete and coach must assess the athlete’s strengths and areas where additional work is needed. By exploring both the offensive and defensive types of mental and emotional skills, opportunities may be found to strengthen the athlete’s overall game. At elite levels, one must have a complete “tool kit” of skills and techniques. One area or skill cannot compensate for a weakness in another area. All aspects must be fully developed. Each of is an area rich with possibilities for exploration and work by the athlete and coach.

Observations – 4 Keys For Elite Athletes At Major Competitions

Be Fully Ready – When competing at a major competition, an athlete must be fully ready even before arriving at the venue. Training time is limited, nor is this the time to build skills or shoot a practice match. One’s confidence must already be rock steady. As the match begins, each and every sighter must “mean something” to the athlete. One cannot “work into it” during sighters... that tentativeness will go nowhere that is good.

“Off-road” vs. “Highway Driving” – As a match begins, all may be well. The shooting, while determined, seems to be flowing fairly easily. One is on the highway and cruising! Then something happens. It might be score awareness, a sudden tension, or a bad shot. At this point the athlete has a decision to make. Pretend all is well, stay on the highway, continue to go “full speed ahead” and have several bad shots. This is when you let things happen to you. Or the choice can be to go “off-road” among the bumps and rocks, slow down a bit and focus on the

basics. Use the breath to help calm and focus the mind. Use the techniques that have been refined in training and earlier competitions to get oneself back on the highway. Focus on the basics, work through the situation, and one will quickly discover they are back on “cruise control.” This is when you make things happen. It is a choice. Make it happen.

Abhinav Bindra of India has what appears to be a flawless shot routine, both on paper and in the actual performance of the plan. Indeed, on most shots, his execution of that plan is flawless. He will have moments when he must, as he says, “manufacture a shot”, because something isn’t going just exactly according to plan. Rather than let the situation defeat him, he has developed an ability to slow down a bit to go off-road and resolve the situation instead of mindlessly speeding down the highway and wondering later what went wrong.

Expect Hard Work – Great shooting, really great shooting, is hard work. Very hard. Moderately good shooting is not. Understanding this difference is critical. Expect to work hard. Expect to struggle and learn and refine and probe the dark corners of your game... and of your mind and heart. Train for the hard competition days. When we do high intensity training, many of the athletes will come off the line and literally be shaking like a leaf and their heart will be pounding. This will often show in their amazingly horrid scores... at first. But they learn how to dig deep inside themselves and learn how to perform when things are not perfect. They begin to amaze themselves by doing things they thought were not possible. This boosts scores and confidence. Later, in contrast, a rough match is easy for them. And the scores show it.

Train Above Your Goal – One must always go to a competition expecting to shoot their average. Personal records in competition are fun, and do happen. But not when they are expected. Expect the average, set goals higher than that, and be open to the possibility of a record. If you are training at a world record level, then a “bad” day will likely result in a medal.

Many events now are so competitive that perfect or nearly perfect scores are required to win the event. One cannot have an average that is higher than perfect! Here, an average a couple of points lower says that the athlete is not ready to consistently win the event. When Abhinav first was training in the USA, many people commented, “He never shoots a nine!” Indeed, he had numerous 600/600 training sessions. He knew that his chosen event, men’s air rifle, required a perfect or nearly perfect score in a major competition. Therefore he worked quite hard to ensure that this level of performance became his norm.

There is no substitute for confidence gained through having performed well in the past. The past is not guarantee of excellence in the future, but it does prove to the athlete that they are truly capable of reaching the harder goals. This confidence then fuels their work. Proper training is a key component of this.

Closing Thoughts

The game is different for athletes at the elite level. Expectations are external, explicit, and extraordinary. The game is no longer just for the athlete’s personal enjoyment. There are additional strains of travel and jet lag. The season is long, sometimes they seem to run together. Periodization in training is a challenge. Peaking at the right times is also made more complex. The sport becomes a job. This is when the athlete must have a burning passion. ...and a complete toolkit.

Successful performance at the pinnacle of sport requires a solid physical and technical foundation. Many athletes mistakenly believe nothing more is required. Ultimate performance comes from the head and the heart. Build a rich, diverse, robust toolkit of mental and emotional

skills, just as you do with the physical and technical toolkit, and prepare to amaze yourself. Are you going to act like the prey, or will you act like the predator?

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Reference:

[McCann, 2003] – McCann, Dr. Sean, *Role of Offensive And Defensive Skills In The Shooting Sports*, unpublished presentation notes, 2003.

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(Biographical information as of October 2009)

On the Firing Line (Twenty-third in a series)

Sitting On Your... Laurels

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The Need To Win

Chuang Tzu

When an archer is shooting for nothing,
He has all his skill.
If he shoots for a brass buckle,
He is already nervous.
If he shoots for a prize of gold,
He goes blind,
Or sees two targets.
He is out of his mind!
His skill has not changed.
But the prize divides him.
He cares.
He thinks more of winning,
Than of the shooting.
And the need to win,
Drains him of his power.

“How good do you want to be?”

A commonly seen phenomenon is athletes achieving competition scores that are significantly lower than their practice scores. Sometimes these are transient occurrences due to illness, jet lag, fatigue, or emotional upset due to external life influences and events. In many cases, it is a common pattern and there are fundamental reasons why the athlete repeatedly has lower scores in competition than in training. In a few cases, the phenomenon only occurs in major competitions such as Olympic Trials or World Cup competitions.

Two of the previous articles in this series discussed choking from a scientific standpoint and then provided ideas and strategies at a tactical level to “inoculate” the athlete from the problem. Two subsequent articles explored deeper issues. This article looks at things a tiny bit more strategically. Doing so also causes us to revisit training themes from some of the much earlier articles in the series and look at them from a different perspective.

The vast majority of practice time in our sport is spent shooting a course of fire. That is, shooting the same number of shots under the same program as in a competition. Typically, the score is tallied up. If it is “better than average” the day is considered to be a good one. If the score is “lower than average” then the day is considered a failure. Nothing more. A number of coaches and athletes realize there is a lot more to shooting than just firing downrange and they actually do something about it.

NCAA rifle teams are one microcosm of the sport and provide many representative examples of varying ways of training.

Some coaches have their athletes fire full or partial courses of fire for score during most of their practice time each week. Scores are carefully tracked and if there is any dip at all, the athlete is questioned about “What is wrong?” since “progress” consists solely of scores going up. The athletes are given little or no time to direct their own training or experiment with new techniques, nor is any freedom given to “tear down” and rebuild to a better technique since any dip in score is not tolerated. And perish the thought that an athlete might consult with a former and trusted outside coach or training partner. Many teams have practice programs that, though possibly very different in form, are no different in substance to that described here.

Contrasting this, in some programs the athletes are encouraged to take responsibility for their training, work with their coach on plans, strategies, and techniques for improvement, and are afforded the freedom to do real training instead of mere course of fire practice. At least one NCAA team also makes extensive use of intensity training through competitive “games”. The heat is on when the cost of losing is having to sweep brass or hang targets for a teammate instead of having them doing it for you! Through this friendly, though intense, competition, each athlete becomes better able to perform under the stress of outcome-based pressure.

This dichotomy is seen in high school and club teams, and in individual athletes. A few teams, coaches, and athletes are willing to challenge themselves, have open minds to explore new ideas, and actually work hard at their training. It pays off. Some who do not understand this still achieve some success at times, but do not know how to sustain it.

For example, a team of teenage athletes that has won three straight team championships thinks they have it all figured out. Their first championship was earned the old fashioned way... hard work. Led by a couple of athletes who were mature, dedicated, and hard working, the team truly earned their success that first time. Although they won their second and third championships fair and square, and are to be congratulated for being able to win three in a row, how they won their second and third championships provides some insight into their future if a mid-course correction is not made.

The latter two crowns were not so much earned or won by this team, as much as other teams lost them. In that second year, two members of the team most likely to win made some poor choices at the last minute in preparation for the event and performed very poorly. The subject team turned in a decent performance and prevailed... by only a very slim margin. The third year, a different team was providing strong competition. Unfortunately, one of the athletes was not able to complete the season. The subject team won again with an adequate performance, though other teams weren't too far behind. Again, these are fair and honest wins, for which they are to be congratulated. Yet, they want to merely “keep doing what worked in the past.” And this is unlikely to bring them continued success. Do you suppose that an Olympic champion, in planning to return and win again 4 years later, plans only to “keep doing what worked in the past” and nothing more. Not on your life!

In point of fact, “what worked” for that team is gone. More correctly, “they” are gone due to age. If the athletes and coaches don't step up to fill the void by going back to the ideals of the previous athletes, the team will not be able to sustain their record on a long-term basis. Here is why. The previous athletes trained rather than practiced. They challenged themselves and each other. They worked hard on their game. They led by example and action. But now they are gone. The team and individual practice now is very much like so many others... lots of shooting for score and not enough real training. Intensity training is seen as pointless games. With one

exception, the experienced athletes now on the team are not training, leading, and encouraging the younger team members the way they themselves were brought up by the now departed athletes. So, the team is no longer “doing what worked” in the past.” They just think they are, and are instead depending on raw talent and luck.

A newer team has watched this and has decided that through real training, they can easily capture the win from the old-time champion team. Although we can sometimes win by luck, it won't last. Which team won the following year? We already know the answer: the new team won. No surprise. The prediction was made almost a year before, and it came true.

Shotgun competition and training are no different; also providing contrasting examples.

Many athletes go out on the field and shoot a round or two of the competition program, take a break, read or play cards or whatever, and then go back out and do another round or two. If it is windy, they don't like to practice and will not do it if given the choice. After all, it's hard and the scores go down. (Perish the thought! It is all about score isn't it?) Other athletes will mix up their training and will shoot in the wind every chance they get. The added stress and experience makes them much stronger and more skilled competitors. In addition to shooting full rounds, they will go to a particular station and work on that one station, and no other, to find, diagnose, and resolve a problem they are having. Do you or your coaches know which targets on which stations you miss the most? Do you know why? Do you actually go out to do station work and specifically work on them... to the point of shooting a full box or more of shells on one station and target if that is what it takes? Do you do intensity training? At the Athens World Cup in 2004 and again at the Olympics, the conditions were quite windy. Guess which athletes did best?

None of these examples are meant to criticize any discipline, group, or team. Rather, each provides contrasting examples, both negative and positive, to lend insight into the differences that set some programs and athletes apart from all the rest. If your aspirations include winning international medals, merely making a national team and sitting back to rest on your... laurels... isn't going to get you to the podium. The same is true at a national, state, or local level.

There is another critical factor at work. When a team wins a championship, when an athlete wins an event or makes a national team, when a particular level of success is achieved, it is natural to “protect” that level of performance and be unwilling to change anything. Yet, higher levels of achievement require and demand continuous study, refinement, and evolution of the athlete's game. This doesn't mean just physical or technical aspects. At ever higher levels, the subtle parts of the mental and emotional aspects become ever more important. Yet the majority of athletes do not address these things often enough, if at all. They often think they have “arrived” or that they have it “all figured out now” and are no longer acting as true students of the game.

This is borne out by looking at World Cup results the last two or three years and at the Olympic Trials results. While there have been brilliant performances by some, there have also been any number of breakdowns. These may seem to be harsh words, though they are not meant that way. Whether they have reached their goals or not, there are many athletes who truly do work “smart and hard” as the saying goes. However, without honest assessment, there cannot be genuine improvement.

The higher one's level of achievement, the more one needs to become a student of the game, the more open-minded one must become, the more one must adapt to and adopt new and additional techniques (and know when and how to do so), and the more one must explore and

master the mental and emotional aspects of the higher levels of the game. This is counter to one's natural inclination and thus stands in the way of much potential success.

What decisions are you making for your own training and success? It is up to you, and you alone, to decide. What actions are you taking? What changes in behavior, in technique, in your approach, thought patterns, and feelings, are you making? What resources are you seeking out and reading, or listening to, or talking with? Wanting to improve is one thing. Doing it is quite another. Merely doing the same things over and over is not going to take you to your goals.

Don't tell me it is all about trigger control or some other technical aspect at the Olympic Trials, school or club championships, World Cups, nationals, the Olympics, or anywhere the athlete deeply cares about the outcome. Sure, the foundation must be there and must be solid. At those levels, technique is only the start. At those levels, it is all about what is going on deep inside your head and your heart... and very little else. The Chinese philosopher Chuang Tzu, among others, clearly understood this. Do we as coaches and athletes also understand this, or do we ignore it, in our approach to training and competing?

Those who step up in training, not just go through the motions of practice, and not just physically and technically, but also mentally and emotionally, these are the ones who typically win the medals.

Many are called, but few are chosen. And yet, you alone are the one who decides if you are "chosen" or not. Yes, only you.

Ultimately, it comes down to this: "How good do you want to be? I mean it, how good do you really want to be?"

No, don't tell me. Show me.

On second thought, don't tell or show me.

Show yourself!

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(Biographical information as of October 2009)

On the Firing Line (Twenty-fourth in a series)

A Process For Breaking Out

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“Are you committed to your shooting? Or merely involved with it?”

Dr. Bob Rotella is considered to be one of the very best coaches in professional golf. Because golf is a “big money” sport, it attracts a large number of top quality coaches and Dr. Rotella is among the very best of an elite group. His books are classics in sports teaching. Shooting, golf, and many other sports are almost identical when it comes to the non-technical aspects of ultimate performance. His ideas are universal and apply to almost all sports, including our sport of target shooting.

Despite the number of quality coaches available in golf, many athletes who aspire to greatness on the PGA tour never seek out a good coach as a resource to assist them on their journey. So often athletes in every sport “go it alone” even though a great guide could make the journey faster, easier, more enjoyable, and allow the athlete to achieve at a much higher level. Dr. Rotella outlines a process to “break out” of the normal mediocrity and achieve at any level the athlete desires.

If you want to play your best game ever – that is shoot well and easily and truly enjoy your shooting – you must admit to yourself that you want to be good and that you have the necessary talent to do well. Stop asking yourself “Can I be good enough?” I sometimes ask my students “What would you attempt to achieve if you knew you could not fail?” It isn’t usually a question of “can” an athlete be great; it is a question of “will” the athlete do what it takes to be great. Get over it and get to work! But that's not all. You must truly commit yourself to a process that will improve your game. Dr. Rotella outlines a 7 step process.

1. Choose the right teaching professional.

Not every coach or athlete is a great teacher. The very best serve as a guide, a leader, a resource, a teacher, and an inspiration to the athlete. How does one choose a teacher?

Just because the teacher is not a former champion, it does not automatically mean they are unable to guide you on your journey of reaching your goals. Often, they are more than capable of guiding you. People will argue that they cannot learn from someone who does not (or did not) shoot as well as them, or that the coach doesn’t know what the athlete is feeling. While this is true in many cases, it is not universally true. Such prejudice prevents the athlete from taking advantage of a great teacher.

Conversely, just because a teacher is a former champion, it does not automatically mean they are able to guide you on your journey of reaching your goals. Often, they cannot teach effectively. The majority of athletes are good at what they do, but have less understanding of how they do it, and even less understanding of how to teach it. Happily, there are those who are great at teaching, but they are a distinct minority. Often an athlete will look to an elite athlete as a teacher, when that elite athlete would serve better as a training partner or as friend and inspiration.

You need someone who knows how to teach the sport, how to teach the broader and deeper aspects of the sport and of competition... and most of all, how to teach you specifically.

Whether your teacher is a former champion or not is far less important. This has been proven repeatedly in shooting and in other sports.

You need someone who understands that there is far more to ultimate performance than just getting the physical and technical things mastered. Those aspects are merely the foundation. The mental and emotional aspects of sport performance are far more important, and have a much greater effect on your game, than the physical and technical aspects. To be sure, the physical and technical aspects are critical – foundational – yet the mental and emotional aspects are the keys to unlock your potential. You will fall short of your goals until you also understand this concept and act accordingly.

You need someone who will take the time and effort to understand you and your strengths and weaknesses and guide you accordingly. No cookie cutter teaching at the higher levels! The teaching must become less structured over time, yet more rigorous, and always specific to the individual student. A great teacher will also help you train with purpose, create and maintain a healthy balance in your life, and provide an objective outside opinion.

2. Communicate your dreams and goals to your teacher.

When your teacher knows what you want to accomplish, they are in a much better position to assist you in making it happen. When a teacher and an athlete do not have the same understanding of goals and commitments, it can cause communication problems between them. The teacher ends up thinking the athlete is not committed and the athlete thinks the coach pushes too hard, or the teacher thinks the athlete drives themselves too much and the athlete thinks the teacher doesn't care. Either way, it hurts the process.

There must be a deep level of trust and commitment between teacher and athlete. This takes time to develop and requires constant and clear communication and understanding. It also requires a teacher who is willing to make your goals their goals for you. There will be times of disagreement requiring athlete and teacher alike to stay focused on the long term goals, work through the short term challenges, and be open and honest with each other.

3. Get your teacher to teach you as a student who is serious about improving.

Your teacher must understand that you are serious and want to work hard and are willing to do the “hard” things needed to reach your goals. Rather than showing up and giving you a few tips now and then, you want your teacher to dig deep over the long haul and really show you how to change your game to raise it to whole new levels. Simplistic tips usually go nowhere in the long run. You need solid work over a long period of time.

You want a teacher who will hold you accountable and encourage you. There will be times when your spirit and motivation sag. Your teacher will help you through those times, yet remain sensitive to your needs.

4. Make a plan for improvement with your teacher and stay committed.

Training without developing your own plan is far less effective. Although your teacher can guide you in developing effective goal sets, schedules, and training plans, ultimately they must be your own in the sense that you decide they are in fact what you truly want. Lack of a plan allows the athlete to drift and an improperly constructed goal set actually demotivates the athlete. Conversely, a properly constructed goal set, in concert with an effective training plan, actually helps motivate the athlete. At that point, motivation is rarely an issue.

Teaching without commitment is far less effective. The best teacher in the world is powerless if the athlete is not committed. Similarly, the best athlete in the world is not helped by a teacher that is not also committed. No matter how talented and hard working the athlete is, without commitment to the actual process by both parties the athlete will fall short of their goals.

Remember that your teacher can only be as committed to you as you are to your plan, to your self, and to your teacher. An athlete cannot ask a teacher for more commitment than the athlete is willing to make. Your teacher is making a big sacrifice for your benefit, so you need to match the commitment level that you have asked your teacher to give you.

5. Sustain and honor your commitment.

Lofty goals require a long and often frustrating and difficult journey. Only the athlete who remains committed – through action, not just word – reaches their goals and dreams. You have invested much time and effort in your self. See it through. You must remain committed – to your sport, to your plan, to your teacher, and most of all... remain committed to your self!

There will be difficult moments between athlete and teacher. Open and honest communication is an important part of the commitments each has made to the other. Avoiding a conversation, or your teacher altogether, when a problem arises is unprofessional and is not being honest with your teacher. Communication is most important in the difficult times. Of course, your teacher must reciprocate in this area as well.

Merely being involved in your shooting or waiting for coaches and skills and awards to come to you will get you nowhere. You have to go after it! You must understand the difference between committing to and working toward something instead of merely being involved and “trying” harder.

6. Break old habits and develop new ones.

One definition of insanity is doing the same thing over and over while expecting a different result. Think about it! Champions will tell you that you must have an open mind and be willing to change in order to improve. The challenge is to sustain that attitude.

Champions are different because they are willing to learn. They dare to change their game and their own inner self when needed. We are so worried about score that we refuse to do anything that results in a drop in score. Yet, often we must “back up” out of a dead end in our game in order to take a new course. If we are patient and allow the score to drop, the new direction will result in higher scores once the change is assimilated into our game. Many athletes are afraid of “breaking” their game, refuse to change except very little, and cheat themselves of the possibilities.

7. Practice efficiently and effectively.

Competition is nothing more than a test of what you have really learned. Training should be about learning to compete. Anyone can learn to shoot tens in practice. Shooting tens in a big match is the key.

Are you going through the motions and paying lip service to your self, or are you committed to improving and actually making the effort? Do you shoot a set number of shots and call it a day? Or do you truly use the training time, work on skills, do “hard” work like intensity training or drills that you don’t really like to do but that will make you a tougher competitor?

Your training time is a gift. Your teacher’s time is a gift. Use both wisely.

Putting the process to work.

Sport shooting is generally not a big money sport and does not attract a large number of teachers. As a result, your local school or club coach is the coach you will interact with the most and may even be your only coach. Other athletes have no teacher other than teammates or an interested parent. Commit to your game and communicate with your coach or coach surrogate. You both will benefit!

A good teacher also may be an athlete or coach from outside of your school or club. For example, the best music students learn from their director at school yet they also take private lessons from an outside teacher. It should be no different in shooting. Clinics, camps, seminars, articles, and books also expose you to additional teachers and ideas. You must be able to evaluate all of this information to properly determine which pieces fit your “puzzle” and which pieces, while helpful to some, are not helpful to you. Conversely, coach who says that you should always listen only to that one coach, and no other, is not a good teacher and is giving you some very bad advice.

Great athletes quickly learn to become their own coach. While it is true that you are your own best coach, and must learn to be independent in competition and training, advanced and elite level athletes often do best when partnered with a good teacher. Josef Gonci is a classic example of that effect. He worked very closely with a teacher during the time that he dominated men’s rifle. In our country, Nancy Johnson partnered with Dan Durben as one of her teachers on her quest that resulted in Olympic gold in 2000. Probably the most dramatic example of this process at work is the partnership between cyclist Lance Armstrong and his teacher Chris Carmichael.

Remember that it takes time for this process to work. It takes time each week in communication between teacher and athlete. It takes time for the benefits of your work to affect your results. Sometimes the athlete will notice immediate improvement in some areas. Other times, it may take 6 months for an improvement to become apparent. The ultimate athlete is patient! So is a good teacher.

Your scores in competition and your enjoyment of the sport will both grow immensely if you will allow yourself to actually learn the game – really learn it! However, you must have and actually act on the single biggest thing that is missing in most athletes – true commitment.

Are you committed to your shooting or merely involved with it? What, you may ask, is the difference between being involved in your shooting and being committed to it? An example provides a clear illustration of the difference. When it comes to a bacon and eggs breakfast, the chicken is merely involved. The pig, on the other hand, is truly committed.

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(Biographical information as of October 2009)

On the Firing Line (Twenty-fifth in a series)

Believe

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**“We do what we think.
We become what we believe.”**

This article marks the 25th installment of the On the Firing Line series. At the time of the first article, I never would have imagined the series would still be going strong almost 5 years and 25 installments later. If someone had suggested this would be the case, I would not have believed them. So it is fitting that “Believe” is the title and theme of this article.

When asked what the difference was between a day when she fired a 390 in air rifle competition and a day when she fired a 397 or better, a 19 year old World Cup champion in smallbore rifle replied “The only difference is in my confidence level that day. If I believe I am on top of my game that day, I am. If I don’t believe I am, I’m not.” She didn’t say a word about her technique, positions, shot process, concentration, or anything other aspect of shooting. Just that one concept.

In writing about his study of “flow”, Mihaly Csikszentmihalyi says that one of the critical elements for flow to take place is that the challenge of the task must be well matched with the capability of the performer. Even when this is true as determined by an outside observer, such as a coach, the performer themselves must believe this is the case; otherwise flow cannot take place.

Abhinav Bindra of India, a brilliant technician and performer in our sport, echoes similar sentiments. One may indeed be among the best in the world (as he certainly is), yet one’s training process and schedule must be such that the performer believes they are prepared and able to meet the challenge. If this is the case, he will find himself in the “flow” state or “zone of forgetfulness” when he shoots and the results are world class. Other times, as when competing in a World Cup with very limited training ahead of time due to work and school, or in a new discipline with a new rifle, he may or may not have the same level of belief in his preparedness to match the challenge. This is all very normal and affects the way the performance unfolds. Because he understands these concepts, he is able to plan his training accordingly.

With all the emphasis we place on technical aspects of the sport, such as our equipment and technique, and on the physical aspects including our positions, it seems odd that something as seemingly simple as what we think or believe can have such an impact on our performance. Yet, experience repeatedly shows just how true this is. The stories of two champions lend insight and illustrate this theme quite well.

Rebuild My Confidence

When an athlete loses confidence and no longer believes that they can perform at a high level, it is frustrating, at best. But all is not lost as this athlete discovered.

Despite numerous achievements, including gold medals and at least one record setting performance, this 19 year old athlete was coming off of a season where one thing after another had eroded her confidence and it showed in her scores. Two months before a national championship, she asked an old coach of hers if they could work together to help her work through the current situation. They talked about the situation, her feelings about it, and most importantly, explored her assessment of why she was struggling and what she thought was

needed to break the cycle. They also discussed the coach's observations and suggestions and together they came up with a plan of action.

Some of their training session activities were planned in advance by the coach. At one point, he suggested a short session using a Noptel electronic trainer "just to see" if they might notice anything interesting or helpful to the process. Uncharacteristically, but by design, the coach allowed the athlete to see the instant replay right after each shot. After only the third shot, she commented on how good her hold appeared to be on the computer screen. After she completed the ten shot series, they discussed what she had observed. Once again, she believed in her hold. Progress was being made.

Other training session activities were decided upon almost in real time as a response to observations by athlete or coach of what was happening in the session or what the athlete was noticing or feeling. They used a mix of drills all designed to allow the athlete to rediscover just how capable she really was. The entire two month training program was designed around just that one idea; the athlete must rediscover how good she was and believe in herself again.

At the conclusion of their last training session's wrap up discussion, the coach then asked the athlete to imagine making the final in the air pistol event. Her body visibly reacted in fear. They then discussed the dynamics of a final, and of starting near the back of the pack in a final, along with how she could approach the event in her mind and heart. Once she was comfortable with this idea and felt equipped to handle a final, he then asked her to imagine not only making the final, but starting it in first place. Again, her body visibly reacted. They discussed the very different dynamic that would be at work in that situation, and again how she could approach it. The coach said that he wanted her to be prepared in case those things happened. After all, neither of them could predict the future, and she was shooting quite well again. She didn't believe that she could even make the final, and her coach helped her open her mind to the fact that it might just be possible and that she could perform well in a final.

At the national event, her qualification performances were absolutely dominating. Imagine her surprise when she discovered that she had made the final... and was starting in first place! In the final, she started out quite strongly, then faltered. An 8 shook her up and then she followed with a 5. This stunning development sent a jolt of adrenaline through her like an electric shock. As the scores were read, she worked mightily to burn the extra adrenaline and calm herself before the next shot. Many in the crowd thought she was going to give up on the spot. Though soft spoken, they didn't know how determined this athlete was.

Although "Eights are your friend", shooting a 5 when contending for the gold is quite a challenge to overcome. After calming herself as much as she could after that devastating shot, she was only able to deliver an 8 on her next shot. This was still a great accomplishment under the circumstances. Only with this shot did she relinquish first place! She continued to believe that she was capable of shooting well, calmed herself even more and finished strongly in her remaining shots to claim the gold medal.

Believe In Me

The power of one's belief's about one's ability to perform was made strikingly clear to a young athlete and her coach on a day that made a difference in both their lives.

At the age of 15, and with only 1-1/2 years of shooting experience behind her, this athlete was about to compete in a huge air rifle final round. The hall was packed with athletes, coaches, spectators, and media. Having posted a qualification score that she later labeled as "low", she

found herself tied for 5th place and shooting in the 6th position of the final. She assumed that she would shoot her final and finish somewhere in the middle of the pack.

Realizing this, her coach sat with her for a chat a few minutes before the final. Her eyes grew wide with fear as he started by reminding her that the World Cup champion mentioned earlier had won her gold medal starting in exactly the same situation. He said he didn't tell her this because he expected her to win or that he would be disappointed if she didn't win; he merely wanted her to believe that it was possible. He then went on to invite her to open her mind to the possibilities of what might happen that day. He told her how the others in the final might be approaching the final and how that might open the door for her if she did her part. If she stayed within herself, dug deep inside, and did what she knew so well how to do, anything was possible. Of course, the outcome also depended on how the other 7 athletes performed. But if she did her part, everything else would take care of itself. A year later she would write about the experience in a school essay:

“[My coach], was talking to me before the final started and told me that I could and would win. All I had to do was trust myself and it would happen. I doubted that I would win. I told him “Yeah, right coach, you go on and think that.” But he just told me to trust myself and to take my time and I would surprise myself.

Her first nine record shots all scored 10. At that point she could stand the curiosity no longer and looked at the live update scoreboard. She was shocked to find that she was in first place! Collecting herself, she managed a solid 9 on her last shot for a 99 raw score and a final total over 101. When she realized that she had won, her emotions poured out. Without even pausing to take off her shooting coat, and with tears of joy running down her face, she called out her coach's nickname, gave him a big hug, and said “Nobody believed in me but you. I didn't even believe in me, but you did.”

“[My coach] was the only one who had faith in me to win. All I had to do was trust myself and I could accomplish my goals. My school coach never believed that I could win. My teammates believed in me less. My own boyfriend never really congratulated me or believed that I could win either. My parents were happy for me; however they were just as surprised as I was because of my low qualifying round score. Only one person believed in me and it wasn't even me.”

“The final taught me to believe in myself and that I can accomplish anything. This lesson in what I am capable of greatly shapes how I now approach difficult or impossible looking tasks. I know now that if I only trust myself and follow the task through to the end I can accomplish anything.”

Lucky is the coach who gets to hear the rest of the story. Neither athlete nor coach will ever forget that day.

Final Thoughts

In both of these stories, the athletes were very good technicians and had proven their mettle in competition. Yet, each did not believe they could achieve their goal. In each case the

athletes had a coach help them find a way to overcome that challenge. They learned that, despite adversity and even disaster, they could prevail. They learned to believe in themselves.

Both of these examples also illustrate some of the points discussed in the previous installment of this series on the topic of partnering with a teacher. These athletes were strongly assisted by their teacher through mutual communication, commitment to their common goals and to their work together, and good old fashioned hard work.

Make no mistake, however. Regardless of the coach's contribution, the athlete is the one who must stand all on their own and perform. Even the best coach cannot "produce" a winner if the athlete is not up to the challenge. Both of these athletes were and are winners, with and without their teacher. In the examples, the teacher merely contributed.

We truly do what we think and we become what we believe. If we think we will shoot a bad shot... we are almost always correct. If we believe that we can't ever win, we are right again. Yet, if we think we are going to shoot a good shot and allow ourself to do it properly, it is normally quite good. If we believe that we can win, we are well on the way.

Ultimately, it is the athlete who must do the work, and face the test of competition... and believe.

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(Biographical information as of October 2009)

On the Firing Line (Twenty-sixth in a series)

Culture of Shooters

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**“Nothing is broken.
Stop trying to fix it.”**

Culture has such a fundamental influence on our ways of thinking that we don't realize the effects. Only when people from two cultures meet do the effects become apparent. This is especially true when the people from eastern and western cultures meet. Americans are especially prone to being “culture unaware” because of the size of the country and the resultant geographic isolation from most other countries. For example, American business people must often be taught about other cultures, especially when traveling to Japan or other eastern cultures.

Culture of Shooters

Despite the dramatic differences among cultures around the world, there is another culture that is constant no matter where the athlete calls home. This is the Culture of Shooters. The effects of this culture, as with any other, are so pervasive as to be invisible. There is one foundational concept in this culture: *“There is something wrong with my game and I must fix it”*.

This attitude and approach is so ingrained and taken for granted that it isn't even noticed. “Something is wrong with my shooting and maybe this article will give me an idea of how to fix it.” Sound familiar? Rarely is another approach even contemplated. Shooting isn't the only sport with this culture. Archery, golf, tennis, and most other sports are all a part of his same culture of “fix it” people. Let us learn a bit about this culture and then explore another culture.

The performance of our chosen sport requires complex and intricate movements that are precisely timed. We don't normally do activities like this, so we must learn how to perform the activity. Most people hack away at it while a few seem to stand out above the rest. When you go to shoot, what is your plan? Having no plan is useless. Having a plan to “fix” something is worse! When coach and athlete talk, it goes something like this:

“Fix what?”

“My shot release.”

“What part of it?”

“The part I am doing wrong.”

“What part are you doing wrong?”

“I don't know.”

“How will you know when it is fixed?”

“I will hit the center of the target.”

“What if you don't hit the center?”

“I'll have to fix it.”

“Fix what?”

“My shot release.”

... It only gets worse from there!

So often we hear “Coach, if I can just fix my (fill in blank here), I’ll have it all figured out!” This is wishful thinking and nowhere near the truth. How can an athlete possibly “fix” something or improve without awareness of what needs improvement? The “fix it” mentality uses tips, tricks, hints, pointers and random trial in an attempt to “fix” the problem. Of course, there is no real knowledge of the problem; only of visible symptoms. Improvement is haphazard: “Now I’ve got it! Now I don’t!” One moment; unbeatable – the next; worse than a beginner. Always two shots away from being crazy.

Imagine for a moment that we are both working on our own picture puzzles, each with hundreds of little pieces. Yours is a beach scene and mine is a mountain scene. If you have trouble with your puzzle, I won’t hand you a piece from mine and say “Here, try this. It worked for me in that situation.” That would be absurd! Now imagine for a moment, that our puzzle pieces are all upside down – we don’t know there is a picture on the other side. Every piece is the same solid color. If you ask for my help, you willingly accept the puzzle piece that I offer you from my side of the table because the pieces all appear to belong together. Too bad the piece that worked so well in my puzzle won’t work at all in yours. Athletes and coaches do this all the time! We need to understand what style of “puzzle” is involved for each athlete.

There are different styles and methods of shooting, just as there are different picture puzzles. Bob Foth and Dan Jordan, both of whom have won numerous medals in international shooting competitions (including Bob’s medal at the 1992 Olympics and Dan’s medal at the 2004 Paralympics), have very different styles of shooting. While there are certain underlying principles that their styles have in common, there are any number of significant differences. If the two of them mindlessly traded “tips” then very soon they both would shoot very poorly.

Bob used a method that is very specific and that is not all that common. He did this because certain very specific circumstances forced him to do so. Despite his success with his method, he urged me to continue to train athletes with the much different style that he saw me teaching because his way was harder, required more training, and was difficult to maintain. In effect, he was saying “My beach scene worked well for me because of certain specifics. However, it would be best for your students if you continued to teach the mountain scene and only switched to another scene if specific circumstances require it.” Yet, most of the time, athletes (even many at elite levels) and coaches randomly trade puzzle pieces without realizing what kind of puzzle they are working on. When we have no idea what is wrong or why, or even what kind of technique is being used, we will “try” anything with widely varying results.

How then is it possible for athletes to excel in the sport if they, like most, are in the Culture of Shooters? If an athlete randomly happens to come up with a style of shooting that works for them and trains with it a great deal, they can do quite well with it. They have no real understanding of the process, yet are shooting well. Gary Anderson (2 time Olympic champion in rifle) is often heard to say “A well practiced mistake beats the eternal search for perfection.” By finally settling down and doing something and learning it well, the athlete performs much better than if they are constantly changing things. They got lucky in their “fix it” journey and found something that worked just well enough that they left it alone for awhile. Many athletes do not get so lucky.

Culture of Awareness

How do we break the “fix it” pattern and what do we replace it with? For an insight, let us look at how a small child learns to walk. How many times does the baby fall down while learning to walk? I’m not sure I can count that high! Does the baby set out to “fix” what is

wrong? Does the baby say “Stupid baby!” every time he or she falls down? Of course not! The baby merely becomes aware of what was done and what happens as a result – and then modifies what is done and repeats this cycle over and over. It is really quite simple.

It is time now for some culture shock. Instead of fixing things, we are going to use our awareness to learn what is happening and to learn to discern cause and effect. The new culture says: *“There is something going on in my shooting and I must become aware of it.”* Step to the line with that attitude and resist the urge to fix everything. Just be aware of what is going on. You will be amazed at the insight you gain and then it will become clear what to do differently. This may take time, but it will happen. Additionally, one must be willing to explore doing things differently so that different results might take place. Some will appear to be better and some worse, yet all will provide insight. This is not the same as random “trying” – rather it is thoughtful experimentation based on things the athlete and coach become aware of. Always changing things randomly, or always trying to shoot nothing but tens in practice, will rob you of the opportunity to actually learn what is going on.

When you are training – or competing – and you catch yourself trying to “fix” things, stop and take charge. For example, when coaching or training, I sometimes have to stop myself from falling into the “fix it” trap! Be aware and insight will come to you. Rather than judge and attempt to fix, merely be aware. Rather than focusing on what is wrong, be open to the possibilities of what good things could happen. You could actually hit the center of the target. The people who are the most successful in life are the ones who focus on the possibilities. This holds true in sport as well. Rather than burden yourself with the weight of “broken” shooting, enjoy the uplifting experience of shooting with your focus on the possibilities. The stories of the two athletes in the previous installment of this series provide dramatic examples of the power of considering the possibilities.

One evening, an advanced athlete was telling me about a problem he had noticed and that he (and others) had been unable to fix. There is that word again! They had tried one thing after another to no avail while expending a great deal of energy and time. He described the “problem” to me and we agreed that it was actually a symptom. He was encouraged to not worry about it, to not attempt to fix it, and to merely use his awareness to discover what was really going on. I wandered off to another athlete after we agreed that he could best do this on his own and asked him to get my attention and let me know if he had any questions during the session. Left to his own devices, this advanced athlete did exactly as was suggested. A bit later, having not heard from the athlete, I went over to him and he reported exactly what he had discovered, what he had experimented with as a result of the discoveries, and that the symptom had not only disappeared, but he knew why and how it had come and gone. The issue isn’t likely to return again, nor will it remain unsolved for very long if it does return. He took a step into the Culture of Awareness!

Summary

The Culture of Shooters is so much a part of our shooting that we don’t even know it. No one is immune, not even coaches and elite athletes. Experience has proven this many times over. The Culture of Shooters looks externally to others for tips, tricks, hints, and pointers from others for solutions. External score is a major focus. The mode of operation is: “Observation – Judgment – Reaction.” Inconsistency results.

The Culture of Awareness is a brave new world. Everyone is capable of working in this manner, yet so few chose to do so. The Culture of Awareness looks inside themselves for insight

and answers. Internal performance is a major focus. The mode of operation is: “Awareness – Response”. Competent stability results.

Take your pick! As with any aspect of shooting, the choice is yours.

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Dan Jordan always encourages me in my journey off the beaten path. Dan introduced me to the Culture of Shooters and to Fred Shoemaker’s wonderful book, listed below.

Lauren Herrington, a young rifle shooter, spontaneously created the art work upon hearing of the Culture of Shooters.

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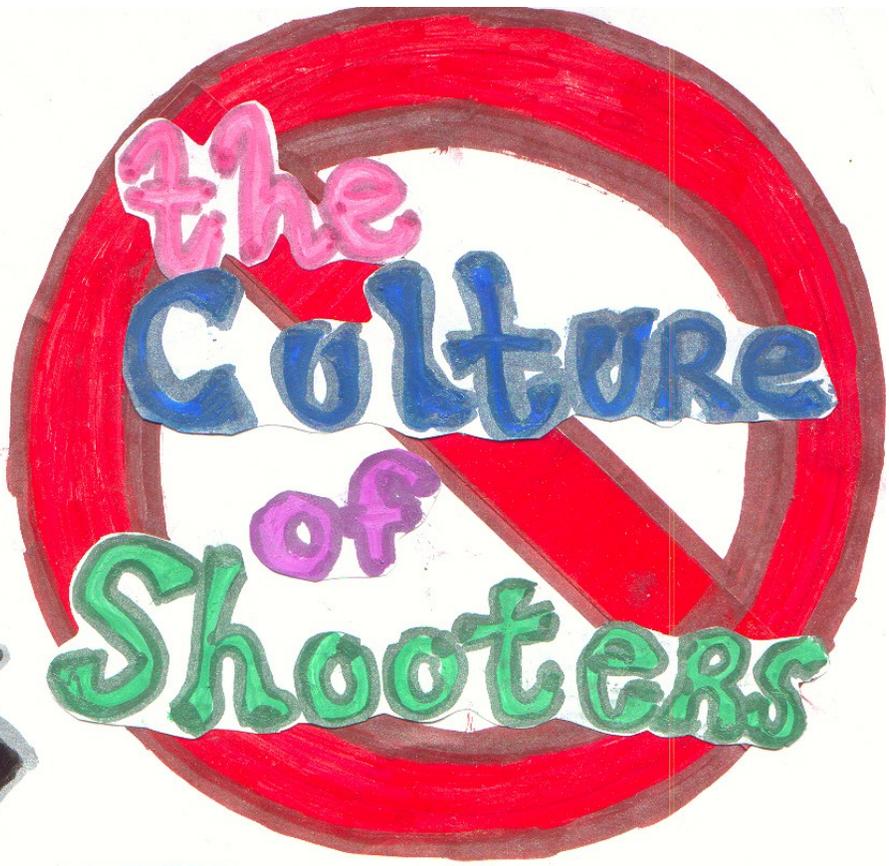
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(Biographical information as of October 2009)

Just
Say
NO
to....
→



On the Firing Line (Twenty-seventh in a series)

Fear and Risk

©2006 JP O'Connor

Dare not, Achieve not.

People don't like mistakes. We aren't kind to people who make mistakes. Mistakes embarrass us and keep us from reaching our goals – or so we think. We worry about making mistakes and we try not to make them.

Certainly in competition we strive mightily to avoid mistakes. In fact, too often we become so obsessed with not making mistakes that we lose sight of our true objective. Instead, we live in fear of the next bad shots. We are always “Two shots away from being crazy.” It should be no surprise then, when our score plummets even though we shot so well in training. We often try to “Play it safe.”

Based on these thoughts, we might conclude that mistakes are bad. This may come as a surprise to you: **MISTAKES ARE GOOD!** Not always, certainly, but in most situations where we avoid mistakes at all costs, we would be better served with a different attitude.

No, this doesn't mean that we should go out of our way to make mistakes, nor should we hope to make lots of mistakes in competition. Rather, mistakes are good when they are used to provide insight into our performance and lead us to improvement. As we grow to understand this, we free ourselves from the fear of mistakes. This frees us to “just do” our chosen sport in a manner that is more enjoyable and which facilitates a much higher level of performance.

One aspect of this line of thinking involves “Eights are your friend.” If we become aware of what led to the mistake, we have given our self an opportunity to actually learn and change and reduce the chances of making that same mistake again. More importantly, we have not been negatively self critical and further heightened our fear of failure. “Mistakes are normal and I can learn from them if I will allow my self to do so. They are **NOT** a reflection of my self worth!”

Another aspect involves the debilitating effects of fear. We have all seen automobile drivers that were so timid as to be dangerous to themselves and others. We may have experienced moments when were frozen by fear or at least were not able to perform our best due to fear. What is it that we fear? In competition, we fear nothing more than making a mistake.

Is it possible to enter a burning building to search for people – without fear? Is it possible to force one's self up a stairway of a burning building while pushing back a wall of flame with the water stream – without fear? Is it possible to go over the edge of an overhanging cliff 150 feet above the valley below held only by one small rope – without fear? Is it possible to ride a motorcycle at 190 mph on a racetrack or 140 mph on a small country road – without fear? The answer to each of these questions is a resounding “Yes!” In each of these endeavors, the inherent danger brings an amazing level of focus and clarity of thought into the mix. How does one learn to do these things without fear? The answer is deceptively simple. One must learn the activity so well that there is no concern or expectation that mistakes will occur. Although we learn how to release the shot, we don't really learn the sport to the degree that we truly understand what is going on with our performance and why we get different outcomes. Thus, we fear mistakes instead of just shooting... and accepting and learning from the few mistakes that are made.

In our sport, there is no danger of physical harm from missing the center of the target with our shot. Lacking this physical danger, and lacking the overwhelming sensory inputs of the examples above, we are not forced by survival instincts into the clarity of focus and thought that we need. Nor are we forced to learn the activity so deeply that we truly understand its subtle dynamics. Instead, most participants learn to a much shallower level and allow fear of much different kinds of “danger” to engulf us. What kind of fear? Embarrassment! The fear we carry leads us to exactly the result we fear. It becomes a self-fulfilling prophecy.

One aspect of fear that isn’t as obvious is the fear of not being in control. Those who learn our sport to the deepest levels (and they are in the minority) come to understand intuitively that ultimate level shooting demands that the “active thought, take control, pay attention” part of our mind must completely relinquish active control of the shooting. There are many top athletes and coaches who will disagree vehemently with this statement. Yet human physiology and psychology show the statement to be true. Although many athletes do achieve great success using active control, this is a path that is far longer and more difficult. We are taught to “pay attention” and “take charge” and control our actions. Time and again, at the beginning level, at the Olympic level, and everywhere in between, athletes have “taken control” and failed miserably. The earlier articles on choking provide insight into this mechanism. Those who learn to “give up” active control find themselves performing on an entirely different plane.

In major competition, we act as if a mistake has the same consequences as a mistake made inside a burning building. Unlike the firefighter, we have not trained our self to the degree that we truly and deeply understand the situation and therefore have very little to fear from it. We don’t understand “flow”; we don’t understand why we get seemingly random bad shots; we don’t understand why some days are better than others. Therefore we are filled with fear. It doesn’t have to be this way.

We begin in training. Here, the coach and athlete can create a safe environment where the athlete feels free to experiment and do seemingly outlandish things. (Always shooting for score and being critical of any score drop is emphatically not a safe training environment! It only increases fear.) Naturally, many of the experiments will show what not to do. Interestingly, many of them will lend insight to positive changes or refinements that otherwise would have been overlooked. The athlete cannot “break” their game doing this. Merely returning to what was done before allows them to return to what they were comfortable with doing originally. The athlete learns to experiment, then return to what they did before if the experiment shows no benefit. The athlete also learns to incorporate the results of successful experiments.

Once the athlete experiences this, they become more receptive to experimentation and they realize that the larger groups and lower scores are only a very short term consequence that rapidly changes to even tighter groups and higher scores than before. Be careful not to fall into the “fix it” mentality of the Culture of Shooters. Instead, use awareness and creativity and, after proper consideration, be willing to risk doing something different.

The real challenge comes in competition. Here, we care very much about the outcome. Our natural inclination is to abandon the lessons learned in training and take control and be careful all over again. We must be aware that we are doing this, make up our mind to not accept it, and then decide to go about our business in ways that we have learned actually work. Again, this starts in training. Intensity training is critical to this process. The athlete cares deeply about the outcome and/or is placed in a situation where they are very likely to be careful or play it safe. If they follow their natural inclinations and old habits, they will take control and fail. In time, the athlete learns that they can perform well when their heart is pounding and there is time pressure

and someone else is about to beat them if they falter. The best intensity training produces very high levels of internally generated pressure. At first, incredible failures are often seen. Yet, the athlete gains insight, alters their mindset, and performs better the next time. The athlete eventually learns how to “compartmentalize” or block out the internal fears and concerns and discovers that they are now free to “just do” as they always wanted to. Athletes discover that their favorite training activities are the hardest intensity drills! They enter competition with high levels of confidence and competence.

Fear of the unknown disappears when we eliminate the unknown. There is nothing mysterious or fleeting about being “in the zone” or in the “flow state” of performance. There is nothing random about rock solid steadiness and balance on a given day. There is nothing mysterious about obtaining a world class hold. There is no deep secret to smooth shot release. There is nothing mysterious about shooting deep ten after deep ten in a carefree manner. Yet we tell ourselves these things are difficult or unknown and fight ourselves and build our fears. True, many of these things seem mysterious or difficult, and many are not blatantly obvious as we read books on the sport, yet the information and techniques are available. Our fear of change and failure –and our fear of being different – block our way.

In the words of Franklin Roosevelt, “The only thing we have to fear is fear itself.”

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(Biographical information as of October 2009)

On the Firing Line (Twenty-eighth in a series)

Great Expectations

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**Give it up,
And it will come to you.**

Her face showed joy, excitement, and a deep quiet confidence. As Sasha Cohen took the ice at the 2006 Winter Olympics for her original (short) program, you knew that this was going to be a very special performance. Indeed it was! She had the performance of her life!

Two nights later, as she prepared to skate her long program, her face showed something completely different. With a razor-thin lead and her lifelong goal within grasp, Sasha's face showed tension, nervousness, anxiousness, and possibly a hint of fear. It was clear that this performance was in jeopardy. Her very first jump resulted in a fall, and her second one nearly ended the same way. Only her hands on the ice prevented a second fall. Now missing many critical points, it was clear to her that gold, and possibly any medal at all, was now beyond her reach that night. She gathered herself and skated beautifully from that point on. Because of the strength of her performance after the falls, and falls on the part of some of the other competitors, Sasha earned the silver medal.

A couple of important lessons may be learned from Sasha's performances those evenings. One lesson is that a competition is not over until the rules and officials say it is over. If Sasha had given up after her miscues, she would have walked away without any prize. Instead, she toughed it out. She dug deep inside herself and never gave up. Not on herself and not on the competition. Anyone who comes away with an Olympic medal has accomplished something very special!

The main lesson of this story is the primary topic of this article. Expectations are a very normal part of sport and competition. Yet expectations are one of many aspects of outcome that we cannot directly control. Did Sasha expect to win? Given how tightly bunched the scores were, that is doubtful. Yet she carried the burden of so many expectations – from herself, from her coaches, the media, and many others – that it affected her mental and emotional state as she took the ice for the final program. Of course, without speaking with her, one cannot possibly know all of the thoughts and feelings she had at that time. Also, the fact that she had to wrap her leg and was flirting with possible injury certainly could have been a factor as well. She is hard working and wonderfully talented, so I suspect we haven't seen the last chapter in her skating career!

We are human beings with blood pumping through our body and with thoughts and hopes and dreams and fears and goals and desires running through our mind and heart. We don't invest a decade or more of our life to a pursuit without hope of someday winning the big prize. Yet, it is these expectations that often stand in the way of reaching our goals.

Almost anyone can learn the mechanics of a sport. They can learn the equipment, how to adjust it, the procedures and moves, refine them, and approach a decent level of performance in training. Many go on to a very high level of performance in training. Yet the essence of sport is the journey of learning how to perform at a very high level – when we care about the outcome! This adds an entirely new and tricky dimension to the game.

It is funny how things work. To determine the winner in many sports, we add up the points and the high score wins. This is true of shooting, archery, basketball, and many other

sports. In some cases, we use reverse or low score as in golf. In still other sports it is the fastest time (skiing, running) or greatest distance (high jump, long jump, ski jumping, and others). Regardless, there is some measure that we use to determine the winner.

Paradoxically, how we go about performing, and thus winning, is quite different from how we determine the winner. In order to get the score we have to perform certain actions, moves, or maneuvers. These are often quite unrelated to the actual measure used to determine the winner. It is this difference that allows expectations to degrade our performance.

Activities in the class known as “complex sensorimotor tasks” are best performed when the activity has been well and properly rehearsed and when the body and deeper parts of the mind are allowed to manage and control the performance. Golf, shooting, and archery are three examples of this type of activity.

Yet, all our life we are taught to “pay attention” and “take control” whenever the outcome is important to us. Therefore it is only natural that, when we really care about posting a good score or winning a competition, we use the active thought part of our mind and attempt to micro-manage the performance. While this works well for certain kinds of tasks, such as doing mathematics work, it is completely the wrong approach for complex sensorimotor tasks. Instead, we need to “back off” and get the active thought part of our mind (and our ego) to give up control (or more correctly, give up the illusion of being in control) and allow the body and deeper parts of the mind to manage the process. When the active thought part of the mind exerts control, the performance suffers – often fatally.

We need to learn and develop the ancient oriental technique of compartmentalization. Simply stated, we need to separate “outcome” from “performance” (or “result” from “doing”) in our mind. Outcome is something over which we cannot exert direct control. Therefore we cannot ensure the outcome. Yet we so often “take control” (or so we think) in an attempt to ensure the outcome! We need to realize that outcome is beyond our direct control, and that our performance, that is how we go about doing the activity, is directly under our control. We can reject the shot if it is not unfolding properly. We can calm our mind and “just shoot” as so many people say. One of the first keys to doing this is separating outcome from performance in our own mind. Until the competition is completed, outcome is just more baggage that will degrade our performance unless we leave it outside the range.

Does this always work the way we want it to? Of course not. Just like any other technique or skill, it comes through training. Make up your mind to separate outcome from performance in your thinking. Make up your mind to reject the shot when you catch yourself trying to actively control the shot or even when you notice you are thinking about score or any other aspect of outcome. Continuing the shot in those circumstances is a far greater error than if you feel some physical error and don’t reject. It is that subtle and that powerful. Be patient with yourself and the process. After all, you didn’t get to your current level of performance in just one day.

One of the critical elements is to totally relinquish control. Give it up! The active thought part of your mind – the one with the ego and the little voices – will scream and you will fight yourself to do this. It may be quite challenging to relinquish control. The vast majority of the athletes who are at the very top of this game, and who stay there year after year, all shoot this way. Yes, there are always exceptions. However, their journey is generally longer, harder, and the results are usually less sustainable. Dare yourself to get outside your comfort zone and experience a whole new dimension of performance!

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(Biographical information as of October 2009)

On the Firing Line (Twenty-ninth in a series)

Deliver the Shot

©2006 JP O'Connor

Hold is nothing, Without execution.

“I have lots of athletes on my teams that have awesome holds and who can’t execute the shot!” The speaker was not a local club coach talking about developing athletes. This was a National Team coach in October, 2005 talking about several of the junior and adult members of the National Teams. Of course, these athletes do execute the shot. What the coach meant is that too often the shot executions are tentative and therefore often fatally flawed.

Certainly a steady hold is a critical component of any good shot release. The hold must be steady enough that the athlete trusts that there is sufficient steadiness to allow a good result. It is this concept of “trust” that provides the critical element in the actual shot delivery. We will discuss hold because it is a major foundation of shot delivery, then we will explore the actual delivery itself.

Hold

Developing a world class hold, while seemingly a mysterious and slow process to many coaches and athletes, should be straightforward and fairly rapid. There are a number of essential elements.

Physical Position – Many books and articles are available to teach us the proper techniques for building our position. All sorts of rules, principles, and hints are available. Coaches and fellow athletes are a wealth of information and experience. Despite all of these resources, we so often overlook or do not fully utilize the three most critical and fundamental elements of all: bone, bone, bone!

Muscle not only fatigues, it vibrates. Even when holding a smallbore rifle or heavy pistol in the standing position, or a fully drawn bow, the very best athletes are using a surprisingly small number of muscles and have very low levels of contraction in the few muscles that are being used. Examine your position, stop shooting for score, and really notice where you have muscle tension and why. Often, opportunities for improvement are to be found.

Balance – We seem to be at the mercy of our balance each time we shoot. Either our balance is “good” today or it isn’t. Notice that balance actually isn’t random. Notice that we are “falling” one direction (usually forward) and “correcting” the opposite way. By making very subtle adjustments to the positions of our feet, usually just in where they are pointed, we can in essence “tune” our balance until it almost appears that we aren’t swaying at all. This may vary from day to day, but we have the power to tune it to be the best it can be each day. Athletes who have worked on this for a long time notice that the technique actually works better over time. Balance training improves this to the point that many athletes appear to stand essentially motionless at the critical moments.

Relaxation & Natural Aim – If our natural aim area is not truly aligned with our desired aim area (the target), the hold will open up considerably due to the slightly increased muscle tension introduced to push over to the desired aim area instead of allowing natural aim to take place. We must think of natural aim as “Where does it want to point?” Normally, we want to

impose our will and have the aiming point where we want it to point. Actually, you do not care where you want it to point – you just think you do! Instead, you care about where it wants to point. (Often called the Natural Point of Aim) If we discover where it wants to point, and then adjust our position properly, we eventually align where it wants to point with where we want it to point. Now we can accomplish something!

While adjusting the natural aim, we must not undo the careful balance tuning that we just performed, even though some of the adjustment techniques involve changing the position of the feet slightly. Therefore, it is imperative that the athlete optimize both balance and natural aim. Awkward and seemingly difficult at first, this becomes second nature in time.

Approach – One must approach the area of aim exactly the same way each time. One cannot approach the aiming mark from one side, then the other, then from below, then from high and to the left, and so on, from one shot to the next. Instead, always, always approach the aiming area from the same direction and in the same manner. This technique doesn't get as much discussion as many other topics, yet is very powerful.

If your position is solid, if your balance is well tuned, if your natural aim is truly aligned with the center of the target, and if you approach the target consistently, you will discover that your hold will become essentially motionless within the first few moments of arriving on the aiming area, and that it will remain that way long enough to calmly and cleanly deliver a shot. There are coaches, athletes, and even National Team members who protest that the hold is never essentially motionless. They are invited to explore these techniques in more depth – and to discuss them with athletes, even as young as age 13, who experience this phenomenon on a regular and frequent basis.

Quiet Mind – Brain waves open up the hold. Yes, merely thinking opens up the hold! That voice chattering away inside has an even worse effect. This is only one of many reasons why it is important to learn to let distracting thoughts run out, or take control and quiet them, before starting to aim. Additionally, if you are thinking, or “checking things” before you give yourself permission to shoot, you are not in a proper mindset and are causing your hold to open up.

Quiet Eye – How we use our eye while aiming also has a significant effect on hold. Looking around, from sight to target and back, looking at different parts of the sight, and so forth, all cause movement in the hold. Instead, allow your eye to “quietly”, or steadily, rest on one spot. One tiny little spot and not move the eye at all. Everything you need to see will come to you.

Delivery

Sight Picture – The sight picture itself has a profound effect on our ability to execute the shot. In rifle shooting, there is a virtual epidemic of front apertures that are too small. If a front aperture is only 0.1 mm (yes, only 1/10th of a millimeter!) too small from optimal, it has devastating effects on the athlete's ability to execute in almost all cases. Interestingly, the aperture may be as much as 0.5mm or 1.0mm larger than optimal (or even more) with great effect. A number of elite athletes actually use quite large apertures. Although this runs counter to “conventional wisdom”, it has been borne out by controlled tests and numerous field tests with athletes at all levels.

Do not move your eye around the white ring to check it nor must the eye be used to bounce around from place to place on the white ring to check it. This violates the critical

principle of quiet eye, opens the hold, reduces confidence, promotes hold as a verb, and often destroys quiet mind.

In pistol, many athletes would be well advised to not use the “six o’clock” or “thin line of white” hold. The precise nature of the tiny hold “area” promotes hold as a verb, and again destroys quiet mind and quiet eye. Instead a center hold or a deep in the white hold – with the eye quietly resting on the middle of the front sight (not the top edge or anywhere else) – has amazing results. Note that the deep while hold is never intended to be “measured” by making the width of the white between the bull and the front sight equal to the width of the gaps on either side of the front sight, as is often taught. Doing so promotes eye movement and “checking”, which have already been discussed.

Having said all this, it is important to note that the six or thin line holds are used by many very successful pistol athletes, even at the highest levels. Many beginning, advanced, and recreational pistol athletes would be better served by the other aiming methods.

Hold as a Noun – Often the concept of “hold” is thought to be a verb, meaning something we do. “I have to hold it still!” This results in a very erratic hold and wastes lots of physical and psychological energy. Instead, think of “Hold” as a noun, meaning something that is. Our hold exists as a result of our physical foundation. The hold becomes amazingly steady, but only on the natural aim area. Nowhere else! The majority of athletes do not give natural aim enough attention, and are constantly “pushing” toward the desired aim area and away from the natural aim. The hold opens, and then the athlete will “try” to hold still. Relax, and enjoy the steadiness as discussed above in the natural aim paragraph.

Release – Many athletes release their shot “on command” by deciding exactly when they want it released. This is often due to not having a good hold and trying to catch the ten ring as it goes by. We call these “drive by” tens and they aren’t very reliable. To be sure, many elite athletes use shot release that is actively controlled with excellent results because their hold is quite solid. This style of technique requires much more training, is somewhat less reliable, and more prone to breakdown in the highest levels of competition. Therefore, while often used, and sometimes used quite well, the technique is not optimal.

Instead, having prepared the foundation using the program outlined in this article, the athlete has the confidence to preload the trigger by actually adding and maintaining some pressure to the trigger (yes, even to the 2nd stage on a 2 stage trigger) prior to arriving on the area of aim. Note that ultra-light triggers work against the athlete here. When “all the pieces of the puzzle” of this program are put in place, and that does mean every single piece as a unified whole, then the shots will soon almost seemingly release themselves. Often the athlete will be amazed by the difference in how they feel and in what is happening inside, and will also know the shot is very deep with no need to look in the scope. They also comment that they are the “easiest” shots they have ever fired.

Note that some coaches and athletes believe that this style of shot release is a huge mistake and to be avoided at all costs. Actual work in the field all around the world has shown the value of this technique.

To be sure, there are other techniques that are used to great effect. This technique is robust, repeatable, and holds up well under pressure. Very few techniques can stand the heat. Also, it has been found that this technique actually facilitates entering the flow state or so-called zone. Athletes have found themselves in the flow state – often for the first time – and discovered an entirely different plane of performance in as little as three days of carefully planned and structured training and in some cases in less than one day.

Athletes and coaches are encouraged to fully explore this program. Warning: merely picking and choosing elements of the program will rarely yield satisfactory results.

Focus Through – In baseball, golf, tennis, shotgun shooting, and many other sports, the concept of “follow through” is quite clear and understandable. In the context of rifle or pistol shooting, or archery, where the athlete is shooting at a stationary target, the concept seems less clear to many. Instead, think of the concept as “Focus Through.” As the shot is released, continue to maintain physical position, balance, natural aim, quiet mind, quiet eye, and just observe. In effect, pretend the shot has not been released. In rifle and pistol shooting, keep the trigger finger back instead of allowing it to come forward after the release. In archery, make no movement, even of the release hand.

Final Thoughts

This article is merely an outline that barely scratches the surface of the topic or even of the specific program presented. To do so will take several long chapters in a book. Hopefully the reader will glean some insights into a world of effortless ultimate level performance. Think about these techniques in the context of many of the previous articles, which have dealt with the athlete’s mindset. Those components are even more critical than having a good hold or preloading the trigger! All are required – else the puzzle is incomplete and the results are mediocre. Enjoy your journey of self discovery!

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(Biographical information as of October 2009)

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.

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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 and 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)

On the Firing Line (Thirty First in a series)

Attitude Is Everything

©2006 JP O'Connor, Kirsten Weiss

**You cannot control what has already happened;
You can control how you react.**

The previous two installments of this series have scratched the surface of advanced techniques for shot delivery that are robust and stand up in the heat of competition. Most anyone can learn to shoot a gun, swing a golf club, or draw and release an archer's bow. Learning how to do these things in competition is quite another story. Even with the most robust and well-practiced techniques, one must also have the appropriate mental and emotional skills and attitudes in order to thrive in competition.

One of the best illustrations of the importance of this concept is described in an essay "Attitude Is Everything" that Kirsten Weiss wrote upon her return from the World Shooting Championships in Zagreb, Croatia in July 2006. She has graciously agreed to share her essay with us in this article.

Gliding through the sea on her surfboard, Bethany Hamilton searched for the next wave she would ride to shore. Without warning, a shark came up and bit off her arm, sending shock, fear, and panic piercing into everyone around her – but not Bethany. Bethany looked at her friends and wondered why they were upset. She was aware of the problem, but remained unbelievably calm, swam to shore and got help.

Why was Bethany so calm in the face of such a horrific situation?

A similar situation occurred in the Amazon jungle. A doctor was approached by a boy for help. His arm was partially amputated and yet he climbed and crawled through miles of jungle to get to the doctor without a trace of panic. In this situation, the doctor immediately went to give the boy a shot of Novocain and the boy screamed from the prick of the needle. Why hadn't he screamed over the much larger injury that almost certainly gave him more pain?

Our brains are amazing. In a panic situation, where we are injured, it shifts into survival mode. After the initial pain, our brain already knows that our body is hurt and needs attention. To let the pain continue would only hinder our ability to seek help or help ourselves. The reason why the little boy was so aware of the tiny pain from the needle was because it was a new sort of pain. His brain was alerting him once again to be aware that something wasn't quite right.

Now take a different situation.

You are at World Championships. You have been training very hard for this. You are into standing and are shooting decently. Things are going fairly smoothly. BAM! The screen flashes: 6! You are shocked! You think, "I haven't done a shot like that in a very long time, and I do it in World Championships?"

How do you respond?

Or take another situation, much less dramatic but equally as significant. Again, you are on the line at World Championships, but this time it is in the prone competition. You are

shooting your shots one by one, it's not too bad, but you're aware of something. You have this low underlying buzz, like a mosquito flying around your head whispering, "Something's not right." But you can't put your finger on it for almost the whole match. Then you put your finger on it – literally. Your trigger is malfunctioning and has been intermittently the entire match. It is not over yet. You have 19 shots left. What do you do?

As shooters, we experience situations, both mentally and emotionally challenging, and there is no automatic "survival mode" that our brains can just kick into with ease. In both these situations it is critically important how we handle them. That makes all the difference between a good performance and one that we might as well not even have shot. When we shoot a bad shot, we may very well feel like we have just been attacked by a shark, caught off our guard, and not sure what the next move should be. Do we let panic set in? Do we embrace the adrenaline and let our body race as much as our mind? Do our minds immediately flood with negative thoughts, seeking to blame something. The heat, the range, ourselves...

Or is the problem less pronounced. The match isn't going as you thought it might. You try everything you know, but the needle prick of less-than-perfect shots is telling you to be aware that something isn't right. You check everything you know to check, and still the problem stays. Your time is running out, you have to keep going. What happens to you at this point? Do you get frustrated and mentally give up, throwing shots indiscriminately down range? If and when you realize the culprit, what is your next move?

The previous two shooting situations happened to me while I shot in the World Championships this summer. Both were unexpected, but not improbable or unforeseeable.

Going into a match it is good to have a thorough plan, but not a rigid one. This means that you should think about situations that could occur in the match both good and bad, and what your plan will be in those cases. Your plan should be like a tree. If you just have one rigid stump of a plan, if something goes wrong you have nowhere to go. You should have a main plan, with specific alternate plans branching off in case you need them.

But, the most important thing is how you handle initial disappointment or even panic. If you let it overcome you, then no plan in the world will save you. During my matches, I knew this was critical and I'm not one to easily let negative talk or panic take over. I kept talking positively and trusting myself, and knew that one simple shot did not define me. In prone, I became aware of the trigger problem, knew I couldn't have it fixed and finish the match in time, figured out how I could work with the trigger to finish the match and decided that I'd finish strongly. 19 shots left. 19 shots fired. 19 tens recorded.

The bottom line is: Let nothing shake you. You can not control what has already happened, but you can control how you react to it. Don't let the past define you. You are defined by your future.

You know what Bethany Hamilton is doing right now? She is surfing. With one arm, she has adapted and surfs without fear of the past. Did she foresee that the shark would bite her? Of course not. Was it improbable? No, sharks occasionally bite surfers. But when it happened, it was certainly unexpected! Yet, Bethany followed an alternate plan, and she keeps surfing, even training for competitions. Maybe she will win a championship one day; she definitely has the attitude for it.

Two thirds of the way through her prone competition, fate handed Kirsten a perfect excuse to have a poor performance. After all, everyone knows how important the release of the shot is and how critical a role the trigger plays in that part of the performance. Yet, when her trigger malfunction finally manifested itself at World Championships, she got over her initial shock and fear. Instead of giving up (even though she had the perfect excuse to do so), she dug deeply and took control of her emotions. Nineteen tens in a row is not a bad finish in any situation! After the competition, her trigger was replaced so she had to adapt to a new feel for her three position competition, which she did quite well.

In competition isn't the only place where Kirsten's attitude serves her well. She works very hard at her game, constantly striving to improve her techniques – physical, technical, mental, and emotional. She will not settle for just “good enough” in her shooting.

Just before leaving for the world championships, Kirsten was working hard to become even better at handling pressure situations. One evening, she settled into the standing position to shoot 50 meter smallbore outdoors, sensed and tuned her balance, sensed and tuned her natural point of aim, optimized them to all work together, did some dry firing, then shot some sighter or “warm-up” shots. Then her ammunition was taken away.

One cartridge was brought to her and she was told, “Shoot an X!” (This is the small ring inside the ten ring.) She gave a funny look and then went to work. When she reported that the shot was not an X, but that it was a ten, there was no comment given to her, another cartridge was brought to her, and she was again told: “Shoot an X!” This went on for a number of shots, with her frustration and adrenaline rising with each missed X. She collected herself and started getting a number X shots while still collecting a few tens. Finally her ammunition was brought back to her and she was told to “Just shoot until you have a total of 5 tens.” Seven or eight shots later, she had her 5 tens.

When asked for her observations, one of her comments was quite insightful. “When I had to shoot X ring shots on each and every shot, my mistakes were tens. When I was told to shoot some tens and the number of shots didn't matter I felt the pressure come off... and my mistakes were nines.” You could almost see the light bulb go off in her head! We accept nines! Even our attitude about what is “good enough” has a profound effect on our shooting. (Note: This drill, only partially described here, was very demanding and could only be done because the athlete is advanced and could handle the intense pressure because the task, while difficult, was possible for her. If using this type of technique with other athletes, it must be appropriately scaled to their level of development. The goal here is to place the athlete in an intense situation and allow them to learn that they can perform well in such situations. If the task is too difficult for the athlete, the result is demoralization, not learning.)

Later, on her own, Kirsten imposed a similar drill on her self. She was shooting smallbore prone and demanded 10.7 or better from herself. (An X is only a 10.3 or better.) After shooting a few 10.7 shots in a row, she kidded herself good naturedly about “only” shooting the “minimum” of 10.7 that she was demanding of herself. So she decided to go for a 10.8 or better... and the very next shot was a 10.8! Regardless of whether she made the scores or not in those drills, the key point is that she challenged herself, felt the pressure of a desired outcome, and learned how to deal with those feelings to calmly perform even better. Kirsten is one of those athletes who understands how to train and raise her game to ever higher levels. Her attitude is what makes this possible.

Attitude is everything. It affects how we learn, or even if we learn at all, and how we compete. Take charge, take responsibility, and take it on! Enjoy!

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Thank you to Kirsten Weiss for sharing her wonderful essay and stories.

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(Biographical information as of October 2009)

On the Firing Line (Thirty Second in a series)

Goals as Motivation

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**“Virtually every athlete who consistently wins uses some form of goal setting”
(US Olympic Committee Sports Psychology Program)**

You can almost hear the outcry: “Not another lecture on goal setting! We have heard that lecture a million times! I hate doing goal setting; I never know what to write and it does not motivate me at all!” These and similar sentiments are expressed by many athletes. How can this problem be resolved? What is an effective strategy for goal setting that is useful to the athlete? Can goals actually become motivators rather than just a painful chore performed to make the coach happy?

When Dan Durben rewrote the Civilian Marksmanship Program (CMP) 3 Position Air Rifle Summer Camp curriculum in 2004 (and revised it again in 2005 and 2006) with assistance from Dan Jordan and this author, we placed a strong emphasis on turning theory into action. Dan’s presentation on the topic of goals is a classic example of that teaching strategy in action and provides athletes with a way to learn to use goal setting as a powerful tool in their development. This article is adapted from that presentation.

Top athletes realize that effective goal setting is an integral part of their success. Goal setting gives an athlete an edge in:

- Direction – Goals tell you where you need to go and how to get there. “What do I need to do today to take me one little step closer to my goals... and my dreams?”
- Feedback – Goals tell you when you are making progress. You can tell if you are making progress or not, and in which areas. This allows you to alter your plans and training as needed.
- Motivation – Goals keep you going when you might otherwise give up. “I really want (a specific goal) and I know if I follow my plans I can accomplish what I want.
- Confidence – Goals provide the plan that make success more likely, rather than merely being random, which raises confidence, especially in competitions

Effective goal setting changes behavior. Merely setting a goal, or writing down a dream, does not make anything happen. This is no different than learning a new technique. Ultimately, it comes down to what the athlete actually does. Does the athlete actually change behavior in order to improve? An old joke states that one of the examples of insanity is doing the same thing repeatedly and expecting a different outcome. A dynamic set of goals that the athlete works toward and modifies as circumstances dictate aids the athlete in actually changing behavior to improve.

Training is more productive, with more done in less time when goal setting is properly used. Imagine going to every training session with a plan of action so that the athlete knows exactly what needs to be done during that particular session. There is no time wasted in deciding what to do today nor is time wasted in activities that do not aid in reaching the goals.

Competition behavior is more focused resulting in less nervousness, again because there is a plan that has been planned ahead of time. The athlete knows what to do and how to do it.

Effective goal setting becomes a habit. Goal setting is most helpful when it becomes an automatic part of your day. Taking a few minutes each day to review and possibly revise your goals provides a chance to think about what was accomplished today, plan the activities for the next day, reflect on accomplishments already achieved, and to think about the future.

What are effective goals? Effective goals are SMART:

- Specific – Goals must specifically state what is to be achieved or performed. “Doing better.” is not a specific goal; it is a wish.
- Measurable – Goals must be measurable or in some manner have a way to tell if they have been achieved.
- Applicable – Goals must be relevant so that if time and energy are spent in reaching them, they actually aid in reaching the athlete’s long term goals.
- Realistic – Goals must be attainable yet challenging. If the goal is too easy, the athlete is bored and is not motivated to strive for improvement. If the goal is too hard, the athlete is demoralized and again does not strive for improvement.
- Timely – Goals must include a time component or time limit. Without the timeliness component, the goal is still only a dream or a wish. Even long term goals must have a time associated with them. This part of the goal focuses the athlete on thinking about what they need to do now.

Notice that this version of the “SMART” goal setting strategy differs from some of the more common versions. This is by design. The “A” for “Applicable” is important since not every goal is applicable to the athlete’s situation. Just because a particular goal is set does not mean that achieving it will assist the athlete in reaching their ultimate goals. Thus the important step of evaluating the relevance of a particular goal to the larger picture. In many other versions of the “SMART” strategy, the “A” stands for “Attainable”, which is discussed in the “Realistic” section.

Based on the “SMART” criteria, it becomes easy to spot wishes and dreams that have not matured into real goals. The most common “goal” is “I want to do my best.” While this is a good and true wish or desire, it is not a goal. Even the often heard “I want to win.” falls into the same category. The statements are not real goals because they lack specifics and a time component, among other problems.

There are three types of goals that are important to a complete set of goals. Note that these types also differ from many traditional presentations on goal setting.

- Outcome Goals – This type of goal covers those things over which the athlete has no direct control: win, medal, make a team, get a certain score, or make progress from current average.
- Behavior Goals – These are goals that are based on specific behaviors related to good performance – what you have to do to achieve the outcome goals.
- Action Goals – These are very specific actions taken to achieve the behavior goals.

A simplistic example might look like this.

- Outcome Goal – I will shoot a 90 in standing today.
- Behavior Goal – To accomplish this I will make sure my standing position is set up correctly on each shot.
- Action Goal – To accomplish this I will place the butt plate of my rifle in the same location in my shoulder on each shot.

More typically, each outcome goal will likely have many behavior goals associated with it. Each behavior goal will, in turn, have a large number of action goals associated with it.

The strategy for using these types of goals is: Set outcome goals, set related behavior goals, set related action goals, achieve action goals, achieve related behavior goals, achieve related outcome goals. All along the way, adjustments are made to the goals as circumstances dictate.

This strategy is used for both long term and short term goals. Long term goals, especially long term outcome goals, are the ones that motivate and excite the athlete. Short term goals are the ones that impact behavior now to take the athlete just that much closer to reaching those big goals. Only by having the shorter term goals can the longer term goals be reached, regardless of whether they are action, behavior, or outcome based. Long term goals don't work unless they lead to short term goals that impact behavior now. Similarly, only by having action goals can behavior goals be reached and only by having behavior goals can outcome goals be reached.

Here is a very small example of long term and short term goals working together as a set.

- Long term goal set
 - Outcome Goal – I will medal at the 2007 Junior Olympics.
 - Behavior Goal – I will be able to stay relaxed and focused on each shot during the competition.
 - Action Goal – I will practice relaxation and imagery three times a week.
- Short term goal set
 - Outcome Goal – I will shoot ten 10's in standing during training today while my teammates are watching me.
 - Behavior Goal – I will stay relaxed and focused on each shot today.
 - Action Goal – I will use imagery to visualize a perfect sight picture during each shot.

Of course, this is a very small, simplified example showing only one goal at each level. One must also ensure that goals cover the gap between today (the shortest of the short term goals) and the date of the major goal (the longest of the long term goals).

There are a number of goal setting ideas that will aid in learning to use goal setting as an integral part of your training.

- State goals in a positive manner.
- Write down goals in your journal.
- Set goals every training session.
- Keep goals challenging but realistic.
- Review goals – analyze.
- Setting behavior and action goals takes effort. Do it!

What if one or more goals are not reached? Do an honest assessment and ask, "Why Not?" If an outcome goal was not achieved was enough time allowed? Was the goal not reached because of external factors? Regardless, were the associated behavior goals achieved? If so, were they the right goals? Do you need to modify them? If behavior goals were not achieved, were the associated action goals achieved? If so, were they the right goals? Do you need to modify them? Were the associated behavior goals achieved? If so, were they the right goals? Do you need to modify them? If action goals were not achieved, what skills need more training? What was missing?

Using these strategies, athletes find that their goals actually draw them in to their training and they enjoy it more. Because they can see a clear path to realizing their goals and dreams,

they are motivated to keep working, even in those times when training and competition provide frustration. The athlete realizes that even that part of the experience is part of the journey of self discovery and mastery of their sport.

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Thank you to Dan Durben for providing the presentation this article is based upon. Any errors in this article are the sole responsibility of this author. Coaches and athletes who participated in one or more of the CMP 3 Position Air Rifle Summer Camps are encouraged to review carefully their curriculum notebook. Despite being billed as an intermediate camp, there are a lot of world class techniques presented on those pages!

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On the Firing Line (Thirty Third in a series)

Learning To Compete

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“I shoot well in practice! Why can't I do it in competition?”

The 2007 USA Shooting National Championships provided another illustration of the dichotomy between practice and competition. While some of the athletes performed well, even achieving personal records, many others were unable to duplicate their practice scores. Beginners, intermediates, and elite athletes alike fell victim to the syndrome. Why is this and what can be done about it?

We rarely follow this principle: “Train like you compete and compete like you train.” In competition, many athletes focus on the outcome in one form or another. Score, place rank, making a team, impressing someone, not embarrassing themselves, concern about outcomes as a reflection of self worth, and other outcome-based issues interfere with the athlete's ability to perform the skills they have learned. This destroys the performance – the “doing” – thus destroying the outcome. Note the paradox: focusing on the outcome actually destroys the outcome.

Everyone loves a winner and we are encouraged to be the winner. Emphasis is placed on winning and on outcome. Nothing is said about how to achieve the outcome! We are erroneously taught to just focus on outcome and it will be ours.

We are also taught to “Take control!” and “Make things happen!” Our ego is relied upon to “take charge” and run things. In many activities, this may be useful. In many others, including shooting, it is counterproductive if we interpret the instructions to mean we must take control of the doing of the activity and/or of the outcome. This is yet another paradox!

Finally, we are taught to use only the active thought part of our mind. We are taught to exercise and use this part of our mind to the exclusion of the deeper parts of our mind. Facts, figures, logic, test scores, and grades are the focus of much of our educational training. We are not taught about the deeper parts of our mind, much less how to tap into its power, if we are told about it at all.

It is certainly possible to achieve great things with a focus on outcome and with emphasis on use of the active thought part of the mind. The challenges to that approach are that it takes much longer to reach the top of the elite level, it is much more frustrating work to get there (thus discouraging many athletes who leave the sport before achieving their goals), and their success is not sustainable over time.

Athletes who excel and who are able to sustain their high level of results do so with a different emphasis. They are more concerned with the process or journey of learning and growing as athletes than they are with the outcome. They have learned that such an emphasis is more enjoyable, leads to faster improvement, leads to higher levels of capability, and thus to higher scores. Yes, focus on something other than outcome improves outcome! This is a hard lesson to believe, much less put into effect in our activities.

The first step in learning how to compete is to think about the differences between outcome and performing or doing. Outcome is something over which the athlete has no direct control. All of the outcome factors listed above in the second paragraph are beyond the athlete's

direct control. At this point, some protest that they can control the score outcome and they can shoot a ten on demand. While they may shoot a few consecutive tens on demand as “proof”, this is a false belief as proven by their inability to do so 60 times in a row in an important 60 shot competition. Realizing that outcome is beyond the athlete’s direct control is critical.

How an athlete performs or goes about doing the activity is in the athlete’s direct control. What one does and thinks can be learned, trained, and directly controlled. Again, some protest that they are controlling what they do and think. The challenge is that they are controlling and thinking the wrong things. To understand this, we must explore the differences between learning and doing the activity, which brings us to the next step.

The second step in learning to compete requires an understanding of how the activity is best performed. Shooting, archery, golf, darts, and many other activities are best performed when the athlete has “programmed” a robust process and then allows that process to unfold without intervention. Golfers who think “swing smoothly” just before addressing the ball, and then who quietly allow the swing to unfold on its own, do much better than those who “talk” themselves through each part of the swing since they want to “control” the swing in order to get a good drive.

To understand this, we need to review how a complex task is learned.

In the first phase of learning a task, the athlete carefully monitors each aspect of the task and often “talks” their way through it when first learning how to perform the activity. “Feet like this, hold it like this, look there...” and additional dialogue goes on in the athlete’s mind.

Rather quickly, parts of the task are learned and “programmed” so that the athlete no longer needs to walk themselves through each little step or component. This second phase of learning a task is characterized by much of the task being automated while still retaining a significant amount of monitoring and control on the part of the athlete.

The third phase of learning a task is the full automation of the performance. This requires complete trust on the part of the athlete and it requires that the athlete’s mind remain quiet. This is in stark contrast to the mind state of the first two phases. This fact, coupled with the cultural conditioning discussed earlier, makes it difficult for many athletes to relinquish the perceived “control” they think they have over the process and just allow the process to unfold.

In the seemingly simple task of tying one’s shoelaces, there is no stress over outcome. We just tie the laces and move on. Imagine being so concerned about the outcome that we insert our ego into the process and attempt to control each step of the process, and even attempt to control each muscle movement within each step. Utter failure! We learn how to sit down, stand up, walk, and climb stairs, yet are incapable of describing or controlling each muscle movement. Similarly, attempting to control the shot release or golf swing destroys the subtle movements and timing of each.

The third step in learning to compete is proper training. Mere practice of shooting skills is not enough. Training encompasses skill acquisition, skill refinement, skill practice, skill assessment, skill expansion, physical training to create aerobic capacity and smooth, aerobic muscle and fitness, and much more. Training is also a mindset of stretching one’s limits and continually expanding them. The concept of skills is understood by most as encompassing physical and technical aspects of the activity. Often overlooked, the mental and emotional aspects of the activity are equally important. They become even more important under the pressure of competition. The most frequently overlooked aspect of training is training under true competition conditions. Merely hanging a target and shooting for score does not create the proper environment. Intensity training is required.

Intensity training – creating training situations where the athlete cares about the outcome – is of paramount importance. Here the athlete is able to experience the “match nerves” and explore the techniques of just “tying the shoelaces” instead of controlling the actions. At first, intensity training works just like competition. The athlete often chokes. Then, through learning about thought patterns and self-talk, the athlete is able to experience shooting that “feels like practice” because they have focused on being aware of their actions without controlling or interfering with them, and without focusing on the outcome. As with any skill acquisition, this takes time and effort.

Exposed to a lot of competitions and intensity training, one athlete described how she stepped up her level of determination and raised her standards in terms of what she would accept from herself. She focused this energy into overcoming the natural tendency to “take control” when under pressure and instead forced herself to “give up control” in order to allow the performance to unfold. She became more determined to do this because she knew it would increase her score. She did not become more determined to shoot tens because she knew this would decrease her score.

Many athletes rarely or never experience intensity training, thus having to learn these lessons in actual competition. This becomes a long, frustrating, and often heartbreaking process.

A very few examples of intensity training:

- **First to Five Tens** – After a short sighting period, a “Go!” signal is given and athletes must shoot until they have five tens. Each time they shoot a ten, they loudly call out their count of tens: “One!”, then “Two!”, and so on. The race is on to see which athlete reaches five tens first. The loud count serves to increase the pressure. One of the most effective ways to use this drill is to evenly match pairs of athletes so they have head-to-head competition. This can be expanded into a single elimination tournament where the winners of each pair advance to the next round until an eventual champion is determined.
- **How Many Tens In Five Shots** – Effective in group and in solo training scenarios, the athlete is given five shots and strives to get as many tens as possible. Highly advanced athletes can expand this to ten shots or more. Athletes who merely go through the motions gain no benefit, just as in any other type of training when they do not strive for improvement. Those who do strive and push themselves obtain great benefit.
- **Tens In A Row** – This drill has no upper limit! That’s the point! Count how many tens in a row are shot. When a shot scores less than a ten, start the count over. Athletes must learn to shoot long strings of tens... and expand the upper limit of their comfort zone to match.
- **Shoot An X** – After a sighter/warmup period, the athlete’s ammunition is removed. One bullet or pellet is provided with instructions to shoot an X with this one shot. Tens are not acceptable! Athletes notice quite a boost in intensity! This is repeated as the coach monitors the athletes state of mind and assists the athlete in working into the appropriate mindset.

Notice that all of the above examples are stated in terms of outcome. The athlete must disassociate the desired outcome from the doing in order to excel. This is no different than in competition. Notice also, that anything less than a ten is not good enough. Too often we accept nines as being ok. Difficulty should be adjusted up or down to match athlete skill levels. This still

provides the intensity benefit. Tasks that are too easy or too hard might aid skill development in some cases but have no intensity training benefit and either bore or discourage the athlete.

An underlying theme of this article is the concept of focusing on and enjoying the journey of improvement and discovery. The so-called “Type A” hard-chargers have difficulty with this idea at first. Those who embrace it are transformed.

Clearly an article of this brevity can barely scratch the surface of a topic as complex as learning how to compete. The topics discussed provide a framework for further study. A number of previous articles in this series have touched on related themes.

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(Biographical information as of October 2009)

On the Firing Line (Thirty Fourth in a series)

Mental Flexibility

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**“Insanity: Doing the same thing over and over
and expecting a different outcome”**

Athletes and coaches work long, hard hours training in their chosen sport. They invest huge amounts of time, money, and energy striving for the seemingly elusive top prize. Too often, this effort is slow, frustrating, and the athlete falls far short of the ultimate goal or leaves the sport before realizing their potential. Only a few participants seem to rise above the crowd. Why is this?

The majority of coaches and athletes who truly excel exhibit mental flexibility in their planning and work. They adapt their thinking and their actions as needed in order to reach their training and competition goals.

Eugenio Monti of Italy was a budding world-class skier as a young man when a bad injury ended his career in that sport. Rather than give up his dreams of world and Olympic competition, he switched to a very different sport, the bobsled. While this took mental flexibility on his part, it is not the biggest example that he provides on this topic. Eugenio became a world class bobsled pilot. He was a true sportsman and to this day is known as one of the greatest sports of all time. He is also known as one of the best bobsled pilots of all time. It turns out that his key “secrets to success” was nothing more than mental flexibility.

The fastest way down a bobsled track is on the optimal line. This is the line that provides the shortest route and the greatest speed in order to result in the shortest time. Most bobsled pilots spend the entire run down the hill attempting to hold the sled on that line and, when it wavers, working to get back on the optimal line as quickly as possible. When making corrections, most pilots attempt to do so with sudden corrections and scrub off lots of speed.

Eugenio “took what the hill gave” and calmly guided his sled through the course with gentle corrections. Thus, he did not scrub off lots of speed with sudden corrections. Rather than work to stay inflexibly on “the” optimal line, he realized that there was a “new” optimal line based on his position at any given moment. His mental flexibility allowed him to make corrections that were calmer, smoother, and smaller. He was not fighting the sled, and the sled was not fighting the hill. He merely guided the sled on the new optimal line that existed at that moment.

Upon hearing this story, one young athlete realized it was like going off course when using a GPS unit to navigate on public roads. The unit detects a deviation from the original “optimal line” or route, and recalculates a new optimal route instead of forcing the driver to go back immediately to the original route.

This same young athlete recently observed an example and a counter-example in his own training and competition. Upon arriving at a particular national competition, he and his teammates discovered that the competition would be conducted in a manner different than any other they had ever attended and deviated from any method covered in the rules. This particular athlete was so upset that his club coach had to stop a group meeting and remind him that he could either remain inflexible in his thinking and affect himself and the entire team, or he could

be flexible, adapt his thinking and methods to the match conditions as they existed, and enjoy a successful competition. Despite some initial grumbling, to his credit, the athlete did quickly adapt and performed quite well.

That lesson allowed him to make a big change in his game a few weeks later. One of the “great debates” in international pistol shooting technique is where to aim. There are at least 4 different methods: center hold, bottom of the black hold, thin line of white hold, and deep in the white hold. As a specialist in air pistol and free pistol, both of which demand great precision, and being quite analytical, the athlete had long ago decided that the thin line of white was “best” since he could be the most “precise” in his aiming. His private training coach, who prefers the deep in the white hold, did not insist on a change when the two started working together a year earlier. They discussed the different methods, the pros and cons of each, and agreed not to initially make a change.

A couple of weeks after competing in two national competitions, including the one mentioned above, the athlete noticed a number of subtle, yet critical errors in his technique. Based on ongoing discussions with his training coach, the athlete realized the errors were due, in part, to the aiming method he was using and that the deep in the white hold might alleviate all those issues. It took a great deal of mental flexibility for this athlete to experiment with a hold method that seemed so “wrong” and seemed to provide little if any precision. Despite his initial discomfort, the athlete discovered that the new method provided him with long strings of very precise shots that were “easy” to shoot. The technique also held up quite well during intensity training.

About 2 weeks later, the athlete’s younger sister made exactly the same discovery and embraced the change. She reported that the shots were so “easy” and fun and her groups were significantly tighter. Once she learned to trust the technique, she was confident and performed well in intensity training.

The examples of where to aim with pistol were chosen for this article because the typical reaction to the deep in the white hold is quite negative. Athletes “try” the method and find it quite discomforting because of the lack of “precision” or other related feelings. They reject the method after a quick trial. Of course, where to aim is only one piece of a much larger puzzle of pieces that one must assemble into an overall technique and process. It is dangerous to “try” something without understanding how it does or does not fit in to the athlete’s overall approach. Without mental flexibility, one gets hopelessly mired into making minor tweaks and trying “tips and hints” instead of stepping back and truly assessing their whole approach.

There is no question that top athletes spend a lot of time in training. One must be so familiar with the process of performing that it is beyond routine. All too often, practice sessions reinforce weak technique and processes. It is critically important that coaches and athletes make sure the basics are very robust and that practice sessions always require solid basics as a foundation. This requires flexible thinking and openness for evaluation and change when and where needed.

Flexible thinking sometimes needs to extend to “rules” that are “never” to be broken. One “rule” that is often repeated, and for good reason, is “Never make major changes just before a big competition.” In almost all cases, this is excellent advice. Most coaches and athletes can recall a time that an athlete tried something before a big competition, had a great result in training (due to honeymoon effect) and crashed at the competition. Therefore, one should never break the rule. Or so we are taught.

Many years ago, a young athlete was introduced to and chose to work with a new training coach. After listening carefully to the athlete and assessing her situation, the training coach and athlete came to a radical conclusion after only two weeks of work together. Her standing position needed to be completely overhauled and changed... three weeks before a major national competition. Despite the fact that everyone “knows” this is wrong, coach and athlete agreed that the then current position technique would not work at all, so there was nothing to lose since she was unlikely to advance beyond her then current “club” level of shooting with the old position. Additionally, the position would soon cause physical injury to the athlete, which cannot be tolerated.

After exploring a new strategy for the standing position, the next decision was whether to use it right away or wait until after the competition. Their plan was for her to train with the new position for a week, then assess and decide. Then train another week and decide again. Then stick with that choice for the last week. The athlete loved the new position and decided to stick with it. She won the first of five consecutive junior national championships, along with a number of other junior, open, and international medals, over the next few years. Her flexible thinking and ability to go against “conventional wisdom” allowed her to accelerate her training and her shooting career at a very young age.

In the psychological literature on people who become experts, one of the key attributes was a “rage to master” their field. Experts, and experts in training, constantly push the envelope of their knowledge and abilities. They constantly strive to go outside their comfort zone to learn more. This can only happen with people who learn to be flexible in their thinking. Conforming rarely yields spectacular results.

At the same time, coaches and athletes so often will point to an exception, such as the one above, and use it as an excuse to go against the grain even when the situation has not been carefully assessed and a plan carefully formulated. With or without flexible thinking, there is no substitute for hard work – whether physical or mental.

Learn the basics. Really learn them. Understand how they work and why. Understand how they work together and why. Then one can discern genuine opportunities for improvement. Flexible thinking does not mean do whatever one feels like. Flexible thinking means being open to new possibilities and ideas as they appear based on solid foundational work.

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(Biographical information as of October 2009)

On the Firing Line (Thirty Fifth in a series)

Intangibles

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**“There are no such things as intangibles.
The so called intangibles are very real.”**

Some time ago, a shooting coach and one of his student athletes had an opportunity to sit informally with a senior sport executive and discuss the topic of attributes that drive athletic success. We will call him “Bill” in this article since he spoke on condition of anonymity. His position is equivalent to a general manager or a vice-president of player personnel for one of the most successful teams in one of the major professional sports. He doesn't want his competitors to know how he selects athletes! This article is based on that conversation and on a later presentation and discussion the executive held with a gathering of high level coaches from a variety of sports. All quotes are paraphrased from notes taken by the student athlete and the memory of the coach.

The topic of their informal discussion was the concept of talent and other attributes of successful athletes. Bill indicated that he and his team's head coach do not look for “talent” nearly as much as they look for the so-called intangibles that coaches often refer to when looking for athletes. The saying at the opening of this article is a paraphrase of something Bill said in the conversation. The “intangibles” are real and he evaluates them. Why does he not look for talent and how then can he be successful?

Bill makes no secret of the fact that, years earlier, he and the same head coach failed miserably at another team. Why? “We talked about our core principles and the kind of people we wanted to hire for our team. However, we did not follow those principles and instead hired the biggest stars – the biggest talent – we could find. We said one thing and did another.” Big stars are flashy, but they often do not do anything for a team's work ethic and improvement – critical factors in long-term success.

“We now look for people who constantly strive to improve themselves, people who want to work with others, who don't sleep through meetings, who show up early and stay late, who go the extra mile, who learn how to learn, and who encourage those around them to do the same.” Instead of looking for the “best” athlete, they look for the “right” athlete. “We do evaluate the athletes in traditional ways (speed, agility, foundational skills, game statistics, etc.) and then do much more. We will spend three hours talking with a prospective athlete to learn all about them, both in and outside of the sport.”

“One's lifestyle outside of competition really does count and good raising is a great foundation. Asking questions you already know the answers to helps to find out who people really are. Understand people, but don't condone their bad habits.” It may seem odd to want to understand an athlete's life story, yet this executive has found that doing so really helps give a sense of how successful the athlete can become. Athletes who come from a troubled past often have a troubled present and future. Those who come from such a background – often through no fault of their own – and who are among the few who take control of their life, turn out to be just as successful as those who had no such challenges. The implication is that, even when “life deals you a bad hand” you are in control of how it turns out.

In talking about talent and super stars, Bill commented, “People are too focused on the trappings of being an athlete and not focused on really being an athlete. Everyone gets caught up in success. Don't get caught up in everything, just do what is needed. What you were taught about sports, teammates, hard work, and passion, when you were eight years old is what really needs to be taken seriously as an adult. Embrace the simplicity of it all.” Yes, this is how one very successful executive thinks his multi-million dollar athletes should operate.

Too many athletes just want to “make the team” so they can travel, wear an exclusive jacket, and get their picture in a magazine or on a web site. Others care nothing of such trappings and remain focused on loftier and substantive goals. Guess who will achieve and sustain success!

Bill looks for far more than just upbringing and the athlete’s outlook. “You have to have a love and a passion for your sport. Preparation and passion are very important. Have a work ethic that matches your passion. Work ethic, work habits, and being demanding of oneself are all very important. You have to be mentally and physically tough – be able to play through situations. Only the strong survive – not just physically strong but mentally strong. ‘Woe is me’ is a bad attitude to possess – you have to take control and take charge.”

He has advice based on years of experience that applies to any athlete at any level. “Positive and constructive self criticism helps keep things fresh and in check. Manage your expectations – understand where, who, and what you are. Identify your strengths and weaknesses and be honest with yourself. Be dependable. Take responsibility. Allow no compromising. If you crash and burn, at least do it while you are doing what you believe in and doing it how you believe.”

Bill continued, “Pay attention, work hard, be intelligent in your thinking, and resist being easily distracted. Harness the same energy you had when you started the sport. Show willingness to work hard, don’t just talk about it. One has to have discipline! Development needs a lot of attention, especially at first. Sometimes you think you know everything about a subject, but you really don't. Never stop learning.”

“Beware of overtraining. Breaks are necessary. Goals take patience. Expectations put more pressure on – manage them. You have to have trust in your plans. No matter how much control you have over your variables, things can still happen.”

“Winning a championship is much easier than maintaining success. Sustaining success is difficult. You have to understand and be realistic that you aren't going to win every time. Create a team or individual athlete (depending on the sport) to be able to accomplish a goal or sustain success, whether or not that may or may not happen because of reality.”

In short, successful athletes and teams cut out all the “junk”, focus on learning and doing, understand what is really going on and bring a clarity of thought to their training and competition. Success is about hard work, not raw talent. In fact, the “gifted” athletes with loads of raw talent have a handicap. Because they did not have to work long and hard to achieve a level of success, they have not developed the habits and mental toughness needed to endure long months and years of training required for ultimate success. Those with less talent and more heart invariably pass those raw talents who do not also develop the requisite work ethic.

In identifying your own strengths and weaknesses, honesty is paramount. Are you committed to achieving your goals, or are you just dabbling and going through the motions?

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(Biographical information as of October 2009)

On the Firing Line (Thirty Sixth in a series)

Confidence

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**“If you think you cannot, you will not.
If you think you can, you most likely will.”**

An athlete's confidence has a profound effect on the resulting performance. Similarly, the athlete's self-talk also has a very strong effect on the performance. Often these concepts are overlooked when looking for explanations of sub-par performance. Yet, they unlock many of the keys of peak performance. The difference between winning and losing is very small at the highest levels.

This article and the one to follow will explore the concepts of confidence and self-talk. Both articles are based on work by Dr. Nate Zinsser (Zinsser 2006), and provide, of necessity, only a short synopsis of each topic. Dr. Zinsser is Director of the Performance Enhancement Program, a cornerstone of the Center for Enhanced Performance at the United States Military Academy, in West Point, NY.

“The most consistent finding in peak performance literature is the direct correlation between self-confidence and success. Athletes who are truly outstanding are self-confident. Their confidence has been developed over many years and is the direct result of effective thinking and frequent experiences in which they have been successful.”

“Confident athletes think about themselves and the action at hand in a different way than those who lack confidence. They have discovered that what they think and say to themselves in practice and competition is critical to performance.”

Often, we are unaware of our inner dialogue and its profound effect on our performance. Thoughts affect feelings and feelings affect behavior. The literature of psychology is rich with examples where thought patterns directly affect outcome.

“Confidence in competitive sport is the result of particular thinking habits more so than physical talent, opportunity, or previous success. These thinking habits, when consistently practiced until they have become automatic and natural, enable athletes to both retain and benefit from the experiences in which they have been successful, and release or restructure the memories and feelings from the less successful experiences. The result of this selective perception is the priceless trait called confidence.”

It is nice to know how critically important confidence is. What is confidence, what are some common misconceptions, and how do we go about developing confidence?

To understand what confidence is, we need to look at a few key concepts.

- Confidence – is a state of assurance or belief in one’s powers. It is often marked by a level of inner arrogance or cockiness. This arrogance or cockiness is best kept as a “quiet air of confidence” inside the athlete, instead of brashly spoken to others.
- Mental Toughness – is an important component of confidence. It is the ability to cope with the demands of performance and remain focused in the face of adversity. Most of all it is an unshakeable belief in your ability to achieve your goals.
- Optimism – is the tendency always to think about the best possible or most hopeful aspects of a situation. Optimists tend to look for the opportunities that will help them achieve their goals. Optimism, regardless of the obstacles, is indispensable for success.
- Self-Efficacy – is a belief in one’s specific abilities to perform an activity or meet a challenge. Confidence can be thought of as a broader concept, while self-efficacy can be thought of as more specific, related to skills, techniques, and situations.

Taken together, these four concepts create an “I can do it!” attitude. Such an attitude is critical to athletic success. Dr. Zinsser comments, “*Without this belief, one automatically concedes an advantage to the opponent.*”

There are a number of common misconceptions that need to be dispelled before one can develop true confidence.

- Misconception 1: Either You Have It or You Don’t – Confidence is not an inherited trait or characteristic. Instead, confidence can be developed. Successful athletes develop confidence using a consistently constructive thought process or outlook to hang on to, and benefit from past successful experiences and let go of or forget their less successful experiences.
- Misconception 2: Only Positive Feedback Can Build Confidence – Positive, constructive feedback and criticism certainly is more fun than negative inputs. When negative feedback stimulates positive changes in behavior or thought, the athlete builds confidence through the positive changes. Notice how the athlete’s choice of thought pattern and response determines if the negative feedback stimulates improvement in confidence or becomes a debilitating distraction.
- Misconception 3: Success Always Builds Confidence – Just because an athlete experiences success does not automatically mean they will gain confidence. Athletes who focus on failures erode their confidence. How many shooters, upon shooting a tight group or good record target, focus on the one “bad” shot of the series of ten shots? Understand why the bad shot happened and learn from it in order to understand what needs to be done differently. Focus on the success of the other nine shots to build confidence in yourself!
- Misconception 4: Confidence Equals Outspoken Arrogance – A deeply felt inner confidence, cockiness, or arrogance, is a powerful tool to aid an athlete in achieving success. A loud, outspoken cockiness or arrogance is actually an impediment to the athlete’s success. “*It is crucial for athletes to realize that they can be confident without being considered conceited or arrogant.*”

- Misconception 5: Mistakes Inevitably Destroy Confidence – This is almost the reverse of misconception 3. All athletes make mistakes. We are, after all, human. Athletes who make improvements in their techniques, plans, strategies, and thought patterns based on what they learn from mistakes actually improve their success and build confidence.

Notice how each of these five concepts point out that it is not what happens to an athlete, but what the athlete thinks, that makes all the difference. *“Confidence is a result of how one thinks, what one focuses on, and how one reacts to the events in one’s life.”*

A solid foundation for building confidence involves these techniques.

- Understand the interaction of thought and performance – Earlier it was mentioned that thoughts affect feelings and feelings affect behavior. This is because the feelings, generated by thoughts, cause physiological changes in the athlete such as altered breathing patterns, restricted blood flow, muscle tensions, and other changes. Muscle tension alters the familiar patterns and destroys timing. Tension in the wrong muscles causes the gun to move around more than usual. Even tension in the right muscles, but at the wrong time, can be devastating. Such as in the trigger finger!
- Cultivate honest self-awareness – How honest are you with yourself? How aware are you of your thought patterns and their effect on you? Many athletes delude themselves due to deep-seated defense mechanisms. Many athletes have developed habits of self-doubt, self-criticism, and hesitation.
- Develop an optimistic explanatory style – How do you think about the events that happen to you? Optimistically or pessimistically? This style, developed in childhood and adolescence stems from your view of your place in the world. Do you think you are valuable and deserving or worthless and hopeless? Sport often results in setbacks. An optimistic pattern of thought is critical in analyzing and improving performance. Sometimes athletes are over-optimistic and make decisions that hold back their performance. This is much less common, but awareness of it is just as important. The hallmarks of explanatory style are:
 - Permanence – The optimistic athlete believes that good results are the result of their learning and execution and are a “permanent” part of their game. They believe that mistakes are isolated and rare and will diminish with more experience.
 - Pervasiveness – The optimistic athlete believes that success in a particular experience or activity will generalize to other contexts. They also believe that mistakes are isolated and are confined.
 - Personalization – The optimistic athlete believes that successes are the result of their own hard work and are repeatable. They also believe that mistakes are anomalies either that are beyond their control or that are the result of specific circumstances or errors that can be rectified.
- Embrace a psychology of excellence – Our culture conditions us to focus on mistakes and constantly reminds us of them. This instills a self-critical “failure focus” that ignores the many successes one has and erodes confidence. Successful athletes buck this trend and develop a positive thought pattern to build confidence

through successes and positive thoughts, while learning from and then forgetting mistakes. Here are important components of a psychology of excellence:

- Go for your dreams – Believe that great things can be done – by you – even if never done before. Get excited about doing, feeling, and experiencing things that few people have ever done.
- Focus on your successes – Use your free will and decide to dwell on the successes and the opportunities for learning that you are presented with and that you make happen for yourself. After every session, regardless of how well or poorly it went, find and write down at least one success, one improvement, and one instance of great effort.
- Be your own best friend, biggest fan, and greatest coach – Talk to yourself the way you want your best friend or favorite coach to talk with you. Think about the most positive, helpful person you have ever known or wish to meet, and imagine what they would say to you... and then talk to yourself that way.
- Create your own reality – If a session starts out with difficulty, tell yourself you are still working out some kinks and expect to do better on the next shot. You likely will. Interpret events in ways that open you to the possibilities of what you can create. Believe in yourself.

At the highest levels of sport, the difference between the winner and the others is so tiny that the slightest “edge” is often the difference. Understanding and believing that thoughts have a profound effect on performance is a critical skill that is required to be successful at the highest levels. In the rookie leagues talent may carry the day from time to time. It will not in the majors!

For deeper study on this topic, refer to the reference provided. Because self-talk is such an important component of developing and maintaining confidence, it is the topic of the next article in this series. In the mean time, enjoy this illustration of the power of confidence and one’s belief system.

Roger Bannister is best known for being the first person to run a mile in under 4 minutes. He did this in 1954 at a major competition in Oxford, England. Modern readers may wonder why this was such an important event. Up until then, almost everyone believed that the human organism could not possibly bear up under the physiological and psychological stress and therefore could never run a mile in less than 4 minutes. Numerous papers were written purporting to “prove” that it could not be done. Numerous athletes had tried and failed over the course of many years. As Roger’s awareness of his improving capabilities grew, he realized two important things: 1) it was possible for a human to run a mile in under 4 minutes, and 2) he could be the one to do it. He trained both his body and his mind for the goal with a strong belief that it was possible. Then, in 1954, he reached his goal. As remarkable as that is, the most remarkable thing is that in the following 6 months, no less than 37 other runners also ran the mile in under 4 minutes. The only thing that had changed was their belief. Their own beliefs had held them back until Roger proved to them it could be done.

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(Biographical information as of October 2009)

On the Firing Line (Thirty Seventh in a series)

Self Talk

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**“Winners say what they want to happen,
Losers say what they fear might happen.”**

The inner dialogue we carry on has a profound effect on our performance and even upon our mental health. Most people are not aware of their self-talk or, even if aware, do not understand its importance. Moreover, self-talk can be modified to achieve desired ends. This is especially important in the case of negative self-talk.

This article and the previous installment of the series explore the concepts of confidence and self-talk. Both articles are based on work by Dr. Nate Zinsser (Zinsser 2006), and provide, of necessity, only a short synopsis of each topic. Dr. Zinsser is Director of the Performance Enhancement Program, a cornerstone of the Center for Enhanced Performance at the United States Military Academy, in West Point, NY.

“The key to cognitive control is self-talk.”

“Self-talk becomes an asset when it enhances self-worth and performance. Such talk can help the athlete stay appropriately focused in the present, not dwelling on past mistakes or projecting too far into the future.”

“Self-talk becomes a liability when it is negative, distracting to the task at hand, or so frequent that it disrupts the automatic performance of skills.

How important is self-talk? At least one researcher (Seligman 1991) describes depression as nothing more than a disorder of conscious thought (negative self-talk), and not an issue of anger turned inward or brain chemistry imbalances, as maintained by some theories. In effect, the negative self-talk is the disease! In these cases, changing the self-talk from negative to positive eventually resolves the depression. Whether or not this is the only correct theory of depression, and there are likely others, changing self-talk from negative to positive has a dramatic positive effect on athletic performance.

We will confine the rest of this article to a discussion of self-talk for enhancing sport performance.

Uses of Self-Talk

“The uses of self-talk are almost as varied as are the different types of sports. The effective coach and sport psychologist can use self-talk to aid athletes in learning skills, correcting bad habits, preparing for performance, focusing attention, creating the best mood for performance, and building confidence and competence.”

Applications of self-talk include the following.

Skill Acquisition and Performance – As an athlete learns a skill, positive self-talk aids in the process by reminding the athlete of key steps in the process. Cue words are especially helpful. (“Smooth trigger.”) As the athlete masters the skill, self-talk should evolve to being far less frequent and shifts from mechanics to strategies and optimal feelings required to perform well. (“Relax and release.”)

Changing Bad Habits – Unlearning and reprogramming is facilitated by self-talk that focuses on the desired behavior or actions. (“Pressure on trigger. Decisive release.”) Focus and self-talk that reinforces the old or incorrect action only serves to reinforce rather than erase. (“Don’t jerk!”)

Attention Control – Keeping one’s focus on the task at hand – in the present moment – is critical to success. Self-talk that reminds the athlete what they need to do right now is a powerful technique for maintaining or altering attention. (“Head down, smooth!”)

Creating Affect or Mood – Use of words such as “smooth” or “relax” help an athlete perform in a desired manner or create feelings or a mood that allows them to perform well.

Changing Affect or Mood – Cue words are effective triggers for mood or energy level changes. Words such as “attack” or “easy” are but two examples that aid in altering the athlete’s arousal level and mood.

Controlling Effort – An athlete’s effort does not always match the optimal level at a given moment in competition. Phrases such as “go for it”, “rhythm and pace”, “cool it”, and other similar phrases aid the athlete in altering their effort to match the situation.

Building Self-Efficacy – Remember that self-efficacy is a belief in one’s specific abilities to perform an activity or meet a challenge. Self-talk has a powerful effect on an athlete’s own belief in their ability to accomplish a goal, meet a challenge, or recover from an injury.

Increasing Adoption and Maintenance of Exercise Behavior – Though more research is needed, it is thought by many that self-talk has an impact on the likelihood of an athlete beginning and adhering to a physical training regimen.

Identifying Self-Talk

“The first step in managing self-talk is becoming aware of what you say to yourself.”

Self-defeating “chatter” only leads to poor performance. Positive self-talk is a powerful “secret weapon” in training and competition. As with any phase or aspect of enhanced performance, becoming aware of self-talk is the critical first step. By doing so, an athlete understands what kinds of self-talk are effective and can take charge of their self-talk. There are a number of ways to enhance an athlete’s awareness of self-talk.

Retrospection – Taking time to reflect on past performances and the associated feelings and self-talk, especially when the performance was notably above or below average, athletes gain an understanding of how their self-talk affects the performances.

Imagery – Athletes who use imagery or mental rehearsal as part of their training can “re-live” an event to recall their feelings and thoughts.

Self-Talk Log – Some athletes have difficulty with retrospection or imagery and all athletes are susceptible to having memories altered by personal perceptions or forgetting events and thoughts. Keeping a log of self-talk, whether by itself or as part of a more comprehensive

sport log or journal, allows the athlete to record and later review what their thoughts were before, during, and after a performance.

When using any of the above techniques, especially the self-talk log, athletes should address questions such as the following suggested by Dr. Zinsser:

- *When I talk to myself, what do I say?*
- *What thoughts precede and accompany my good performances?*
- *Not only what thoughts, but how frequently am I talking to myself?*
- *When performing poorly, do I deprecate myself?*
- *Do I stay in the present moment, or revert to dwelling on past performance?*
- *Do I call myself names and wish I were sitting on the bench?*
- *Does the content of my self-talk center on how I feel about myself, or how others feel about me, or on not letting down my friends and teammates, or on how unlucky I am?*

Knowledge of one's self-talk allows the athlete to alter their self-talk patterns for future performances. It is vitally important that self-talk in practice and training sessions, indeed at any time, must be positive and set the stage for good performance. One cannot suddenly "turn on" proper self-talk habits that are not used in training.

Controlling and Modifying Self-Talk

Thought Stoppage – If self-talk is so constant as to distract from the performance or if it leads to self-doubt, it must be terminated. Choose a trigger word ("stop") or action (finger snap or light clap of thigh with hand) to use as an aid in breaking the thought pattern and redirecting it to something helpful or to quiet down. Select a memory of a time when negative thought contributed to bad feelings or performance. Vividly recreate the feelings and negative self-talk. Then interrupt and stop those thoughts with the trigger word or action. Practice this and it will become second nature so that it will work in competition.

Changing Negative Thoughts to Positive Thoughts – Stopping negative thoughts can be difficult. Countering them with a positive thought is an effective strategy. When challenged by a new skill or technique, instead of thinking "I'll never learn this new thing coach just showed me." The athlete should replace that thought with "I've learned lots of hard things, so if I work at this one I can learn it as well." Or other positive affirmation. Athletes can make a list of their most common negative thoughts on the left side of a page, and then list a countering positive thought on the right side. Review and revision on a regular basis is a powerful tool for improving the athlete's self-talk. At times, it may also provide them with a bit of humor as they look at some of their old thought patterns!

Countering – Merely changing a thought from negative to positive may not be enough if the athlete still believes the negative thought. Countering is a process of the athlete using facts and reasons to refute their own negative thought. The athlete realizes that the negative thought is a habit and untrue.

Reframing – Often, a negative thought can be turned positive by looking at things from a different frame of reference. Our world is what we make it, so change it! An example might be changing "I'm feeling tense and anxious about the match today." to "I'm feeling excited and ready! I'm more alert and am really on my game today!"

Identifying Irrational and Distorted Thinking – In addition to negative self-talk patterns, athletes often engage in self-talk that is irrational. These irrational thoughts are based on one or more false beliefs:

- I must at all times perform outstandingly well.
- People who are important to me must approve and love me.
- Everyone must treat me kindly and fairly.
- The conditions of my life, especially in sport, must be arranged so that I get what I want when I want.

We wish! If athletes subscribe to any one of these false beliefs, let alone two or more, their progress is blocked.

These false beliefs foster a number of irrational thought patterns, any one of which debilitate an athlete's ability to perform.

- **Perfection is Essential** – This is probably one of the most debilitating thought patterns of all. No one is “perfect” all the time. Strive for perfection. Do not demand it. Coaches need to remember this as well.
- **Catastrophizing** – Perfectionist athletes often feel that the slightest mistake is a catastrophe and humiliation. Failure is not humiliation and is not disappointing parents, friends, and coaches; it is an opportunity to learn. Everyone makes mistakes. Everyone. Set realistic performance goals and realize they are not always achieved on the first or 100th try.
- **Worth Depends on Achievement** – Worth as a human being is based on factors other than the win-loss record. This comes as quite a revelation to many young athletes conditioned by a culture of winning is everything.
- **Personalization** – Athletes susceptible to linking self worth to sport achievement often personalize everything. People are not laughing at you and the coach is not upset with you when helping you correct a skill or technique.
- **Fallacy of Fairness and Ideal Conditions** – Life, and sometimes sport, just doesn't seem fair. Some athletes fold up and quit in the face of issues or “bad calls” on the part of the officials. Others shake it off as if it were nothing and go on like it never happened. Problems with the venue? Grumpy officials? Surly opponents? Balky equipment? Get over it. Are you going to let them defeat you or are you going to ignore them and do your best to do what you have trained to do? It takes hard work, including appropriate responses to adversity, to succeed. There is no substitute. The choice is yours.
- **Blaming** – In the face of perceived unfairness or conditions that are less than ideal, it is easy to blame other people or things. How often has a coach heard a new athlete blame the gun for the wild shots? Blaming allows the athlete to abdicate responsibility, which is absolutely nonproductive.
- **Polarized Thinking** – Sport is not made up of absolutes. Athletes are not all “good” or all “bad” nor are their performances. Labeling oneself (“choker”, “loser”) is disabling.
- **One-Trial Generalizations** – Just because something happens once or twice, does not mean it is the general rule. It rarely is the rule! Believing that one or two unsuccessful performances defines the general “rule” blocks future performance. If the “rule” is based on many occurrences, then the repeated shortcoming points the way for special emphasis in training.

Modifying Irrational and Distorted Thinking – Athletes who use any of the above irrational thought patterns need to change the situation. One excellent method is ABC Cognitive Restructuring. Using this method, athletes follow a four step (ABCD) process. It is helpful to set up four columns across a wide sheet of paper to record each step. The explanation and example shown here is adapted directly from the work of Dr. Zinsser. (Zinsser 2006, Figure 17-1) Athletes should follow all four steps for each type of self-talk pattern that they wish to modify.

- **A**ctivating Event – Instructions: Briefly describe the actual event that led to the feelings and behavior. Athlete’s entry: Fouled in final ten seconds of game – missed free throw.
- **B**eliefs or Interpretations – Instructions: Record the actual dysfunctional self-talk and, if appropriate, include mental pictures. Athlete’s entry: I lost the game for the team. (The athlete is using personalization and blaming.) I always choke in pressure situations. (The athlete is using overgeneralization and catastrophizing.)
- **C**onsequences – Instructions: Identify feelings, bodily reactions, and behavior. Athlete’s entry: Depressed, tensed up, blew defensive assignment after free throw.
- **D**ispute or Refutation – Instructions: Write rational response(s) to the automatic thoughts. Athlete’s entry: I am disappointed but that is just one point out of 40 minutes of play. I missed this shot, but there are other times when I have come through under pressure. I will put extra time into free throw practice and work on staying loose and positive.

To aid the process, athletes may stimulate their thinking with the following questions:

- Are the beliefs based on objective reality?
- Are they helpful? Self-destructive thoughts are usually irrational.
- Are they useful in reducing conflicts with others or do they set up a me-versus-them situation?
- Do they help you reach your short and long term goals, or do they get in the way?
- Do they reduce emotional conflict and help you feel the way you want to feel?

Constructing Affirmation Statements – positive, present focused statements of fact or desired behavior are powerful aids. An excellent example is “I play well under pressure.” Note that the following two examples, while seemingly very similar, are ineffective statements: “I want to play well under pressure.” (...but I cannot yet.) or “I always play well under pressure.” (perfectionism). Affirmations are not sufficient by themselves to turn a negatively thinking athlete into one with a more positive mindset. However, as part of a broader program of training, they are quite useful and powerful. Affirmations must be phrased as if the athlete has already achieved the desired state. For example, in 1985 Ivan Lendl had a 9-12 record against John McEnroe. As part of a broader training program, Ivan started writing each day in his notebook, “I look forward to playing John McEnroe.” By 1991 his record was 19-15, including winning the last 10 matches in a row.

Designing Coping and Mastery Self-Talk Tapes – Mental rehearsal or imagery are enhanced through the use of recordings that aid the athlete in mastery of a skill (or their belief in their mastery) or that aid them in handling adversity in a positive manner during performance.

A mastery tape may rehearse a routine, such as a shot process, series of shots, or an entire competition, along with the internal thoughts and feelings of the athlete.

A coping tape may rehearse challenges that the athlete may face, whether they be external or internal. Knowing what to do and how to think, and rehearsing those responses, assures that the correct response will take place in the heat of competition.

One athlete who went on to become an Olympic finalist was prevented from shooting for 3 months due to injury. She rehearsed every day of her recovery. Some days her “match” resulted in Olympic gold and a world record. Other days she rehearsed and imagined everything going wrong: from officiating, to range and weather problems, equipment malfunctions, and even an official stepping on her while about to release a shot. Others laughed when they heard her mention the latter possibility. “Ridiculous!” A few months later, while officiating at a World Cup, I witnessed another official step on her leg while she about to release a shot from the prone position! She shot a quick “look that could kill” at the official - and blithely returned to shooting tens. Her mastery and her coping skills were enhanced by the long layoff due to her constant rehearsal of her mastery and her coping strategies.

Many athletes have not yet developed the vivid mental rehearsal skills of this athlete, and benefit from use of pre-recorded tapes or MP3 files. These may be recorded by others or by the athlete.

Using Videotape and Electronic Trainers to Enhance Performance – Reviewing video of a properly executed skill, whether it be of the athlete them self or of another, allows the athlete to get an external perspective and truly visualize the action. This is also useful to show when an action needs to be modified. Computer-based training devises, such as the Noptel, provide another avenue of “video” review. While working with an athlete to rebuild her confidence prior to the national championships, we identified her belief that her hold on the aiming area was too loose. We could see that her hold was world class, but she didn’t believe it. After watching only three of her shots on the Noptel, she commented: “My hold seems to be pretty good today!” We spent a moment to discuss what she was seeing and how she might respond to what she was observing. After that, her shot release was smooth and decisive, as it had been in prior years. With renewed confidence - and two months of very hard mental, physical, and technical work on her part - she was national champion.

Clearly, these past two articles can only provide an overview of the topics of confidence and self-talk. For more on these topics, and the much broader range of sport psychology, see (Zinsser 2006). The book covers the entire range of sport psychology – that is, the entire range of the elusive concept of “mental training” that is so often talked about and so seldom understood. It provides underlying theory and research findings, as all good texts on the topic do, but does so in a style that is at once rigorous and accessible to the everyday reader. In addition, it provides plenty of examples of the practical application of the techniques. We regularly take concepts directly out of the book and apply them in our training with great success.

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(Biographical information as of October 2009)

On the Firing Line (Thirty Eighth in a series)

Asleep On The Trigger

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“Sleep? Who needs sleep?”

Sleep is a very low priority in the minds of many folks. Even as awareness grows in the minds of athletes and coaches of the need for and value of proper breathing, hydration, and nutrition, sleep is almost ignored. Even worse, there are many misconceptions about sleep, causing decisions to be made that are detrimental to ultimate performance. Sleep is a basic need that is equally as important as air, water, and food, whether for survival, or for sport performance.

In a recent article in Olympic Coach magazine, Mark Rosekind, President of Alertness Solutions discussed sleep and its effect on athletes. This article summarizes his findings and suggestions.

The National Sleep Foundation conducted a simple test to determine knowledge of sleep concepts. About 82% failed! They failed spectacularly with an average score of 42%. Flipping a coin would have at least given a higher score! This indicates that most of what people think they “know” about sleep is incorrect. There are 4 fundamental concepts that everyone should know about sleep and circadian rhythms.

Sleep Need – The human organism needs about 8 hours of sleep every night. The amount needed by a particular individual is genetically determined and generally varies between 7 and 9 hours. There is no “training” that will allow individuals to reduce their own sleep requirement.

People between the ages of about 11 or 12 up through about 22 or 23 – in the age ranges covered by junior high or middle school, high school, and college – all require about 9 to 10 hours of sleep each night. The very age groups that get the least amount of sleep actually require the most sleep!

Sleep Debt – Lost sleep builds up and accumulates as a “sleep debt” that is unhealthy and that degrades alertness and abilities.

Circadian Rhythms – Our bodies and minds work best on a regular rhythm of sleep and wakefulness. Upsetting this internal rhythm affects health, alertness, performance, and even our moods.

Perception Is Not Reality – Our ability to perceive our own level of fatigue does not reflect reality. We think we are awake and alert and say that we feel fine. Yet actual ability and performance show the huge negative effects of fatigue or upset of circadian rhythm. We believe that these factors do not affect us because of this gap between our perception and the reality of our significant impairment.

Because we do not understand these concepts, and especially because we are unaware of (or let our ego tell us we can ignore) the negative effects of sleep deficit, we allow ourselves to undertake sleep behaviors that are actually quite detrimental.

Staying up all night to cram for an exam is a prescription for failure. Students who have a nice supper (not too light nor too heavy) and then spend 1 or 2 hours reviewing their material, followed by a good night of sleep, perform much better.

Many athletes report “I perform better when I don’t have enough sleep.” One high school athlete, along with several friends and parents (who monitored for health and safety), actually did a study in an attempt to test that hypothesis. The results seemed to “prove” they were better off with some sleep deprivation. However, the study design did not account for or control additional factors.

For intermediate level shooters, who often have a great emphasis on outcome and are thus susceptible to “match nerves” and choking, a sleep debt dulls the active thought part of their mind. The usual negative chatter is diminished or absent and no longer interfering with the performance because they are too tired to think. Thus, a higher score is achieved. These athletes lose a bit of “sharpness” in the performance, but gain much by not freaking themselves out. Even many “advanced” shooters fall into this same category, their protestations notwithstanding. Unfortunately, for them, this relationship does not hold true at the very highest levels of performance and use of this “technique” slows their progress. Shooting is a very complex sensori-motor task requiring a very alert mind.

Numerous studies show degradation in performance, judgment, reaction time, attention, memory, learning, communication skills, and other factors. These degradations vary from 10 to 50% in most cases. How many students or athletes are willing to take a 10 to 50% drop in their test score or shooting score? Performance during the lowest circadian point in the night is reduced 30%. This is not a great time to study!

It does not take much sleep loss to reduce abilities. Loss of 2 hours of sleep equates to the impairment of 2 or 3 beers or about a .05% alcohol level in the blood. A 4 hour sleep deficit equates to the impairment of 5 or 6 beers or about a .10% level. One is seemingly legally “drunk” at that point, at least in terms of impairment! Paradoxically, one feels alert yet performance is measurably impaired.

Rosekind has the following sleep suggestions:

Good Sleep Habits – Following good sleep habits should become a part of everyone’s daily routine in order to obtain optimal sleep.

- Protect sleep from intrusions
- Keep a regular bedtime and wake time whenever possible
- Use a pre-bedtime routine to prepare for sleep
- Use the bed and bedroom for relaxation and sleep
- Avoid work and worry in the bed and bedroom
- Learn and practice a relaxation technique for sleep
- Avoid caffeine, alcohol, and exercise within at least 2 hours of sleep
- Get the sleep you need – make sleep a priority

Environmental Factors – Evaluate and address the following bedroom factors in order to allow optimal sleep.

- Noise – background or intrusive events
- Temperature – cooler is better than warmer
- Light – dark room, dim night light
- Alarm clock – reliable and effective
- Determine personal comfort of mattress and pillows
- Consider privacy and security

Strategic Naps – A planned nap is a very powerful alertness strategy that can significantly enhance alertness and performance. Note that naps are not a substitute for a proper sleep strategy. They are a helpful component.

- Short naps – should last 30 to 40 minutes in order to avoid deep sleep
- Long naps – about 2 hours and will need more wake up time
- Avoid long naps too close to planned bedtime
- Always allow at least 10-15 minutes of wake up time.
- Use eye mask and ear plugs if needed

Because our perceptions of the effects of sleep deficit do not agree with the proven realities, we often vastly underestimate the negative effects and thus do not obtain nearly enough sleep. As we obtain sufficient sleep, our performance is enhanced – as is our mood. You are encouraged to give this topic some thought.

Reference

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(Biographical information as of October 2009)

Breaking Out Of The Matrix

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**“It takes guts to stand out from the crowd.
You must trust your instincts over the voices of dissent, including your own.”**

For those few who achieve at the highest level and do so consistently, repeatedly, and over a long career, there is no real mystery. It just seems that way. This article will provide a very high-level outline of four interrelated concepts that shed light on how the very few dominant athletes or performers become so dominant. They are keys to true performance.

1. The Performance Equation
2. Your Two Selves
3. Improving the Results
4. The Three Levels of Performance

1. The Performance Equation

The Performance Equation is quite simple. “ $R = P - I$ ” meaning “Result = Potential – Interference.” This is the big “secret”. No one is hiding it – most do not realize it exists, do not understand how to train because of it, or refuse to believe that it applies. Again, “Results equal Potential minus Interference.” This equation rules all performances – in sport, in performance, and in life.

Potential – Potential is the vast store of all the experiences of your life. Incredible detail and “knowledge” is stored in the “memory” of your mind. This is not just data; it is feelings, impressions, kinesthetics, tastes, smells, sounds, and any other sensation, thought or feeling you experience. This is where true talent lies – deep within us. Can you quickly compute the calculus in your head to determine how to catch a fly ball? Of course not! Yet, you catch it effortlessly with very little training and effort! Potential is:

- Talent
- Skill & Ability
- Knowledge & Experience
- Enhanced Through Training

Actual training in this context takes many forms:

- Traditional technical training
- Traditional physical training
- Participation in different disciplines (e.g. rifle, pistol, shotgun, archery, crossbow)
- Participation in different sports (e.g. ice skating, swimming)
- Participation in different activities (e.g. music, dance)
- Participation in alternate forms of training oneself and one’s mind and heart (e.g. Yoga, Pilates)
- Making time to plan, think, dream, set goals, evaluate progress, and take control of your training and your life.
- Realizing that it is what you think and how you feel – your mind and emotions – that have the greatest effect.

How many forms of training on this list are incorporated effectively and appropriately in the “training” activities of most athletes and coaches? All are critical to ultimate success.

Interference – Around age 8 or so, our childlike innocence begins to be modified by perceptions, judgments, and biases. This closes us off from our performing self. We no longer think, or even breathe, naturally as a child. We no longer “just do”. We think about everything, attempt to control it, and lose our natural rhythms, actions, and thoughts. We are loaded with a burden that is fatal to performance:

- Judgments & Baggage
- Doubts & Fears
- Results & Appearance Concerns
- Societal Bias & Judgment

The negative effects on our results are astounding. Athletes who perform well in training, especially solo training, and who perform poorly in competition or intensity training have developed the Performance side of the equation and neglected the Interference aspects. The same is true of athletes who sometimes do perform at seemingly incredible levels now and then, but cannot sustain their performances. We will return to this theme after exploring the next topic.

2. Your Two Selves

Remember your best performance? Remember how easy and effortless it was? Remember your worst performance? Remember how difficult and painful it was? Why, when we “try” hard for an outcome, do we do so poorly? Why, when we “just do”, is the result so great? Most importantly, why do we repeatedly forget or ignore this lesson! The answer becomes clearer as you examine “Your Two Selves” – the Interfering Self and the Performing Self. Fear not! We are not schizophrenic – just multi-faceted! We should understand and use each “self” for the benefit of our training and results.

Interfering Self – This “self” is the “voices” that we hear in our head when performing. This “self” is full of constant chatter, judgment, bias, and evaluation. It places a large emphasis on past and future, right and wrong, correct and broken. The Interfering Self has a number of unhelpful attributes.

- Judgmental & Critical
- Focus on Past & Future
- Closed Minded & “Knows Best” – HUGE EGO
- Constant Chatter & Criticism

This “self” can be useful for analysis... but only at the appropriate time and in the appropriate way. Otherwise, it is a burden.

Performing Self – This “self” utilizes all the “memory” in our body, mind, and nervous system. It operates in Present Moment without care or concern and is capable of “superhuman” feats with little effort. Most of all, it yearns to be free of the Interfering Self in order to soar! The Performing Self has a number of helpful characteristics:

- Deepest Talents & Skills
- Carefree & Childlike
- Effortless Performance
- Operates Only In Present Moment

Now that we have looked at the Performance Equation and Your Two Selves, bringing the two together lends insight for improvement in our results.

3. Improving the Results

There are two primary methods for improving our results. The obvious method is to improve performance. The overlooked method is to reduce interference. Both seem obvious, yet one is routinely ignored.

Our society is all about physical and technical, thus the typical narrow emphasis in training on those two aspects. If you break your leg, people think you are “crazy” if you do not see a doctor. Our society is afraid of the mental and emotional. If you have emotional or mental problems, people think you are “crazy” if you do see a doctor. This is ludicrous! Seeking help for mental or emotional problems should be as normal as for physical or technical problems!

Because it isn't all the same in our society, we fear the topics, even when there is no illness or problem involved. Paradoxically, we wish to “work on our mental game” – without having a clue what it really means.

What good is it to train the Performing Self if we do not really believe in it and if we interfere with it? Why do we ignore the Interfering Self and allow it to sabotage our performances? Because it is “scary”, like other mental or emotional topics. Release that bias and learn to soar!

Before we look at increasing performance and decreasing interference, there is one more concept required. In a typical 60 shot match, what percent of the time is actually spent shooting, that is, releasing the shot? It turns out that the actual shooting time is roughly 5% of the entire match. (One may quibble with the actual number. It is close enough for the purposes of this discussion.) Thus, we spend about 5% of a match actually releasing the shot. With this in mind, we turn our attention to increasing potential and decreasing interference.

Increasing Potential – Current training focuses almost exclusively on technical and physical aspects of the sport, addressing only the “5%” part of the game. Yet, within that 5%, traditional training misses the essential elements of the most critical moments of all. It also ignores what is going on during about 95% or more of the competition. Clearly one must have a solid foundation – quality breathing and sleep, proper hydration and nutrition, physical stamina and flexibility, and technically correct equipment and technique. We spend a great deal of time on the technical part! Yet our results fall short. The missing elements are found in the other half of the equation.

Decreasing Interference – One must understand the power of the Performing Self and the debilitating effect of the Interfering Self. Alternate forms of “training” are critical. New patterns of thoughts and emotions are essential. You can change the way you think! You must decide to do so. Your coaches cannot do it for you.

This involves activities that some folks call “weird” or “soft” or “fruitcake” training. However, it addresses the critical moments of the shooting and it addresses the other 95% of the competition. One must utilize the power of the Mind in both mental and emotional aspects.

There are three essential attributes one must develop to conquer the Interfering Self, decrease interference, and unshackle the Performing Self.

Awareness / Sensing – Awareness and focus are two very different things. While you are focused in the Present Moment on the task at hand, you are also aware. Information gathered is passed to the Performing Self without “comment”, judgment, or bias where an automatic response takes place – all without breaking focus. Sensors “on.” No judgment or “processing.” No Thoughts. Merely “sensing.” See, Feel, Hear, Taste, Smell, “Sense”, Be.

Will / Determination – Force of will is powerful – direct it appropriately! Appropriate goals are a true and driving self-motivator, not a burden. (If your goals, or goals placed on you,

are a burden, resolve that now!) You must have or develop the will to actually DO what you need and want to do. Rejecting shots takes will power! Breaking an old habit or pattern takes will power!

Look beyond the current obstacle to your goal on the other side. Instead of “observation, judgment, reaction” resulting in obstacles and bad actions, use “awareness, response” to resolve issues without concern and they issues never become obstacles.

Desire – to do correctly. Goals – strive and work. Action – actually do right things. Yes, it is “hard” work. Above all, DO it! Get over yourself, stop reminding yourself that you cannot or that this “mind” stuff is stupid, and just DO it!

Trust / Faith – How often do we say we trust someone or something – and then retain control? That is not trust! We are wrong to think that our actively controlling, arrogant, Interfering Self can do it all – it cannot. Release active, Interfering Self “control” – LET GO! GIVE IT UP! The Performing Self actually has far better and true control!

Trust in self & training. Relinquish perceived active “control.” FAITH – trust without reservation. Scary at first, when experienced all of this is incredibly liberating. Then it is trusted and sought after. Very few fully make this transition; those that do are often unbeatable.

4. The Three Levels of Performance

All of the concepts discussed so far come together in this final topic, the three levels of performance.

These three levels are a natural progression. There is no mystery about how to get from one level to the next, though it is seldom taught. Accordingly, traditional training methods mire us in level two and make level three a mystery.

1) Active Learning & Control – The Beginner

Task is learned systematically through repetition. Basic timing is also learned. This can be natural if athlete is not over taught with traditional “training” methods.

Operating mode:

- Learn steps one by one
- Learn sequence and timing
- Constant active thinking and chatter

Role of the two selves:

- Interfering Self – In “control” and quite happy
- Performing Self – Quietly assimilating information

This is our normal mode for initial learning and is well understood.

2) Partial Automation – The Intermediate / Improver / Advanced level athlete

Most athletes and performers operate in this mode. Although much is automated, it is not truly trusted. Ultimate, or level three, performance is repressed – though it does break out at moments. Misunderstood, this glimpse of level three is feared and repressed because we are “not in control”. This is the Interfering Self holding us back because – remember it has an ego – it wants to be in what it thinks is control.

Operating mode:

- Partial sequences automated
- Some great results – highly variable
- Great deal of chatter

Role of two selves:

- Interfering Self – Dominant and quite happy about it

- Performing Self – Crying for freedom, rare and short breakouts

This mode is reached rapidly by beginners and is the mode where a great deal of time is spent. Indeed, for most athletes this is where they spend their entire careers.

3) Full Automation – The Master

We “Just Be” and “Just Do”.

This is the “Zone” or “Flow State” or “Zen” performance that is talked about, yet so poorly understood. There is nothing mysterious about it... the Interfering Self is out of the equation! Flow has been researched and techniques for facilitating it almost (but not quite) on demand are easy to learn and incorporate into an athlete’s routine.

This type of performance reaches deep within our being – and can be very emotional. The feelings are beyond description and the emotional release is astounding! Of course, that is yet another reason so many in our culture recoil from it. Athletes who understand it are overjoyed... and dominate their matches.

Operating mode:

- Performance seemingly on “autopilot” athlete is spectator
- Results are staggeringly great
- Quiet Body, Quiet Mind, Quiet Heart, Quiet Eye – Peaceful Warrior

Role of two selves:

- Interfering Self – Totally silent and trusting
- Performing Self – In true total control

Those who grow to understand this type of performance embrace it and refuse to revert. Many others may experience it at times and then give it up because of their Interfering Selves and the criticism of others who also do not understand.

Final Thoughts

This article merely scratches the surface of the topics discussed. However, enough information is provided to allow one to evaluate and then make up their mind to take initial steps ultimately leading to understanding level three and experiencing it in regular competition. In many quarters, these ideas are thought to be stupid, wrong, or worse. Those who have the guts to break out of “The Matrix” reap the rewards.

In the next installment, we will explore the ramifications of these ideas, look at actual examples, and the impact of these ideas on training, competition, ...and winning.

The “On The Firing Line” series is published by the national governing bodies for Olympic shooting in Japan and the USA, and has been adapted for archery as “On the Shooting Line” published by USA Archery. Olympic Coach Magazine, the National Association of Soccer Coaches, and others have referenced selected articles. The entire series is available online at www.pilkguns.com.

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rifle athletes from around the country, ranging from beginners to the highly advanced, in clinics and one-on-one private coaching, all on a volunteer basis. He also works with musicians and athletes in a variety of sports.

(Biographical information as of October 2009)

On the Firing Line (Fortieth in a series)

On Stepping Up

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“It’s the Olympics. If you aren’t nervous, you aren’t human!”

We interrupt our “regularly schedule programming” for a look at the recently concluded Beijing Olympics. The next installment of this series will follow up the previous article to continue the discussion of learning and of ultimate performance. Insights gained because of the recently concluded Olympics, and discussed in this article, provide ideas that are closely related to that discussion.

The US Olympic Shooting Team made many headlines at this Olympics. The six medals earned are the most won since the boycotted 1984 Olympics, additional athletes earned spots in their finals (placing the USA in contention for an additional 6 medals), and one athlete’s unusual story of adversity saw another chapter written. It was also fun to watch our “adopted team member” from the Czech Republic add to her Olympics medal count. Congratulations to all of our athletes on the team for their hard work and accomplishments.

Matt Emmons – Humility and Positive Thinking

The quote at the beginning of this article is from the open letter that Matt Emmons distributed right after the 2008 Olympics. It is insightful on a number of levels. First, if someone is not feeling some nervousness or excitement just before a competition, they are probably nowhere near a proper mental activation (arousal) level for optimal performance – or they need emergency medical aid! It also illustrates the point that the Olympics are not just another competition in the minds of most people. After all, it is held only once every four years and is the focus of intense interest and desire. As an example of the difference in the Olympics, although those of us who have known Abhinav Bindra of India for many years were very excited for him when he became World Champion in 2006, we were even more excited for him when he became Olympics Champion in 2008.

Matt’s story in Athens and Beijing has had more news and commentary written and filmed than probably any other shooting event in years, so there is no need to recount the story here. Both of Matt’s open letters can be found on the Target Talk discussion forum with some searching, and both provide very interesting insight into how he views his Olympics experiences. Does he wish he had two more medals? Of course! Is he all broken up over the two missed opportunities? Not at all. Disappointed, but not debilitated. Not even close. Instead of focusing on the outcome, he focuses on the performance, and that focus carries through even to those famous two shots. What people forget is how strong the previous 129 shots were. It takes 130 good shots to win, of course, and Matt assesses those two, just as good athletes do of all their performances, and plans for the future.

Matt was kind enough to share additional thoughts in response to an email inquiry I sent him about his prone match and that fateful shot in the three position match.

“Thanks, from both of us, for the congratulations. Greatly appreciated! No kidding, that prone match was the best match of my life. Even though I didn't win, I'm so proud of it. That was perfection with those conditions.”

Notice that his focus is on the performance, not on the outcome? That is a characteristic of great athletes. Long after people forget where he placed or even that he won a medal in that prone match, he will always have the feelings of his performance. Those feelings will carry him forward to the next challenge.

Naturally, the topic of the three position match was next. Matt's comments:

“Ok, to be perfectly honest with you, I was a little more nervous on the last shot, but by no means out of control. Seriously. I had a plan for that final. I've been looking forward to that final for a long time because I knew if I did anything remotely close to normal, I'd be in there. I was following that plan. My visualization was good, I was able to keep my emotions under control and I was shooting good shots. I knew the 10th shot would be challenging and I wasn't going to fool myself and think that my arousal level wouldn't rise. I thought it would and I had a plan of how to deal with that. I knew how the crowd reacted to the shots, so I was prepared for that. I was doing fine with the crowd noise. It was really nothing more than noise in the background for me.

“In retrospect, I guess the last shot was a little faster than the others. I was told that it went off about 10 to 12 seconds faster than the others. So, had the shot made it down to the bull and I could have held, that would have been about 5 to 7 seconds faster. I was told my first 9 shots were like clockwork as far as when they went off. It's something I'm aware of now, but regardless, I'm still very confident that had that shot made it to the bull, it would have been good. I remember that when I looked through the sights as I was coming down into the target, I got a sense of confidence. My body felt solid and I was ready for it. Like I said, as I was getting on the bull and getting on the first stage, it just went off. It surprised me. And that's it.”

Notice that Matt had prepared for that final and had a plan... even to the point of looking forward to it. His other comments in his email, and those from his open letter, are all positive. Those who know Matt are not surprised. Like any great athlete, he remains positive, toughs out the dark moments, and strives to meet the next challenge.

Jason Turner – The Journey

Jason Turner earned a medal as well. His medal was in the men's air pistol competition. The pistol discipline in this country has not established a dominant presence at the Olympics for some time, to say the least, so his medal is quite exciting! When asked about his trip to China, he said “I had a blast!”

Jason shared some insights about how he learned to perform in major competitions. His story is quite typical, starting shooting many years ago, then getting serious about 14 years ago, training, learning, and competing. His journey is quite lengthy, lengthier than most athletes are willing to endure. Yet he persevered and stuck to his goals and dreams and enjoys the journey.

He attributes his success to “hard work and patience” through the years. At times, he would shoot well, and enjoy it. At others, his performances would falter. Rather than quit in disgust or pass them off as “just another bad day”, he examined those times to gain insight into why the performances were not up to par. These insights allowed him to improve. Otherwise, he would have only a memory of a bad performance and nothing learned from it.

Suffering through those many dark moments – and days – of frustration, yet maintaining perspective, motivation, and learning, is an example of one of the hardest parts of “hard” work... and patience. When he talked about those “dark moments”, there was no doubt that it was not easy at times to stay the course. Anyone can keep motivation going when all is going well. The best learn how to keep it going in the tough times.

Jason shared very interesting insights about his two Olympics events, and a couple of prior events that helped him gain the perspective needed to perform well.

In the 2004 Athens Olympics, Jason was squadded next to one of the “big names” in men’s pistol. That added a bit of extra kick to his nervousness of being in his first Olympics. Like Matt said in the quote above this article, if you aren’t nervous...! That experience, along with competition in numerous World Cup events through the years helped Jason learn that he could compete with anyone and that gave him confidence to continue and to perform even better.

One watershed event in Jason’s development as a top athlete took place at the 2007 Pan American Games. Jason loves free pistol, relishes the intense challenge it provides, works hard at it, and identifies more with free pistol than with air pistol. He was shooting very, very well in international competition and came into the Pan Ams with high expectations. Uh, oh... there is that “E” word again! Sure enough, his first 20 record shots were horrible. I am not being mean or critical here. Jason said he put all kinds of pressure on himself and said the shots were not at all good. He could easily have given up, “mailed in” the rest of the match, and posted a low score. Instead, he stopped. He relaxed and reflected on what was happening and what needed to happen – especially with his thoughts. Then he refocused on what he needed to do and how he needed to do it. His last 40 shots were well above his average at the time.

This experience helped him truly understand the significance of his thoughts. Yes, something that is seemingly as insignificant as what he thought had a major impact on his score. This is true for all athletes – even the ones who deny it. He understood this, reoriented his thoughts, and the performance was transformed.

In Beijing, Jason was entered in both air pistol and free pistol. Jason had started shooting strong air pistol scores a few months earlier, and had made the team, but had limited expectations. As a result, he said that he relaxed, found his optimal mode in order to “just focus” and “just do”, and came away with an Olympics medal. Note that he did not put his mental focus on past mistakes or future desires. He stayed in the Present Moment as much as possible and went about his business of “just shoot” the match.

In free pistol, Jason shot several points off his average, despite shooting very strong scores for the entire quadrennial and being very consistent for about a year and a half leading up to the Olympics. Although many of his shots were very strong, he had too many that scored 8. He feels that he had a bit of loss of focus right at the critical moment of the shots. Notice how the slightest change in focus, visually away from the front sight or mentally from the Present Moment, have a profound effect on the performance.

Jason is another athlete who quietly goes about his business in a positive manner, with a focus on performance as the path to outcome.

Nervousness & Stepping Up

How does one learn to “step up” to such a lofty level of pressure and competition? It turns out the key is to understand that it is not at all about stepping up to a higher level! Yes, that’s right. Instead, one must understand the challenge they wish to achieve, understand what is

needed to meet the challenge, understand how to learn, then do the hard work and have patience in the dark moments, and dare to strive. Meet that challenge, then set the next one. Repeat. Over and over.

Almost anyone can learn to shoot. It all comes down to mental toughness. Remember speed skater Dan Jansen? He was a master of technique and tactics. Yet, he fell in every Olympic event he entered. No medals. Finally, in his very last race, he won his gold. The difference was the work he and his coaches did to toughen him mentally so that his perception of his abilities and of the challenges was properly balanced. This allowed proper focus. Ultimately, mental toughness is nothing more than a solid recipe of experiences, perspectives, beliefs, and appropriate focus gained through proper training and competition.

This idea of “there are no levels” has developed in my mind over time. I didn’t invent it – rather discovering it for myself is but one example of the steps in my own journey of learning through reading, listening to my mentors, coaching athletes, and my own training. To explain the concept of no levels and more fully explain the alternative of challenge cycles, the following paragraphs are slightly edited (to clarify and correct typos) from an email on this topic to one of my mentors.

Dear Doc Z...

I have noticed with many athletes that the first time (or first few times in some cases) they enter a competition at a new (higher) level, they falter. Then they learn that the other athletes are no different, that they themselves can perform with them, come to terms with the new level, and learn to perform well. The paradigm is that of "stepping up" to a new level. At first, thinking of them as levels seems an intuitive and obvious way of thinking about the issue. People will often say "You have no idea the pressure at the Olympics!"

In thinking about how to break that “try-fail first” cycle, I thought about one of the critical elements that must be in place to facilitate "flow" and how that element might apply to the situation above. The element of interest is that the challenge must be well balanced with the ability to meet the challenge. That is, the challenge must require effort, yet be attainable. If the two mismatch very much, the athlete is either discouraged ("I can't") or bored ("It's too easy") and therefore "flow" cannot be achieved and/or the performance is sub-par.

In my thinking about this element, some years ago I came to the conclusion that it wasn't whether the two (challenge and ability) were well balanced, but whether or not the athlete's perception of the two was well balanced. Since then, I have successfully assisted athletes in adjusting their perceptions in such a way that they achieved "flow" and/or performed consistently at levels far exceeding their previous belief pattern. This is not a mental trick nor giving of empty platitudes. It is helping the athlete understand and believe in their actual capabilities based on proper training and hard work.

While one can look at the larger or more important competition as being up one or more levels, that is done from a fixed, external reference. If we shift the reference to that of the athlete's internal point of view (the one point of view that actually matters), the concept of levels can go away. Simplistically, a challenge is either easy, attainable with proper effort and focus, or seemingly impossible in the mind of the athlete. It matters not where that challenge falls on an externally referenced scale.

Younger students have commented to me that the state high school championship was harder and more nerve wracking for them than national championships. (The former event had well balanced challenge/ability factors, the latter event was beyond their level of achievement at the time so they didn't get the nerves of trying to win.) This lent insight. More interestingly,

students have also commented that they found it easier to "step up" to a higher level when we had worked together to properly prepare them, as compared to earlier in their career when they didn't feel mentally prepared. This is the perception adjustments at work. They commented on how they had "stepped up" to very high levels without undue strain or trauma, and on a very consistent basis.

With that background, we come to the point. Rather than thinking about each new level as a new and higher level that one must learn to "cope" with, one might think about it as a continuous cycle of challenge, learn, achieve. Each time we increase the challenge, it is merely a matter of proper training (physical, technical, mental, emotional – all in proper proportion) and work to meet the new challenge. "I have increased the challenge before and then eventually met it, and done that several times, so I can do it again and again until I can meet any challenge." As one repeats that cycle, one gains ever more confidence in their ability to repeat the cycle. In effect, they become stronger as the challenge grows, rather than feeling like they have to start all over again for the next level.

That was the main body of my email. Along with a few words of encouragement, my mentor's emailed response was "A most well thought out and on target (no pun) piece of writing. It is indeed the perception of the event and not its status on some external scale that matters. Working on an internal cycle of challenge, learn, achieve acknowledges this reality and returns more control to the athlete." This comment is from a gentleman who has a PhD in psychology, and has worked professionally for decades in high performance enhancement in the fields of athletics, academics, and military combat. For the past 15 plus years he has directed a performance enhancement laboratory in all those fields for a very well know university, including coaching work with numerous Olympic medalists in a wide variety of sports.

Notice that he mentioned an athlete's sense of control. Athletes who feel in control have a lot of fun – and are very hard to defeat!

Stepping up is easy once we understand there is no stepping up – merely a new challenge to be learned and met, just as with previous challenges. Yes, some challenges require more training, thought, patience, and effort than others do, yet the principle is unvarying.

Ultimately, challenges are too hard only if we tell ourselves they are too hard.

Acknowledgements

Thank you to Jason Turner for sharing his story and personal thoughts for this article. Thank you also to Matt Emmons for his thoughtful email and willingness to share his thoughts. Any errors in transcription or fact related to either athlete are solely the responsibility of this author.

It takes guts to "put yourself out there" on the world stage. It also takes guts to allow your private thoughts and mistakes to be discussed publicly, such as in this article, so that others may learn. Jason's and Matt's willingness to do all those things provides us all with interesting lessons learned about times that do not go as planned and about how to meet the challenge. Congratulations on your Olympics gentlemen! Both of you represent the USA very well, both on and off the field of play.

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(Biographical information as of October 2009)

On the Firing Line (Forty-first in a series)

P-R-N-D

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**“How it works we do not know;
Though we sure do love to make it go!”**

The human brain and mind are quite amazing and wonderful. The brain (physical) and mind (psychological) are so complex that, even after generations of study, we are constantly learning more about how they operate. While we refer here to a simplistic boundary between the physical and the psychological, even that classification is subject to discussion.

Despite the lack of a complete and universally accepted model for how our brain and mind work, significant knowledge is available that aids us in the areas of clinical psychology, developing expertise, and performance psychology, among others. As athletes and coaches, we are especially interested in the latter two areas.

It is often not required to understand exactly how the mind works in order to understand what it does in various situations. An analogy is helpful in understanding this assertion. Most modern automobiles in this country have an automatic transmission. While most of us may have little or no understanding of how an automatic transmission works, we clearly understand what it does and are able to use it with little effort.

By now, alert readers have discerned the meaning of this article's title! Regardless of the make or model of automobile, setting the transmission's control lever to P, R, N, D, or other settings is clearly understood in terms of what the transmission will do, even if we are ignorant of how it does what we have asked.

It is no different in the use of the brain and mind in sport or other performance. While we may disagree on, or have no knowledge of, the internal mechanisms of how they work (e.g. conscious, subconscious, unconscious, and any number of other concepts), we can study the actual results of what they do in differing situations. Applied sports psychology places emphasis on the “what” rather than the internal “how” of the operation of the brain and mind as the athlete trains or competes. Thus, while the quote at the beginning of this article could apply to the automatic transmission, also applies to the human mind. Ask any athlete who has experienced flow or other performance far beyond their expectations!

It turns out that the biggest challenge in unleashing and utilizing the power of the mind for performance, and learning to perform, is not our understanding of the mind. Instead, the obstacle is staring back at us from the mirror! The Interfering Self insists in ruling all activity and, as discussed two articles ago, it is incapable of performing as we wish and it prevents us from utilizing the resources available to us in our learning and training.

Frequently we hear: “That athlete/coach can't possibly help me reach (a given level of performance) since he/she has never competed at that level.” Nothing could be further from the truth. This is the Interfering Self, specifically the Ego, taking charge. After all, the Ego, that is “I”, knows all, so another person cannot possibly help because they are deemed inferior.

Open-minded athletes are able to learn from others without feeling inferior. Indeed, the most helpful teacher often turns out to be someone with a very different set of experiences. These athletes, while working to enhance their performance, also work to reduce their internal interference.

Have you ever had a shot that seemed to go off “by itself”, often before you felt you were ready? Have you noticed where those shots end up most of the time? While a few do end up in the white, or in the backstop, the vast majority end up in the black – dead center. How is this possible? After all, the Interfering Self was not “in control” of the shot, so how could it possibly end up in the center? (That is the Ego talking!) In thinking about the Two Selves (the Performing Self and the Interfering Self) and the Three Levels of Performance, one realizes that those shots are generally at Level Three – Full Automation. For some reason, for that shot, the Interfering Self was distracted or not paying attention to “taking control”, and the Performing Self was – finally – free to perform as only it can. The result is astounding. And repeatable.

Many coaches and athletes say that these shots are mistakes and must be avoided at all costs. After all, one must be “in control” they say. This mires the athlete in the Level Two – Partial Automation performance mode. While many athletes are quite successful in this mode, their results are variable and rarely sustainable, even with high levels of work and training.

Other coaches and athletes, intrigued by these “by itself” shots, do not ignore them. Understanding the Three Levels of Performance, and the Two Selves, they explore deeper. Even then, when the number of unexplainable “flyers” increases, coupled with the Ego’s sense of lack of “control”, many step back from their exploration and revert.

A brave few realize that any change in technique, even if “only” mental, often results in temporary decrease in results while the new process is assimilated and solidified. Parts of their training may even revert to Level One – Active Learning & Control. Having confidence, and ignoring the criticism of unknowing naysayers, they soon discover that the “flyers” start to decrease in frequency and severity before disappearing altogether. This is not theory, having been observed in actual training and competition over a period of time.

In fairness, one must look at alternate points of view. One athlete provides a very interesting perspective on this topic. Abhinav Bindra set a junior men’s air rifle world record as a teenager when he won a World Cup with a score of 597. Among other things, he described having been in the “zone of forgetfulness”, which is a way of describing being “mindless”, “just shooting”, or letting the Performing Self take over and experiencing Level Three performance.

Abhinav had learned how to get the Interfering Self to step back and allow the Performing Self to take over. At the time, he was training a great deal, so his confidence was high and he had trained to the point that it was difficult not to follow his shot process. Later, his ability to manage the Two Selves showed when he competed in the smallbore rifle 3x40 event for the very first time in his life. We watched him post a very good score in that match... a World Cup no less.

Despite these successes, Abhinav noticed that at times one could not achieve the same levels of confidence and automation when forced to dramatically reduce the quantity of training or when facing tougher pressures. He then worked on how one could reliably “manufacture a shot” when full automation could not be achieved. While this creeps a tiny bit back toward Level Two, the issue was one of striking an appropriate and delicate balance so that the Ego would not be tempted to take “control” and completely revert to Level Two. Regardless of the actual psychological mechanisms (how), this model worked for him (what) so that he was more adaptable to varying situations in his career. The specific details of his shot process, especially at the critical moments, are such that he has almost everything automated and lets the process control itself for the most part, even when “manufacturing” the shot.

Of course, one of the dangers is that, upon reading the previous paragraph, one’s Ego says, “See, if it’s good enough for Abhinav, it’s good enough for me so I don’t need to worry

about that stupid Level Three stuff!” without truly understanding. Of course, lack of understanding is not a problem either, since the Ego already “knows everything” any way!

We get wrapped up in the technical aspects of our shooting, positions, balance, natural point of aim, trigger adjustments, gun adjustments, where and how to aim, what makes a good shot process, and on and on. We ignore what is going on in our head and our heart. Hopefully, the concepts presented two articles ago provide insight into what is happening and what is needed in training.

The previous article provided insight into one of the critical elements of an athlete’s journey of growth to be able to meet any challenge. Not one word was about physical or technical aspects of shooting or performance. The article also told a bit of the story of two very successful shooters. It is highly unlikely that Matt Emmons will say that his two most famous shots are due to physical or technical aspects of his game, or that those aspects are the only critical components of all his world class shots and performances. In Jason Turner’s story, one of the major events in his journey of growth took place at the 2007 Pan Am games. Again, the insight he gained there was not physical or technical. True, both athletes have solid physical and technical games. Those aspects are obviously necessary. Not so obviously, those aspects are not sufficient on their own without the incorporation of the mental and emotional aspects.

The Interfering Self hurts our performance, and it even stands in the way of our learning and training. The best coach in the world is helplessly ineffective in the face of an intransigent athlete. Similarly, the best athlete in the world is helplessly debilitated by an oblivious coach. It takes clear, well informed communication between coach and athlete, and a “rage to master”, that is a constant journey of learning, on the part of both.

Careful and methodical study of the previous two articles will provide many opportunities for enhancing one’s journey of learning and achieving. This article, by design, is much less detailed and intended to stimulate renewed thought in these areas.

Self-awareness and open mindedness are powerful tools that open many doors.

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(Biographical information as of October 2009)

On the Firing Line (Forty-second in a series)

Put the Cork in the Bottle

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**“At the end of training,
When you are tired and ready to quit,
You must do one more hard thing every time.”**

My friend Jim came over to me on the range to point out something he had noticed. He was serving as one of the range officers on the 50 meter range at the 1996 Atlanta World Cup. As the Olympic test event, this World Cup had drawn most of the best shooters from around the world. His comment was something to the effect “Have you noticed something today? Isn't it interesting how all these athletes can shoot ten after ten, long strings of tens, and then several of them give up a nines on the last one or two shots.”

As an accomplished and life-long shooter, Jim was watching the athletes very closely. He noticed that some of the athletes appeared to “finish” their event with one or two shots remaining. That is, they lost focus, or became impatient, or otherwise altered their rhythm and routine for the last one or two shots. Some may have reached their physical and/or psychological limits. Some may have been excited or disappointed at their performance and just wanted to get it finished. Others may have just lost focus, having shifted it, or allowed it to shift, from the present moment to the (near) future and the end of the event.

Regardless of why or how, the athletes in question failed to stay on track and could not “close the deal” as it were. Many others, of course, stayed on their game for every shot and took higher finish rankings.

The last shots are often among the hardest. The end is in sight, a goal or milestone may be within reach, fatigue has set in, and any number of other factors conspire against the athlete. The mental toughness required to “maintain” is more than is demanded of us in most of our everyday life. This toughness comes through a variety of training attitudes and methods, and through competition.

One aspect of training that is important does not seem so important until one thinks about it for a moment. At the end of a long or intense training session, or when the athlete is tired, one must do “one more drill”, just when it appears that day's limit has been reached.

Abhinav Bindra calls this “Putting the Cork in the Bottle” meaning that the athlete must finish the session with one more activity to build mental and physical toughness. After all, tie-breakers start with the last ten shot score, and finals competition is at the very end of the event.

In addition to the title, the quote at the beginning of this article is inspired by his comments. Athletes who constantly challenge themselves to reach beyond their comfort zone stand a much better chance of prevailing in competition. Doing so in training on a regular basis sets the stage. Many of the best athletes follow this principle at the end of almost all their training sessions. Abhinav suggests that the drill not be “easy” and instead that it should be intense and challenging. Again, this is to better prepare the athlete for the end of an event and for the final round.

Two of the members of the 2008 USA Olympic Team, when they were college teammates, spent a great deal of their training time, not just the end of a training session,

challenging not only themselves, but each other. Already individual NCAA champions, and members of a perennial NCAA champion team, they still challenged themselves to become even better competitors. They did this through a variety of methods, including “intensity” training.

One of the games they played, is known by various names including “3 & 0” (three and oh) or 5 & 0. Each athlete starts with a score of zero. They each shoot one shot, and whoever has the higher value shot gets the point, so the score is 1-0. They shoot a second shot, and if the same athlete again has a higher value shot, the score is 2-0. If the other athlete has the higher shot value, the first shooter’s point is taken away and the score goes back to 0-0. One or the other of the athletes is always at zero. In order to win, the score must reach 3-0. With well matched training partners, such as the two mentioned here, this game can go on for hours. Sometimes, they would never reach 3-0, instead constantly battling back and forth at 1-0 or 2-0 until they had to go to class or dinner. Their exploits in international competition, including some very dramatic and/or dominant wins, proves the value of their training. One suspects that these two do similar training even today, when their schedules allow.

Another favorite intensity drill is called “First to Five Tens”. This can involve a pair of athletes, an entire group (all vying for “gold-silver-bronze” placing), or as a single elimination tournament, where athletes are seeded and paired, and advance to the next round only if they prevail over their partner. With a group of 8 or 16 athletes, this gets quite exciting!

The drill is a race to see who can shoot five shots that each score as a ten, before anyone else. Go too slowly, as in a race, and one cannot win. Go too quickly and rush, and one cannot get the shots in the middle. To add to the excitement and pressure, they are instructed to call out – loudly – their current count: “One!” after getting their first shot value of ten, then “Two!” and so forth. The idea is to add to the intensity... those who fall behind really feel the pressure, while those who are up to four and are trying to close the deal feel a different kind of pressure. It is not unknown for an athlete who is ahead 4-0 to lose 4-5.

After a short period for preparation and sighter shots, the following commands are given. First, “Load”, followed by ample time for all to cock and load their rifle or pistol. Then “Rifles on stands” or “Pistols at ready”. When all are settled, then “GO!” Everyone shoots until the outcome is decided.

First time participants are often shocked at their reaction to this drill. Later they will report, “I have never felt those things except in a match!” It is quite fun to watch each athlete during the drill. As frivolous as this “game” may sound, it allows athletes to build incredible skills and mental toughness. Veterans of this and other intensity drills find they relish final competitions, rather than dreading them, knowing that they have the experience and toughness to thrive in a final when others are wilting. One often hears “We love to shoot finals!”

This “intensity” training is a critical factor in developing mental toughness and in “inoculating” athletes from choking. (See article numbers 17 and 18, “Choking” and “Choking Cures” for more on this topic.) Intensity training involves recreating within the athlete the actual feelings of competition, that is, the adrenaline and desire for outcome. Seasoned competitors learn how to meet the challenge of outcome focus by facing it often and learning to manage themselves. Intensity training is a critical component in this learning.

Notice that merely hanging targets and “shooting a match course” does not simulate competition. Intensity training is performed through drills and games where the athlete truly cares about the outcome. Head-to-head competition drills with a well-matched training partner do a wonderful job of recreating the “match nerves” of real competition. Merely going through

the motions of a match course generally does not, in and of itself, provide the same situation for the athlete.

One night, we had reached the end of training with a group of about two dozen rifle and a few pistol shooters. Most were “regulars”, while others were guests. My younger daughter was home that weekend from college and came to train with us. She had already put in a very long, very intense, self-directed training session, as she always did, having no coach while away at school. The regulars, knowing how our sessions went, were not sure if we were truly finished or not, and asked. Of course, I suggested we “Put the Cork in the Bottle” and do one more short drill to put the finishing touches on the evening.

In good spirits, yet very tired, my daughter asked if she could skip the last drill. Before I could respond, a voice came booming from about 20 firing points away “Michelle, How good do you want to be?!” Michelle exclaimed. “OH! Now his students are even saying it! Darn! Ok, I will shoot!” Everyone laughed good-naturedly at how one of them had used my signature saying to keep her going, and we went to work for a few more minutes. In our post-training wrap-up, where we compare notes, Michelle showed her target, then commented on how surprised she was at how well she shot despite the fatigue. She also commented on how she could use that insight in her next competition.

Constantly challenge yourself, provide yourself with a good mix of intensity training to go with your other training activities, and always “Put the Cork in the Bottle” when you think you cannot do one more drill. You will love the results in competition.

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(Biographical information as of October 2009)

On the Firing Line (Forty-third in a series)

Not Really Athletes

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“Sorry, was that supposed to be funny?”

When traveling to the US Olympic Training Center (OTC) in Colorado Springs, the journey often involves taking a ride on the OTC shuttle bus from the airport. The driver always asks where you are going and which sport you are involved with. Shooting participants are taken directly to the USA Shooting building so that arms and ammunition may be secured.

Many years ago, on my first trip to the OTC, the bus driver, upon hearing we were with Shooting, decided to tell us one of the old OTC jokes. “What does ‘NRA’ stand for?” he asked. Before anyone could respond, he answered, “Not Really Athletes!” I thought to myself “Sorry, was that supposed to be funny?” (Since then I have never heard the joke on the bus again, and the drivers are universally friendly and helpful, even at 5:00 am.)

As an aside, for the benefit of those who may not know, the National Rifle Association (NRA) served as the designated National Governing Body (NGB) for Olympic Shooting in the USA prior to the formation of USA Shooting. It was during the NRA era that the shooting building was built on the OTC campus. Thus the joke’s reference to NRA.

Behind many jokes, there is often an element of truth. What, if anything, is the truth and/or the perception behind this joke, and does it have any merit? The answers are eye opening.

Athletics

Many sports require incredible amounts of physical exertion: football, baseball, basketball, soccer, hockey, tennis, running, speed skating, and many, many other sports fall into this category. It is easy for folks who understand those sports to look at shooting and say, “How hard can it be to stand still? That isn’t athletics at all!” By most measures, they are right – there is far less explosive energy, motion, and movement than in the other sports mentioned. If they would bother to look at our sport for a moment, and few do so, they would discover that there is a different type of athleticism involved.

Think about how many times one lifts their firearm in a competition or a long training session. Although the amount of weight lifted may be small, the repetition count rapidly fatigues anyone who has not trained in that manner. Most weight room work involves much heavier loads and far fewer repetitions. Standing very still requires a great deal of energy over the long duration required.

Highly experienced athletes who include appropriate physical training in their regular routine know that being physically fit makes it much easier to stand for long hours, assume difficult positions (kneeling with the rifle comes to mind), improves balance, makes the many repetitions of lifting seem effortless, and makes it easier to remain mentally tough.

There are great physical demands placed on the shooter, though these demands are quite different than those in many other sports. Thus, in a different way, athletics do play a significant role in our sport. The bus driver’s joke is based on a misperception, at least on this part of the

topic. Before we get too self-congratulatory, however, we need to explore another aspect of the joke.

Athletes

When I refer to shooters as athletes in conversation, I often get funny looks – even from shooters. Part of the reason is the misperception just discussed above. The other part of the reason is because so few shooters, even among the most serious shooters, actually think, act, train, and compete like athletes.

Most shooters do not train; they go through the motions in practice. They do not work out; they think they do not need to do physical training. They do not truly partner with a good coach; they think they can do it on their own. They do not seek interaction with a good sports psychologist on a regular basis; they only do so when having a performance problem, if even then. (“Perish the thought... let some stranger get in my head!?”)

While these words may seem harsh, one only has to go outside our sport for comparison. Many former high school athletes, who never played sports in college and who were otherwise “average” very often understand things that are far less commonly understood in advanced shooting circles.

Read most any of the myriad of books written by great athletes and coaches, such as by Lance Armstrong, Pat Summit, or Lou Holtz, and one quickly realizes the truth. More often than not, we really are not athletes. The best piece of coaching advice I ever received came from one of my mentors. “Go outside the country for shooting resources, and go outside the sport for sports psychology resources.” Following that advice payed off handsomely.

One could spend a lifetime reading, studying, and training with the writings of Heinz Reinkemeier. One could spend another lifetime doing the same with the writings of Dan Millman, Barry Green, Tim Galway, Mihaly Csikszentmihalyi, Fred Shoemaker, among many others, not to mention the excellent sports psychology textbooks available today. Please do not say that these books have nothing to do with shooting. They are all about shooting. For example, one of our very best current female rifle shooters gleaned quite a bit of useful information from a book on the mental aspects of baseball!

Anyone can point out problems or criticize; solutions are preferred. What does one do to become an athlete?

To be an athlete, one must be honest with oneself. Brutally honest at times.

One must make decisions about what one is, and is not, willing to do and to give up, and set appropriate goals. Properly constructed and maintained, goal sets are quite motivating and exciting.

One must be willing to spend the time and energy needed to build a training plan with the coach. Oh, you do not need a coach? True athletes know how to benefit from a good coach. Several articles in this series, including number 25 “Believe”, illustrate examples where athletes utilized their coach to enhance their performance. (Coaches: do we approach our work as if we were an athlete, or only as a casual shooter? That choice has significant impact on our abilities and our value to serious shooting athletes.)

Do you go to competitions tired and dreading the challenge? Or do you go with a sense of “hunger” for, and relish, the challenge? Your training plan has a great deal to do with how you feel going into a competition.

Do you “love to shoot finals” or, as is often heard, do you “hate finals?” One must actually train “under pressure” in order to gain the skills and confidence needed to dominate in finals. There are some shooting athletes who understand this – and they live for finals. Their hard work and “intensity training” prepares them for the challenge.

Serious shooting athletes understand the value and competitive edge they gain from regular, and appropriately structured, physical training. Did you know that the foundation of mental toughness is being in good physical shape? Did you know that one’s balance is dramatically enhanced by being in good physical shape? Good physical tone also enhances one’s hold or swing. These are but a few good reasons to do some work in the gym or other venue.

Speaking of mental toughness, the topic of sports psychology often elicits a variety of responses; often negative. Sports psychology has almost nothing to do with clinical psychology. Rather than attempting to find and resolve problems as in clinical psychology, sports psychology focuses on building mental and emotional skills to enhance an athlete’s ability to thrive and excel in the heat of competition. There is no “head-shrink” work involved!

Athletes who regularly work with a good sports psychologist (often one that is deeply and directly involved with sport and athletes, not merely working academically out of the books), or with a coach who is well versed in the field, find a completely new world of perspective and ability. Though built on a good physical foundation, mental toughness is ultimately a set of attitudes and skills gained through incorporating sports psychology as an integral part of one’s training. The concept of “intensity” training is based wholly on sports psychology principles, as proven through formal research.

A critical part of becoming a true athlete is having or developing an open mind. This is closely related to the “brutally honest” topic above. Having an open mind does not mean mindlessly adopting every little tip or trick that one encounters from all the people who “just want to help.” It does mean, however, that one is open to new ideas and perspectives and develops the critical thinking skills needed to understand what is and is not useful.

On whole, as athletes go, we do not measure up as often as the average participant in many of the sports mentioned earlier. So, the old joke hits a bit close to home. To be sure, we have a number of great exceptions. It sure is fun to watch them shoot... and win!

Final Thoughts

It is possible for a few shooters to reach their loftiest goals through nothing more than regularly being “knee deep in brass” as the old saying goes. Indeed, most of us would benefit from quite a bit more, and more regular, training, so long as it is quality training. Although this is one path, most need more, as discussed in this article. Above all, be honest with yourself. It is ok to be a recreational shooter. Or a collegiate shooter and nothing beyond. Regardless of the level you wish to reach, or the amount of shooting you wish to do, be honest with yourself and others. Enjoy the sport and embrace the athlete’s attitude and joy of training and competing.

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(Biographical information as of October 2009)

On the Firing Line (Forty-fourth in a series)

Knee Deep In Brass

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**“Amateurs practice to get it right;
Champions train until they cannot do it wrong.”**

There is an old saying that in order to become a very good shooter, one must be “knee deep in brass” on a frequent and regular basis. In other words, one must do a lot of shooting. This may come as a shock to regular readers of this series of articles: I completely agree.

As most coaches will assert, one must have quality practice not just the quantity. In this article series, we spend the vast majority of the time exploring self-talk, confidence, attitude, training, competition techniques, and any number of additional topics drawn from applied sports psychology. Those topics are critically important – and often overlooked by many athletes and coaches. Yet, they are useless without a solid foundation of technical training.

Interestingly, even those who do not embrace the value of applied sports psychology and who believe only in training, training, and more training, often do not do enough training! Recreational shooters are limited in their training time and have no choice. Athletes who are serious about reaching the top levels of the sport need to utilize applied sports psychology – and do a great deal of training.

Training Effect

Shooters in multi-day competitions, especially those of 4 or more days duration, often notice a “training effect” over the course of the competitions. As long as their stamina holds out, they find that they shoot better as the days go by. This is especially true at competitions such as the weeklong USA Shooting National Championships and at the various NRA championships held each summer at Camp Perry. One of the best examples is in NRA conventional prone. Some of these competitions involve 160 record shots a day for four days. Including sighting shots for each stage, an athlete will use over 800 rounds of ammunition and more typically closer to 900, 1,000, or more over the four days. For those who are only able to train infrequently, this is an intense “training” period and an improvement is often noted.

There are some athletes who understand the value of volume training. They notice that through the volume, awareness builds and they are able to discern and refine ever-finer aspects of their shooting technique. They become adept at handling different situations that come up in training and competition. Some of the very best shooters of all time, while not studying applied sports psychology, became their own experts in the field through their shooting. Many athletes are very poor teachers and coaches, whether technically or mentally, yet have come to hold an incredible understanding of what they need to do themselves to shoot well.

Volume Works

Lones Wigger provides an interesting example of a top shooting athlete. Certainly one of the best rifle shooters ever, Lones worked very hard at his game. Equipment had to be working properly and adjustments refined. He learned and refined his tactics as well. How? Lots of

shooting. While it is unlikely that he will sit with anyone and discuss the finer points of applied sports psychology, it is almost as unlikely that you will beat him in a competition!

In addition to the preparation and volume in his training, one of the critical elements in his own words is “Shoot in every darned match you can!” He knew that technical training alone was not enough. He built up confidence and a well-stocked tool kit of tactics and techniques in the crucible of competition. Yet, he also knew that this would come only through volume and intensity of training – and a high volume of competition.

Familiarity and Automation

Training with significant volume on a frequent and regular basis builds familiarity to a degree that we seldom experience. Tasks become automated to such a degree that it is difficult to do them incorrectly. Under pressure, we tend to do that which is most familiar. What do we want to do on the last shot of the big match where we feel the pressure? More importantly, what will we do? The answer to the latter is that we will do what we have done most often in training.

In the precision rifle and pistol events, one of the fastest ways to raise one’s score is to reject the shots that do not unfold properly. As one learns to reject, a debate often rages while on aim: “Should I reject this shot or is it ok?” Of course, that kind of thinking is fatal to a good performance! Through volume training, one becomes so familiar with what it feels like for a shot to unfold properly, that shot rejection becomes an automatic response to even the slightest awareness of something being off plan. There is no thought or judgment. Note that this familiarity is both physical and mental. It only comes through volume training.

Conversely, in the shotgun and rapid-fire phases of the 25 meter pistol events, one does not have the luxury of rejecting shots that do not unfold properly. The only option is to have one’s body and mind so familiar with the routine that there is almost no chance of error. When the target launches, one must swing the shotgun now, and properly, in order to get a nice bust shot after shot.

Training to this degree is also of benefit to the precision rifle and pistol shooter, since it reduces the number of rejections, thus saving critical energy and time. This also frees the body and mind to handle deeper tasks since there is no internal distraction over mundane details that should be trusted. An example of automating and trusting the details illustrates the benefits.

Automation Works

Tom Suswal is a very good smallbore prone shooter and provides a good example of a shooter who understands both quantity and quality in training. He trains as much as possible consistent with family, work, and other obligations. He does so frequently and regularly. His self-directed training sessions are planned, focused, and provide him with quality training. He has a great deal of competition experience and many lessons-learned stock his tool kit. When he is working his game, he is among the very best.

One year, during the second day of the iron sight matches at Camp Perry for the prone competition, Olympian Jack Foster watched Tom clean a 20 shot match stage in very, very tricky conditions. Tom ended up with a perfect 1600 and high X count (inner tens) on a very difficult and windy day, and was among the very top finishers at the end of the four days of competition. Afterward, they talked, and Jack commented that Tom was apparently sensing when his conditions were about to return, adjusting sights if needed, and was always ready to shoot immediately when the conditions changed back to the prevailing mode.

Discussing this incident and concept with Tom recently, he shared “I seem to have developed a feeling when things are about to change for the bad and/or the good. Many times I would be waiting out a condition, and even though it was not changing I started to prepare to shoot as I felt it was ready to revert back to my condition. I cleared my mind, breathed, settled and started to squeeze, and at that point the condition came back, I shot, and got an X.” He went on to comment that this is not something you teach a beginner, and I agree. One must take care of all the “basics” first.

Many shooters are unaware of condition changes until after they actually happen. Because Tom had trained so much and so well, almost all the aspects of the shooting took care of themselves. All he had to do was remain aware, and he could sense impending condition changes. Thus, he was less likely to get caught in a switch and shoot a wide shot. Instead, he always stopped, made sight adjustments if needed, and was ready to shoot again quickly when the desired conditions returned. Prone shooters know that conditions are everything. Thus, Tom’s ability to anticipate and instantly know how to respond is priceless. No delay, no debate, no hesitation. This would not be possible if he were still thinking about the details of actually delivering the shot. Tom developed these skills through a great deal of training and competition over the years.

Final Thoughts

The paraphrased quote at the beginning of this article speaks volumes. At first, we strive to learn how to do something. Then we think to ourselves “I’ve got it!” Finally, we wonder why we still fail so often in competition.

Just because we can do something properly some of the time, especially in training, does not mean we can do it consistently, on demand, under pressure. We do what is most familiar under pressure. We must work well past being able to do something correctly to excel. We must work to the point that the proper physical and mental technique becomes the most familiar method.

Training volume is but one component of a holistic plan. Very recently, a young athlete commented that they “hate finals” – just before starting an important final! Despite being very well practiced, and despite having a great deal of practice volume, the athlete is still developing and has not yet developed the requisite mind-set and techniques for performing under pressure. Regular training with finals, triple shot finals, and a variety of intensity training, among many other things, would benefit this shooter – and many other shooters. It is the combination of physical and mental skills that make the difference. “Work smart and work hard!” Both in balance.

Mere volume will not assure success. A well balanced program and plan work wonders. Even some of our very best shooting athletes would benefit from an evaluation of their balance in this regard.

Now, let’s go shooting!

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(Biographical information as of October 2009)

On the Firing Line (Forty-fifth in a series)

Not Shooting Not Tens

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**“The fastest way to raise your score:
Do not shoot bad shots.”**

Those who prefer a positive approach to life, and athletics, may be jarred by all the “negativism” in the title and quote above. Yet, by approaching the familiar “Shoot Tens” and “Shoot Good Shots” from the opposite direction, we discover an interesting perspective.

Though it is obvious that we want to “Shoot Tens” and “Shoot Good Shots” it is not so obvious why we do not always succeed. In striving for the “good” we often fail to spend a moment to understand the “bad” in order to learn from the mistake. Never should we “forget about” a bad shot as is often taught. Instead ignore the outcome and learn from the performance (or “doing”) error. This theme, learning from mistakes, is very important and appears in a number of previous articles, especially number 5, “Eights Are Your Friend.” True, forget the “bad” outcome. However, understand why (“what I did”) and move on.

In the precision rifle and pistol events, a variation of the lead quote is “The fastest way to raise your score is to reject the bad shots.” How many times do we hold on target and agonize over whether we should shoot or not? It happens so often one might call it an epidemic! There should never be any thought, hesitation, or decision about rejecting.

Either the shot process is unfolding properly, and it continues without interruption, or it is not unfolding properly and we reject instantly with no hesitation. If there is the slightest hint of hesitation or doubt, the shot must be rejected immediately.

Watch a really good shooter: sometimes they will reject a shot so early in the process that they had barely begun. As many a top athlete has said, “You can’t make them pretty. They are either there or they are not.”

In the shotgun events and rapid-fire phases of pistol, athletes do not have the luxury (or dilemma!) of rejecting shots.

Any good international shotgun shooter will gladly tell a precision shooter how wickedly fast the clay targets move across the field – and how the slightest hint of hesitation, whether in body, mind, or spirit, will result in a clean miss instead of a nice bust. The same goes for the rapid-fire pistol shooters. When the CRO says “Start!” your options are few: shoot well or else!

How then, does one not shoot “bad” shots when there is no opportunity for rejecting shots? The answer provides the essence of good shooting, even for the precision shooters.

When one has no option for shot rejection, one must truly prepare and commit to the shot. It sounds so simple as to be trite or useless. Quite the opposite is true.

First, we need to understand the difference between “involved” and “committed” as concepts. Do you remember the story of the bacon and eggs breakfast? The chicken is merely involved. The pig, on the other hand, is fully committed! Happily, we may commit to our shots and not be killed. Conversely, athletes who are merely involved with their shots or their shooting are “killed” by the outcome. Many an athlete has joked “Be the pig!”

Second, we need to understand what it means to be committed to a shot instead of being merely involved.

Involvement looks and sounds like this: “I hope this one turns out better.” “I think I am ready... here we go.” “Is my hold good enough?” “Should I reject?” “Hurry up and get this over with.” “I can’t see where the targets are going today. How am I going to hit this next target?”

Involvement takes many forms including not caring, going through the motions, taking a defeatist attitude (article number 22 “Predator or Prey”), focusing on the past, taking “control” in order to “guarantee” the outcome, future and non-shooting thoughts, focusing on fear of failure, timidity, and similar mindsets.

Commitment is quite different and often looks and sounds like this: “I am so ready for this shot (or series). I can’t wait!” “Just Be. Here. Now.” “Present Moment!” “I am ok no matter what happens.” “I own this shot (or series).” “I am up for the challenge!”

Commitment also takes many forms, including decisiveness, aggressiveness (in appropriate measure), self-confidence, laser focus at the appropriate moments, being in the Present Moment, trusting the process and allowing oneself to give up perceived “control” that never existed anyway, and similar mindsets.

Precision shooters often think they are ready and committed to the shot. Shotgun and rapid-fire pistol shooters learn quickly they had better commit. Exposing precision shooters to the “do it now” events is a real eye-opener for them!

A particular trigger technique developed for precision shooters provides insight, and a most useful tactic – especially under pressure, for developing commitment. First we explain the technique, discuss some alternatives, and then explore the ramifications and insights.

Four steps to prepare the trigger:

1. Mind Ready – Focused on this shot now. All other thoughts and distractions have been allowed to run and are now gone. “Be here now!”
2. Heart Ready – Committed to this shot process. There is no outcome or trying. There is only doing. “I am ok no matter what happens!”
3. Stage 1 – Take up the first stage of a two stage trigger, or touch the trigger on a one stage trigger.
4. Stage 2 – Add and maintain a significant amount of pressure on the trigger. (When asked about this step in particular, Abhinav Bindra – 2006 World Champ and 2008 Olympic Champ – instantly replied “Oh, that is critical.”)

The first two steps must take place before the rifle or pistol comes off the bench or stand. The latter two steps must take place before the moment when the shooter is looking through/at the sights and the sights are on the area of aim. This is the scary part for many precision shooters! Hold that thought for a moment while we discuss objections/alternatives to the above.

Many shooters “pulse” their finger on the trigger. This tends to work in rhythm with what is happening in their hold. In extreme cases, this takes the form of “flutter finger” followed by a sharp snapping shot release. Although performed by some top shooters, it is often not as robust a technique. In most cases it indicates some tentativeness or hesitation on the part of the shooter. While many shots will eventually hit the ten, others, even after much training, are still ill timed.

Other shooters start adding pressure and never stop adding pressure until the shot is released. This is often taught in pistol where the hold can appear to be rather large. At a certain stage of their development, the shooter will discover that they are making bigger mistakes in snapping the trigger while trying to catch the ten than they are if they just accept the hold and squeeze until the shot goes off. Indeed, over time, the deeper parts of the mind will help synchronize some of the shots. Still, many take place outside the ten. Having improved with this technique, they are reluctant to change.

With those perspectives, what is going on with the “Four Steps” trigger preparation technique?

When first told of the technique, many shooters are fearful. Some even feel the blood drain from their head! They are concerned about missing the target completely, and later are still concerned with having an early shot. Underlying this fear is the root of the issue. When one completes Step 3, the shooter and trigger are both in a state of rest. The shooter then must overcome mental and physical inertia to get things going. When Step 4 is completed... “Things are going to happen!” The shooter and trigger are no longer at rest. Indeed, the shooter is now in a very dynamic state, both physically and mentally. This is exactly what we want while on aim. When used as an important part of a broader program of shot process construction – this is but one small piece – the technique provides solid results. Unlike many techniques that work well in practice, it stands up under intense pressure.

What happens when this technique is introduced, and how do we prepare shooters to adopt this method?

First, the trigger must already be adjusted such that the athlete can discern the difference in weight between the first and second stages, or the let off weight of the single stage trigger. On a rifle, it does no good to have the first stage weight at 80 grams for example, and the total let off weight at 100 grams. True, the athlete can learn to discern the difference of 20 grams, though the technique will fail miserably when the athlete cannot feel the difference under match pressure. We have watched this happen many times at all levels. One young shooter insisted on having her trigger much heavier than is “normal” in shooting circles. She loved this technique and was able to shoot very well under intense pressure and always pounded the center in finals.

Second, the shooters must sit down, close their eyes (this is critical), and truly learn their trigger. (This is done in such a way that all muzzles are pointed downrange, all ammunition is put away, and a range officer is monitoring for safety.) The drill is: 1) touch the trigger, 2) take up the first stage fully and feel the “stop” against the second stage, 3) gently add pressure but not enough to make the trigger go off. At first, one hears all kinds of trigger clicks! Soon, the shooters learn to “add and maintain” what we call “a fistful of trigger” without having the trigger go off. They then discover that they can then make the trigger go off just by thinking.

Third, the shooters actually dry fire and then live fire. They discover that if they complete Step 4, the shots are “effortless” and often very deep. Some of them also make the most powerful discovery of all. They think they have properly completed Steps 1 & 2, perform Steps 3 & 4, arrive on their area of aim... and discover that they are not ready! They cannot shoot because their mind is not ready! This forces them to go back to Steps 1 & 2 and really learn how to commit to the shot before arriving on the target. Now we are really ready to shoot – and shoot well. Accomplished shotgun and rapid-fire pistol shooters smile knowingly!

Quickly, often in the very first session, shooters discover the gun seems to go off by itself and the outcome is a seemingly effortless deep ten. As mentioned above, the “Four Steps” for trigger preparation are but one small piece of a much larger shot process construction. Topics such as position, balance, a new way to think about and check NPA, a new way to think about the “hold” concept, outcome vs. performance, and many other related areas, are all critical elements.

For those working on “auto-magical shots” this is a critical part of the technique. Soon the deeper parts of the mind, if allowed, take over and deliver incredibly deep and consistent shots. The so-called “flyers” are due to the active thought part of the mind attempting to take over again. Soon the flyers disappear if the shooter is patient with the process. Few are.

Very recently, a very good pistol shooter (who has adopted the program) and this author held a clinic for a group of accomplished junior rifle shooters and their coaches. Over the course of a day and a half, they learned the full program and were quite excited by how “easy” it was to shoot well, by how “bullet proof” they were under intense pressure, and by their results. One shooter had 99-99-98-100 in standing air rifle during very pressure packed intensity training drills. This result was no surprise to the teachers. We have seen this technique yield excellent results on a consistent basis, when applied as part of a full shot process and shooting process program.

It was at this recent clinic that one of the local coaches commented that one way to look at shooting well is to learn to “Not shoot not tens.” With thanks, and apologies, the phrase became the title of this article.

Stop messing around. Stop being afraid of the outcome. Get over yourself: nobody is going to be upset if you miss a shot. Learn from it. Above all, commit to the shot and make the shot. You will have a lot more fun and do quite well.

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(Biographical information as of October 2009)

On the Firing Line (Forty-sixth in a series)

The Conflicted Athlete

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**“I am so frustrated I want to quit!
Yet I love this so much that I cannot quit!”**

It is human nature to enjoy doing the things we are good at doing, and to avoid doing the things we are not good at doing. How many athletes practice their favorite event or activity, even though they are already perfect at doing so, and avoid working on the aspects of their game that are the weakest? No wonder they never get better!

This same effect influences whether we stick with a sport or leave. Once frustration and disappointment overcome enjoyment, the athlete is likely to leave. Yet, too many athletes quit in the face of a plateau or other obstacle without appropriately changing their approach, mindset, coaching, or other aspect of their activity in order to remove the obstacle. Others leave after making many random changes, which made the departure more likely, rather than solving the problem with well thought out changes.

Is this always the case? Is there anything one can do? No and yes, in that order!

The Plateau

“I am so frustrated that sometimes I just hate to shoot. I always seemed to get better, and now I have been stuck with the same scores and performances for the past two years. I should just quit but for some reason I can't bring myself to make the decision.” The athlete's frustration and pain were obvious in her words and facial expressions. A coach at the clinic responded, “Let me guess; despite being so frustrated that you want to quit, you cannot quit because you remember how much you used to love to shoot, cannot bear the thought of leaving that behind, and wish you could recapture that feeling?” Her eyes grew wide in amazement and she said, “Oh, yes! That is it exactly!” The coach continued, “What if we could identify the reasons for the plateau and for your frustrations, identify the causes and work to resolve them, and make shooting fun again?” Her face lit up as she excitedly asked, “We can do that?!”

For the next few months, the athlete and coach worked together to stock her toolkit with sharp tools using robust techniques that can withstand the pressure of competition. (Many techniques that seem to work well in training are “fragile” and break down in competition.) She was already very well trained in her technical aspects of shooting, so she and the coach decided on only a few smaller adjustments. Their primary technical focus was on building a robust shot process.

The major changes they worked on together were in her outlook and mental approach to the game. Soon, she could not wait to get to the range again, and went on to a very successful college shooting career.

In this case, the shooter truly appeared to be on the verge of leaving the sport. Because someone was able to help her discover that this did not have to be the case, and then traveled on the journey with her and helped her discover the skills she needed, she was able to rekindle her joy of the sport and improve her performances and scores. Different athletes have different

needs. The coach must be attuned to the athlete in order to be effective. Luckily, that was the case in this instance.

Dark Moments and Hard Work

Our culture is results driven and we like to do well. When faced with repeated “failures” in competition, our internal motivation diminishes. Coaches and athletes alike must be aware and monitor the “fun factor” as part of the athlete’s development. At the same time, we must also realize that it is not always going to be fun and that there will be many “dark moments” when the athlete suffers through a long plateau or other downturn. Sometimes, these “dark moments” can last a very long time.

While interviewing Jason Turner a few weeks after his medal winning performance in Beijing, when the topic of “dark moments” came up, it was obvious in his voice that he, like all great athletes had experienced times of deep frustration and doubt. Indeed, he indicated that the “moments” sometimes lasted much longer! Yet he found a way to keep going. Article 40 “On Stepping Up” discusses his story and this topic in greater detail.

Doing well at something certainly is fun and motivating. The danger is that when one is a “natural” at first, they often may not develop the mental toughness to work “hard” when their learning curve starts to level off. Those who do not start as a “natural” have to work at their game before they ever gain the excitement of doing really well. Their expectation about the effort required is higher. Later, when the going gets tough, they have already developed the skills needed to keep going through the tough times. This is the “hard” part of the hard work of becoming a champion.

As a result of these dynamics, the young J3 shooter with the top scores may not necessarily be the one with the top scores in high school, college, or beyond. There are exceptions of course, among the truly motivated. The athlete who is struggling along with “average” skills, if able to tough it out and remain motivated, is actually a bit more likely to be on top in later years.

Many years ago, a 13 year old set a national J3 record at the national Junior Olympics after only a short time in the sport. Many predictions were made at the time about what this athlete would accomplish... and sadly, none came true.

There is hope for athletes who stick it out, even through the “dark moments” of self-doubt and frustrating results. Certainly, Jason Turner provides an example of how the medal goes to the one with perseverance.

Another example is Nancy Johnson. She worked and worked, made the National Team, worked more and... could not win the big matches. She worked harder than most... and still could not win the biggest matches. She became frustrated, and her coach Dan Durben assured her that if she would just keep going despite the frustrations, that she would prevail over those who were not working as hard. Sure enough, Nancy’s hard work paid off, she started winning the biggest matches, and then she moved up several spots in the biggest air rifle final of her life to claim the Olympic gold medal in Sydney.

Goals and Real Goals

Another cause of internal conflict is a difference between the athlete's stated goals and the real goals they wish to achieve. One need not be an aspiring junior or elite athlete to experience this effect.

At the USA Shooting Nationals, the old man came to enjoy the competition and camaraderie. Although he knew how to train well, his responsibilities had prevented him from doing any serious training for over two years. Still, he wanted to support the event, see his friends, and enjoy shooting. Accordingly, he adjusted his goals and expectations – or so he thought!

After each event concluded, a young man who is working hard and is making a name for himself came to see the old guy. They compared notes and encouragement about their shooting. The young man quickly realized that old guy was struggling with something. They talked each day through the week, and the younger shooter helped the older shooter discover something... while he had told himself that he had adjusted his goals and expectations... he still wished he shot at the higher levels he had achieved earlier when training regularly. Outcome based expectations cause lots of conflict if out of tune! After that, their conversations were even more enjoyable than they already were, as were the rest of the many competitions that week. The student had become the teacher!

Expectations, the dreaded “E” word, are often too high and often based on wishes rather than realities. Be honest with yourself. Happy is the athlete who understands and applies this insight. Otherwise, another conflicted athlete suffers.

Coach-Dad-Itis

Sometimes the internal conflict has external roots. One of the most common examples of this is “Coach-Dad-Itis.” When a parent, whether actually coaching their child or not, aggressively drives their child concerning outcome, the child develops a great deal of internal conflict.

This topic was explored in article 21 of this series using the example of a father and his daughter, along with the daughter's ideas on the topic. However, the concept applies universally to moms as well, to all sports parents even though they are not the child's actual coach, and – even though the article was about a daughter – it applies equally if the athlete is a son.

After the article was published, a younger friend of mine who coached a junior program at the time told me how in their club the worst parent in this regard noticed that the article mentioned a daughter and said the article didn't apply to him because his athlete child was a son. Sorry, dad, that article should have been about you!

When a parent is overbearing on their child or is “merely” overenthusiastic, the child may eventually wonder if they are shooting for themselves or for their parent. Or they will become frustrated at their parent's constant “disappointment” in them. This is debilitating to the athlete's performance. Either way, the athlete becomes de-motivated, just as surely as if they had hit a long plateau.

Clearing Conflict

Ultimately, the conflicted athlete is the one who must clear the conflict. Certainly a coach, friend, fellow athlete, or other person may lend perspective, as in some of the examples above. Regardless, it is then in the athlete's hands. Understand the sources of the conflict, and

then address them. Yes, it sounds so simple – too simple. Learning to work with the difficulties of conflict strengthens and empowers the athlete to meet even larger challenges.

The important thing is to start – and keep going.

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(Biographical information as of October 2009)

On the Firing Line (Forty-seventh in a series)

More Conflicts

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**“You are not being paranoid
If they really are out to get you!”**

Continuing on the topic of the conflicted athlete, the following email provides an opportunity to amplify on the topic of clearing conflicts and to discuss a couple of common themes. The email is edited ever so slightly so that the identities remain confidential – in order to protect the innocent... and the guilty! If you think you know who wrote the email, you are incorrect. If you think this email is about you (feeling guilty?) and you want to confront the writer, save your energy, look in the mirror, do some serious thinking about your priorities, and then reflect on the ideas presented here. Everyone else may enjoy a peek inside the mind and life of another athlete in order to gain valuable perspective for one's own journey.

An Athlete Writes:

“Subject: Hi JP!!”

“Long time no talk! First off, I wanted to thank you. My first year in college I had a lot of ups and downs with my shooting and I was ready to give up. I took a long break over the summer and came back to school this year willing to make a fresh start. I went through all my notes that I had taken at your clinics and somehow everything has just clicked! I've been shooting better than I ever have in my life, even reaching a new personal best. :-) Every single day when I'm shooting I think of things that you have said and things I have read in your articles. So I just wanted to thank you for helping me so much!”

“I did run into a problem though that I wanted to ask you about. I have been much stronger mentally this year than I ever have been. I have been enjoying the process of shooting and not caring about the outcome at all. But one girl on my team wasn't happy with my improvement because that meant she was no longer the top on the team. She started playing with my head, and long story short, I really let her get to me, and had a terrible match this past weekend. I thought I was mentally stronger than this but I am stuck on what to do next.. I shot a practice match today and was able to bounce back a little, but it is still all in my head.”

“A second question is about another guy on my team. He is an amazing shooter – in practice.. But when it comes match time he lets the pressure get to him. He demands perfection and when he doesn't get it he gets so mad at himself. He demands to be the best on the team. I keep telling him that he is going about it all wrong and focusing on the wrong things. So far I cannot get through to him and he is ready to give up. I don't know how to convince him that he is going about it wrong. He says he cannot do it any other way. You are the only person I can think of that would have some good thoughts about this.”

“I am so sorry to bombard you with such a long email, but I have been meaning to reconnect and thank you and then these last two situations I described were new and I don't know how to address them.”

“Thank you so much JP and I hope everything is going well for you and your family. I hope to see you again sometime!!”

Situation 1 – “Should I stay or should I go?”

It is apparent that the writer of this email faced many similar issues and conflicts as the athlete that wanted to quit who is mentioned in the previous article.

It is easy to set up a negative thought pattern when one is frustrated: “Yes, I did love to shoot before, but I don’t now because I don’t do well in competition. I hate it. Coach tells me to train, but why should I? After all, I just do worse in each competition. I don’t like to shoot any more so why should I even bother? I should just give up.” Note the circular argument? ...and circular downward spiral? The athlete is getting worse because they have reduced their training inappropriately and especially because they have already decided they are not going to do better.

This is a classic “Dark Moment” and the athlete must make up their mind to overcome the current emotions and do what is needed. Most often, this turns out well. Is it difficult? Is it sometimes a long process? Is it frustrating? Most certainly.

The athlete who “toughs it out” usually breaks out into good times again, as with this athlete. The athlete who says “I cannot” does not. Instead, they lock themselves into a self-fulfilling prophecy of failure. Notice that the first sentence says “usually” the athlete breaks out. There is no certainty. Some athletes will point to that and use it to justify their inaction. There are no assurances in sport or in life. We can give up and “prove” that we were right or we can stay the course – and quite likely surprise ourselves.

Several years ago at a “High Performance Shooters” camp, the camp shirts included one of my slogans: “What would you attempt to do if you knew you could not fail?” One must continue to attempt – without any assurance!

Situation 2 – Jealousy

This is a touchy topic – and sadly, it is more common than many people realize. The jealous athlete mentioned in the email is hurting her teammate, her team, and most of all herself. The energy that she puts into hurting everyone could be used in a positive manner to improve her own game. Then everyone benefits.

Ultimately, shooting is an individual sport. We may put together club, high school, college, and even national teams, though at the end of the day, there are still individual scores posted. Many people cannot see past this. They tear each other down, or just fail to help each other at best, and everyone on the outside beats them in competition. Others realize that by helping each other, all benefit, and everyone in the group performs better against outside competitors. The best teams consist of individuals who put the common goals first. Then, individual goals come along for free.

In extreme cases, the harassment goes past the verbal or takes different forms altogether. Spinning sights just before a match begins is not unknown! Sadly, serious gun damage is not unknown either. These things are done in very sneaky and sometimes subtle ways so the perpetrators are rarely caught. In fact, many of these cases are done by people who are otherwise not critical in order to reduce suspicion. When odd things happen, one must not believe that it cannot happen here. Luckily, the vast majority of folks in our sport are positive and supportive. The tiny minority does exist, however.

One of the many challenges we face as we strive to become a better athlete is that what other people think, or more correctly, how much we care about what other people think, has a profound effect on us. We want to get along and be happy and some people then use that caring quality as an opening to manipulate the one who cares. It is hard for one to “harden their heart” to that manipulation. One must stop caring about what unhelpful people think. Consider the source and ignore them. Besides, nothing “burns” them more than seeing their rival ignore them, smile, and thrive!

When confronted with this situation, the athlete must “consider the source” and the motives, and realize the other person really is out to hurt their enjoyment, learning, and performance in the sport. That is no different than stealing money or other possessions. We defend ourselves against the latter, and should do the same for the former.

Sometimes the very people and institutions that in theory should be the most helpful provide the largest obstacles. The jealous teammate is an example. Regardless of the obstacle, we need to understand the situation, get past the fact that they “should” not be part of the problem, and work around them.

Situation 3 – Outcome Focus

The perfectionist athlete is forcing himself down a very common path, one that is full of frustration and that is common with the conflicted athlete. He has a teammate who is attempting to show him a different way, a fruitful and fulfilling way, yet he cannot bring himself to change anything about his mindset.

In the email we are told “He says he cannot do it any other way.” As long as he believes this, he will remain in the downward spiral. As a number of coaches like to say, “Insanity is doing the same thing over and over and expecting a different outcome.” This poor guy is “Two Shots Away From Being Crazy” as discussed in article 20.

Only when he “hits bottom” and opens his mind and heart to a different way, will he be able to break the current situation. His Interfering Self is so dominant that his Performing Self is thwarted. Article 39, “Breaking Out of the Matrix”, discusses these two selves. The bulk of the articles in this series address the outcome (result) vs. performance (doing) theme either directly or in related ways.

One day a text message arrived from a long distance athlete I work with. “Hey JP, call (athlete name) right away. He just hit bottom and is now ready to listen to how we approach this game. I think he could use a good boost of encouragement, too.” We had previously discussed this athlete’s situation and realized that he, like the subject of the email, was unable to “change his mind” despite our ongoing work with him, and that we would have to wait for the opportune time – while hoping he didn’t leave the sport before that time arrived. Luckily the athlete is now very happy with the sport, himself, his progress, and his performance.

In another situation, after 2-1/2 days of an intense high performance shooting camp where a comprehensive shot process program was presented and implemented, a couple of the “Type A” guys were shooting so well that they “couldn’t shoot a bad shot” as they described it. They were transformed and amazed. They were in total “Zone” mode and often forgot to spot their shots since they knew they were deep tens. You could even see the change on their face and in their performance. Sadly, their Interfering Self took over and within days they had rejected the lessons learned and their shooting returned to mediocrity. After all, they “knew” better.

The situation faced by the young man who is profoundly outcome-based is quite common. If he likes to read, time spent studying “Body, Mind Mastery” by Dan Millman would be well spent. Alternatively, watch the “Peaceful Warrior” movie. It is worth the effort to track down and watch. Another athlete commented just a couple of months ago that she asked for the movie for Christmas after it was shown at an advanced shooting performance clinic and she watches it whenever she needs a reminder about how to go about her journey. She is really enjoying her shooting, even with the stress of her college team schedule.

By far the largest obstacle we face in our journey is staring back at us from the mirror. We can train the Physical and Technical to any extreme we want, and yet barely take the first step to learning to compete when it counts. We must also learn and train the Mental (Thought) and Emotional (Heart) aspects every bit as much. The author of the email thought long and hard about her shooting, realized this, and drew upon resources available to her to redirect her mindset and shooting. Give this some thought!

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(Biographical information as of August 2014)

On the Firing Line (Forty-eighth in a series)

Statics & Dynamics – Part 1

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**“That which is Still has Movement.
That which Moves has Stillness.”**

Target shooting is a sport rich with varied disciplines and breadth of related topics. Aspects of the sport appeal to engineers and technicians, while other aspects appeal to those who are much more metaphysical in outlook. Some disciplines require a great deal of movement and action, while others require incredible stillness.

Within the Olympic disciplines, there is the stillness of the extreme precision rifle and pistol events on one hand and the rapid, yet precise movements of rapid fire pistol and shotgun. Modern Pentathletes spend most of their time in physically demanding events and then must learn the mental and physical control of precision air pistol. Biathlon athletes face the ultimate contrast: pounding up the hill to the firing line on cross-country skis, then having to draw upon the inner (and external!) calm of the precision rifle athlete.

Even in the “calm” precision events there often is a whole lot of “action” as the athlete works to calm their mind and body... and pounding heart! Just ask a free pistol athlete... or a shotgun athlete facing their next target with 24 busts already recorded.

As we learn and train in our chosen discipline and events there are a great many factors to understand and master. One cannot possibly learn everything at once; much less master every aspect all at the same time. An Olympic champion typically has a journey of 8 to 10 years or more under their belt. Some journeys are shorter and many are longer.

Because all the various items of information and techniques cannot be mastered at once, we break things down into manageable chunks. For example, we do not start a dialogue on the finer points of trigger control and shot release with an 8 year old, or 28 year old, who is being introduced to shooting for the very first time.

Often there is a missing link in our training. Often we fail to link together the disparate pieces of knowledge and technique into a cohesive, comprehensive whole. Instead we have a patchwork – and do not even realize this has happened. This is very frustrating to say the least.

“Everything Affects Everything”

We typically think in static terms, that is, we think about one variable at a time and in a static or fixed mode. This is a natural outcome based on breaking things down into manageable chunks, and especially based on our tendency to deal primarily with what we see before us. In reality, when we shoot there are thousands of variables, many unseen and un-sensed, all changing moment to moment together, much like an orchestra. The trick, of course, is to get all the instruments tuned together, the musicians well trained, and all “on the same page” in order to produce beautiful music!

Many athletes have heard “Everything Affects Everything” during their training. The coach is reminding them that even the simplest of changes can affect more than the one thing

they are working to adjust and to be sure to fully evaluate the adjustment. There are no “quick fixes” when striving for ultimate performance.

A common example of one adjustment affecting more than one component is a popular method of adjusting natural point of aim (NPA) when shooting rifle in the standing position. Athletes are taught that one method to adjust their NPA horizontally is to adjust where their back foot is pointing. By making subtle adjustments they can move the NPA to the left or right. Without a doubt, this does have the desired effect and so is commonly taught and used. The challenge is that, whether the coach or athlete realizes, this also affects the athlete’s balance and stability. Those who understand the dual effect know that they have to work everything out so that they get the desired NPA and the optimal balance. Working on one aspect affects the other so this must be taken into account. Despite the stillness of a well optimized standing position, it is a dynamic system, not a static system. Understanding these effects helps an athlete optimize their performance. Be sure to think dynamically in addition to thinking statically.

Shooting Between Heartbeats?

We sometimes read about athletes releasing their shots between heartbeats – most typically in the popular press. Certainly heartbeat is one of many things going on inside our body as we shoot. Can athletes shoot between heartbeats? Do they? Can they “time” the shot to do so? The majority of athletes likely do, whether they know it or not and whether they can actually tell or not. There is a natural internal rhythm that occurs as we shoot that typically results in the shot releasing between the heartbeats without any active “control” or awareness of such on the part of the athlete. Thus, the shot timing between heartbeats is an effect, not an active decision in most cases. This is a hot topic of debate which will not be fully explored here, and there are many varying opinions.

Leaving aside the debatable aspects of the topic, there are interesting aspects to ponder. One Olympic athlete was known for having a very high pulse rate in finals. Her national team coach at the time indicated that her pulse rate was typically 160 beats per minute in finals. Yes, almost 3 beats a second! She was very consistent and shot many strong finals in her career, including in the Olympics, by trusting her rhythm and ignoring her racing heart rate. With that high rate, one wonders where in the heartbeat cycle her shots actually released.

Many prone specialists, and others, strive for a low resting pulse rate to improve their shooting. This can be beneficial to the majority of shooters, as long as they do not take it too far. An exceedingly low resting pulse rate results in a very large amplitude to each pulse which causes a larger disturbance to the sight picture. As with most aspects of shooting... all good things in moderation. Thinking statically, one strives for the lowest possible resting pulse. Thinking dynamically, one considers both the frequency and the amplitude to reach an optimal point.

One athlete had a problem with dual groups in prone. Often there would be two very tight groups right next to each other. After careful examination of all factors, and the use of a Noptel training device as an aid for gathering some of the required information, an interesting discovery came to light. The athlete was preloading the trigger – that is holding a significant amount of pressure on the trigger – to the point that it was so close to the release point that the athlete’s own heartbeat provided the final amount of trigger pressure to release the shot. The good news is that this provides a very smooth shot release. The bad news is that this is a “fragile” technique that does not hold up under the pressure of competition.

The athlete's inconsistent preload trigger pressure in competition caused some shots to be released on the heartbeat and others between heartbeats. This was enough of a difference to affect the shot grouping. Generally it is found that athletes do not provide enough preload on their trigger. This athlete was the opposite and often had too much pressure. Thinking about the problem dynamically led to the connection, in this case, between trigger preload pressure and heartbeat.

Radar

While exploring aspects of heartbeat, discussed above, and gun movement, discussed below, an experiment was performed to explore the possibilities of using remote sensing to measure heart rate, respiration rate, and body movement of athletes while in actual competition. To do so, there can be no wires or any physical connection whatsoever between the athlete and the measuring equipment.

Several years ago we took a rifle stock (no barrel or action) and a full shooting kit to a lab in the Georgia Tech Research Institute where Dr. Gene Greneker had a number of interesting remote sensing devices and capabilities. One of the most interesting is his "Radar Flashlight" used by law enforcement and rescue crews to "see" through walls, rubble, and other obstacles to find suspects or victims. Another of his devices is an ultra-low power radar, emitting less than a tenth of the amount of energy allowed to leak from microwave ovens at home.

Our goal was to explore the feasibility of remote sensing while an athlete was in actual competition. Arranging a shooter in the prone position, the radar was aimed at the shooter's back. We used prone for this initial exploration to ensure that we could obtain heart and respiration data through the thick shooting clothing. Despite wearing a T-shirt, shooting shirt, sweater, and a stiff (nearly new) Sauer canvas shooting jacket, the radar easily picked up the athlete's heart and respiration movements and body movements. The graph (below) shows a small time slice of raw, unprocessed data when the athlete was very still. One can easily see both pulse and respiration. With processing software, real-time instantaneous and averaged heart and respiration rates, along with body movement (e.g. sway in standing, gun movement, etc.), trigger pressure, and other movements can be observed and calculated.

The exploration proved the viability of the sensing concept and it also provided tangible evidence of the already well understood dynamic nature of the human body, even when seemingly not moving. Time and resources never allowed us to do remote sensing of the athlete with the 160 pulse rate mentioned above. That would have been interesting! With these discussions as background, we now turn to the question of stillness within the dynamic system.

Does The Gun Stop Moving?

A former longtime member of the national team strongly disagreed with a coach's assertion that the rifle or pistol, when on aim, can seem to momentarily stop for the athlete. "The gun never stops moving!" was the strident, public response. From a purely scientific point of view, this athlete is certainly correct. Regardless of how minute, there are movements taking place. However, that is not the point of the coach's assertion.

The important aspect of the assertion is the athlete's perspective, not an external reference. For this particular athlete, indeed the gun may never have stopped moving from his

perspective. Interestingly, for many other well trained athletes and some not so well trained, the rifle or pistol does indeed seem to stop momentarily just when needed.

The most important aspect of this discussion is that the athlete's point of view is the key factor. It has already been conceded that no matter how steady the hold, the gun does have tiny movements when measured from an external reference. We are interested in the athlete's perception here.

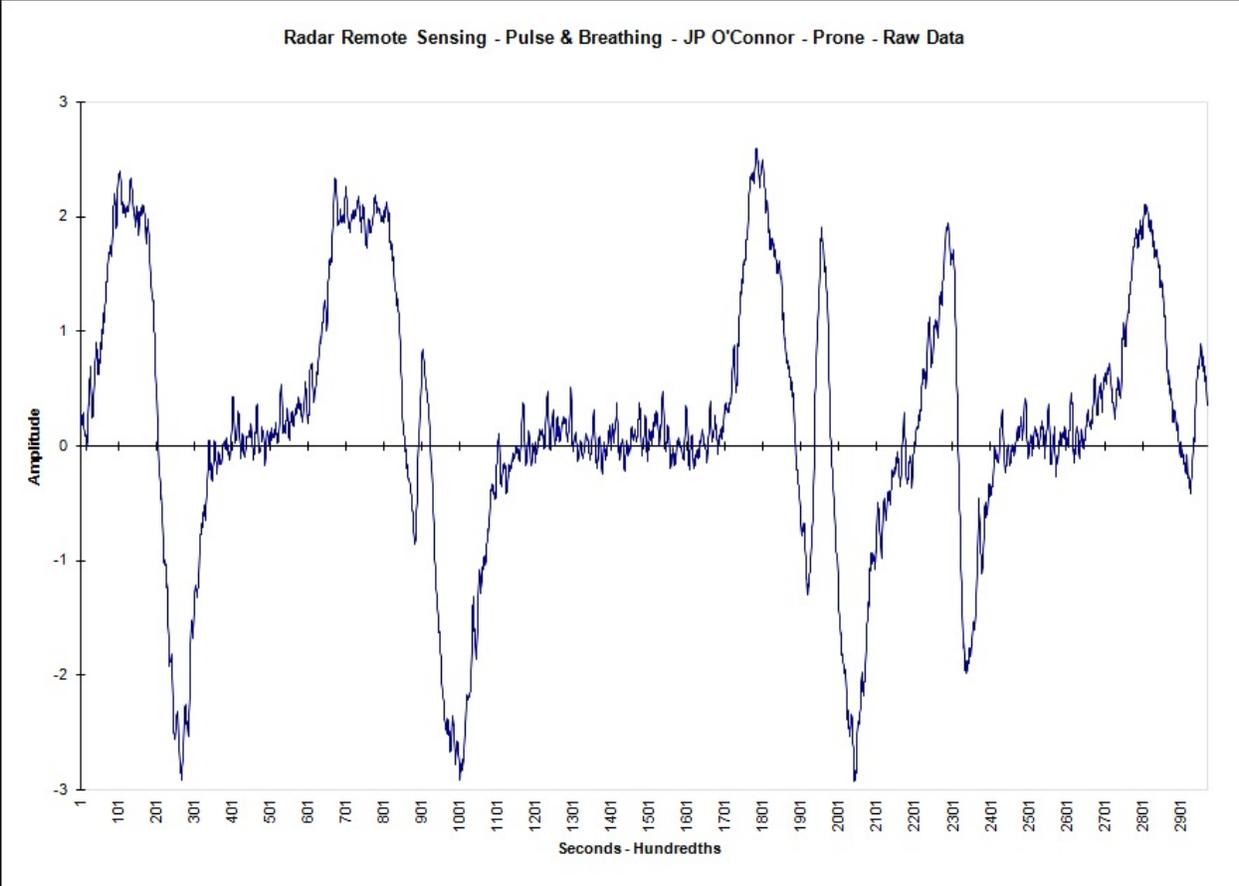
Before exploring whether the gun actually stops from the athlete's perspective, and answering the question, we need to explore additional topics. We will begin there in the next article.

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(Biographical information as of August 2014)



Radar Remote Sensing – Even with raw unprocessed data, pulse and respiration are easily discerned.

On the Firing Line (Forty-ninth in a series)

Statics & Dynamics – Part 2

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“The Pieces are Static. The Whole is Dynamic.”

We continue now with our discussion of hold and stopping the gun. Understanding the dynamics, in addition to the statics, makes all the difference.

What Does NPA Really Mean?

An aspect of shooting that is constantly taught – for very good reason – yet is not often understood in sufficient depth by many coaches and athletes, is the ubiquitous concept of natural point of aim (NPA).

NPA is not about being on target! We are so concerned about being on target, and adjusting our position so that our NPA is on target, that we often miss the essence of NPA. Again, NPA is not about being on target.

NPA is about sensing where the gun wants to point when we are fully established in our position – without external reference to anything, including the target. One coach's mantra is: “Position, balance, NPA, optimize them together.” When the focus is on discerning “where the gun wants to point” the athlete can easily sense the actual NPA, make appropriate adjustments, and end up with the NPA corresponding exactly with... the target. Note that the athlete is focused on sensing what the gun wants to do and then adjusting, rather than imposing the athlete's will on pointing the gun at the target. This is a very important distinction in the required mindset of the athlete.

NPA is not about getting the gun on target – NPA is about truly sensing where the gun wants to point... and only then making adjustments until... the gun arrives on the target of its own accord.

With the appropriate mindset, an athlete can align their NPA with the target to an incredible degree of accuracy. Even the slightest misalignment results in muscle tensions, often undetected, that open up the hold. In air rifle, for example, a misalignment on the target of only 2 or 3 millimeters is more than enough to profoundly change the dynamics. Pistol shooters who apply NPA to this same degree report a dramatic decrease in their hold movement. This has a profound effect on their confidence and their performance.

What does all this discussion of NPA have to do with the topic of whether or not the gun “stops” moving? Everything! When the athlete is able to approach NPA this way they quickly learn to get exact alignment between NPA and the target. When this happens, they are stunned! “Coach, the gun stopped and it was right on target!”

One day at practice, a coach noticed that an athlete was struggling. Watching her front sight, he could see all sorts of movement and difficulties in shot release. They talked for a few moments and then he asked her another question “How well did you set up your position, balance, and NPA?” She looked up with a sheepish grin and said “Ummm... I could do better!?” Both laughed and the coach left her to her work while he worked with other athletes. A few

minutes later he came back to her firing point and watched her front sight... it came straight down from above the target, settled and almost immediately seemed to stop, and the shot went off at exactly that instant. Shot after shot she did this – 5 shots per bull on 4 consecutive bulls.

Upon going downrange and seeing only one shot hole per bull, she exclaimed “Oh my gosh! How did I miss the target that many times? There is no way!” The coach assured her that each was five shots, as he had watched carefully while she shot. Only after showing her that one of the targets had a hole that was a tiny bit bigger than a one shot hole did she believe what she had done.

How can a 13 year old girl do this? How can a middle aged coach, in street clothes, pick up an athlete’s rifle (with permission), establish a standing position, and a few seconds later hear from the athletes who are just behind and watching the coach’s front sight exclaim “The gun stopped! How do you do that?!” In both cases, the “secret” is nothing more than sensing where the gun wants to point – and allowing it to do so, instead of imposing the person’s will. Then adjust accordingly – and doing this to a degree far more than the usual perfunctory NPA checks. The vast majority of athletes do not sense and adjust NPA to the required degree.

Committing To The Shot Process

Many athletes arrive on their area of aim, “check” to see if their hold is “good enough” and then finally allow themselves to start on the next phases of their shot process. This is a very tentative technique.

When one first arrives on their area of aim, that is most likely the steadiest hold they will see. As they hold, there is a normal pattern of relative steadiness, then more movement, then steadiness, and so forth. Each time the steadier part of the hold occurs, it is less steady and of shorter duration than the previous steady state.

With that knowledge, many top shooters are already fully committed to the shot before arriving on the area of aim. They reserve the right to reject the shot, yet they are fully committed to the process. They are able to release the shot almost when they arrive on the area of aim, or on the very next steady state. All of this takes place in a very few seconds. Sensing and adjusting NPA to the fine degree discussed earlier facilitates this style of shooting. This is what the 13 year old did in the example above.

A Natural Progression

A rather interesting progression often takes place naturally (over time) as the athlete builds toward ultimate performance:

1) They notice that some moments are steadier than others... that is... there is an ebb and flow to the body and gun movement. (This is outer and inner position, balance, and NPA all starting to work together.)

2) Then, when they have really mastered NPA and treat “hold” as a noun, they notice that sometimes the gun seems to stop for a fraction of a second. (The deeper parts of the mind are at work and the active part of the mind is starting to be quiet for a change.)

3) Then they try to make the shot in that stop state... which usually results in a pulled shot. (The active part of the mind woke up, took “control” and the athlete jerked the trigger.)

4) Then they break the habit but catch themselves admiring the stopped sight picture, yet still not able to get the shot off. (Trying too hard for score or perfection... the kiss of death! Or, they are just incredulous that the gun can actually be that steady and “forget” to shoot.)

5) Later, they are able to "sense" that the gun is going to stop. This is fun! Eventually they trust this and are able to release the shot in the steady state. (This may sometimes involve somewhat active thinking at first and not the desired end state of full quiet mind... however, it is ok to walk before running!)

6) Finally the day comes where they realize that the gun went off seemingly "by itself" at exactly the instant that it stopped... and right on the center of the area of aim... and after only a very, very short time on aim. WOW! This is really fun! (The athlete will often describe it happening in front of them... almost as if they were a detached spectator.)

We must do things to facilitate this... we cannot force it.

We must allow it to happen... we cannot force it.

Trying to make it happen will cause a regression... sort of like chasing the cat. Chasing a cat is the hardest way to catch it. Sitting quietly on the floor is the easiest way. Tens are like cats that way.

Many people find it difficult to trust a style of shooting, such as was just described, where they do not take “control” of the process. Welcome to Applied Sports Psychology! Indeed, this or any style of shooting requires the dynamic combination of numerous physical, technical, mental, and emotional aspects of the game and the athlete.

The stage is now set to explore stillness in the hold, the topic of the next article, and finally answer the question “Does the gun stop moving from the athlete’s point of view?”

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(Biographical information as of August 2014)

On the Firing Line (Fiftieth in a series)
Statics & Dynamics – Part 3
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“Dynamically Static.”

Having explored the true nature of natural point of aim (NPA) and a natural progression that takes place over the course of an athlete’s development, we complete our discussion of hold and the stopped the gun.

We have previously touched on the topics of “everything affects everything” and the dynamic nature of the human body and mind. When we understand and apply true NPA, commit to our shot process, are decisive in action without “trying to decide” whether to continue the hold or shoot or reject, we set the stage for the natural progression from “drive by” snap shooting to calm, steady – and confident – shooting. Often this culminates in an exceedingly tight hold and a high level of confidence in the shot process.

Passing The Test

Several years ago, Dr. Dan Durben (former world record holder, Olympian, Olympic coach, and certainly among the best coaches in this country) accompanied a coach to the range to observe and assist with a junior club practice session. While watching one particular athlete shooting outdoor 50 meter standing smallbore rifle, the coach explained that the athlete had been trained to fully focus on and commit to her shot process and delivery, while at the same time having an awareness to allow ruthless rejection of any shot that was not unfolding properly. She was using her awareness to sense what was actually going on, without breaking focus, and then rejecting if warranted.

Dr. Durben was skeptical, and rightfully so. After all, the majority of athletes, especially young and inexperienced athletes – and even some national team members – struggle to master these concepts. This athlete in particular was only 15 years old and had less than a year of experience in shooting. Based on these facts, and despite her excellent hold steadiness, Dr. Durben’s skepticism was well founded.

While the athletes were downrange for a target change, Dr. Durben asked the coach if the athlete was actually sensing things and doing what the coach had described, or if the athlete was merely rejecting shots based on nothing more than a short, self-imposed time limit. (Many coaches work with their long-holding athletes by giving them a time limit as a training aid.)

The coach thought “What a great question!” and instantly formulated a way to test the athlete. Once the range was again clear and made ready for firing, the athletes went back to shooting. After the athlete in question had settled in with a number of shots, the test began.

Just as the athlete lifted the rifle from her offhand stand, the coach got in position behind and to the side so that she could not see him. Then, while watching her front sight, when he saw the gun arrive and settle, he very, very subtly applied a slight tension for only a moment to the prone strap on the back of her jacket. She could not feel this slight pull through the jacket, and it was small enough to only slightly affect her otherwise excellent hold. As she continued to allow the hold phase of her shot process to unfold, the coach would again apply a slight pull as he saw

the gun about to settle again. Very quickly, after only about three steady states or less (all of which the coach had disrupted), she sensed that the process was not unfolding properly, rejected the shot, set the gun down, and prepared for a completely new shot process. Notice: same cartridge... a whole new shot process! The coach varied the amount of disruption and both coaches noticed that the more the disruption, the sooner the rejection and even with very little disruption rejections still came fairly quickly. There was no set timing for rejection on the athlete's part.

After she had rejected the shot 3 times and started over each time, the coach finally allowed her to shoot without interference on the fourth attempt. Despite her mounting frustration, she stuck to her plan, did not allow the frustration to affect her work, and a deep ten was the result. Several shots later the experiment was repeated with identical results. The coach was not surprised, knowing his athlete well, while the other athletes and Dr. Durben were pleasantly surprised.

Afterwards, the two coaches confessed to the athlete and congratulated her on her technique and determination to only allow a good shot process. She was very happy to learn that the difficult parts of the session were not due to errors on her part!

As an important aside, it was very important to tell the athlete what had transpired since the difficulties on some of the shots, and the unknown source of those challenges, could have had a negative impact on the athlete's confidence. We could not give any indication to the athlete in advance without affecting the activity. The coach and athlete already had a deep understanding of each other; the athlete trusted the coach, was used to unusual and "hard" training exercises, and had long before granted blanket permission for such training exercises to help in the athlete's development as a tough and confident competitor. The result of this exercise and session debrief was an athlete who was happy to have "passed the test" and whose confidence increased based on the validation of her perceptions that the exercise afforded her.

The athlete had learned robust techniques from her coach, trained and trusted the approach, and thrived. While many athletes bemoan having to shoot finals, she relished them! Where did the coach learn the techniques he taught this athlete? Most of them came from his studies of applied sports psychology and coaching resources from overseas. Most of the coach's early studies were guided primarily by Dr. Durben, with assistance from a number of other excellent coaches. A few months later, the athlete found herself in her first big final. She started back in the sixth position, grit her teeth so to speak, and took the gold. The "Believe In Me" section of article 25 tells that story.

The Gun Does Stop Moving!

When an athlete fully understands the underlying concept of NPA (where does the gun want to point – without regard to the target), truly applies the concept, optimizes position, balance, and NPA together as a dynamic and cohesive whole, treats "hold" as a noun (something that is) instead of a verb ("trying" to hold the gun still), utilizes solid trigger technique (including appropriate preloading of the final stage), and quiets their mind and even their eye – then their hold becomes so steady that at some points in the steadier states, the gun appears to the athlete to have actually stopped moving with respect to the target.

Remember, it is the athlete's point of view that is important here. We all know there is some movement going on at all times, however slight. However, the perception of stillness from the athlete's perspective is the critical element. One does not have to be anywhere near making

an Olympic or even a national team to experience the kind of shooting described in these last three articles.

Article 40, “On Stepping Up,” provided another example where the athlete’s perspective is the critical element. The concept discussed in that article of “challenge cycles” illustrates the importance of an appropriate frame of reference – and of ignoring certain irrelevant external concepts that are often mistakenly thought to be important.

Having just mentioned quieting even the eye, it is critical to note that merely looking around the sight picture to “check” things, instead of quietly allowing the eye to rest in one place, will increase the size of the hold. If the eye is moving around, so is the gun. Yes, it is that subtle. Fear not, solid training and belief will take an athlete to that level.

Numerous athletes have observed and reported the phenomenon of the gun seeming to stop, while coaches who are carefully watching their athlete’s front sights (instead of being glued to the spotting scope) have observed the same thing. During “The Test” discussed above, the coach was looking for the front sight to steady in anticipation of the “stop” state in order to know when to gently apply a slight pull to the athlete’s jacket strap.

To experience the gun “stopping” an athlete must combine numerous aspects of the game. Certainly all of the physical and technical aspects that are so often studied and discussed are required. Similarly, one must explore the psychological: mental and emotional. Don’t worry guys, “emotions” in this context aren’t what you might think! Emotions in this context are about sensing and mastering such things as fear, anger, patience, and having “heart” and “guts” to dig deep to “just do” and to relish competition.

When an athlete reaches a high level of understanding they may already start to experience the stopped gun, even as they are still growing as an intermediate shooter. Even a middle-aged coach, who has the understanding, but not the physical stamina nor training time to compete at the top level, can experience several shots in a row where the free pistol at 50 meters comes down on the area of aim, stops, and goes off just as it arrives and stops. The group is so tight that a click is applied without thought or hesitation to move the group, already inside the X ring, closer to the center. Total Zone! Highly trained athletes who apply the same understanding take it even further.

The athletes described in this and the previous article all experience and trust this type of shooting. Built on solid foundations, the technique is robust and sets the stage for greater things.

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(Biographical information as of August 2014)



The Test – Note the coach’s fingers on the jacket strap.

On the Firing Line (Fifty-first in a series)

Faith

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**“Faith is taking the first step,
Even when you don’t see the rest of the staircase.”
Martin Luther King, Jr.**

The previous three articles in this series have explored a number of interrelated topics culminating in a discussion of steadiness of the rifle or pistol at or near the moment of shot release. Shotgun shooters, archers, and others may be forgiven for skipping the articles though would be well advised to go back and study all three since there are many insights that relate to all disciplines. In the end, one’s acceptance of these or any other concepts depends upon open mindedness and faith.

Logic And Science

Too often, we use logic, science, and math to tell us what is or is not possible. We worship at the altar of science and math to the detriment of other valuable concepts. As a result, we often “lock in” our beliefs of what is and is not possible and limit our possibilities in scientific research, sport, and life. To be sure, science and math are valuable beyond measure; it is exclusive reliance on them to the exclusion of other factors and approaches that is the problem.

How often do we say “That isn’t true!”, “That cannot be!”, or make similar statements? Did you do so while reading the last three articles or while listening to your coach at a recent training session? Really... are you that sure?

The entire sporting world and scientific community believed that it was impossible for a human being to run a mile in four minutes or less. Scientific papers were published proving the fact. Roger Bannister and his “impossible” four minute mile have already been discussed in this series!

Our ego tells us that what we believe is true because we believe it is true. Yes, that is circular – and oh so common! We use logic to “prove” our point and ignore other relevant information. Yet, how often do we later discover that quite something else is correct?

Open Minds Open Doors

Years ago, while participating in a pistol masters camp at the Olympic Training Center, a couple of incidents took place that illustrate the effects of open mindedness or the lack thereof.

At one point, an intermediate level athlete was being closely watched by the head coach and they engaged in a short dialogue about a particular aspect of the athlete’s process. The athlete was having difficulty with a particular aspect of the shot process. The conversation ended when the athlete, in response to a suggestion, said “Oh, no, this is how I do it.” The athlete had no faith that he could learn something new to improve his shooting, instead believing that any change would “break” his game. Closed minds close doors.

Another athlete, struggling with keeping his eye on the front sight of the pistol instead of erroneously looking at the target, heard a suggestion to use a small white dot or other mark on the sight as an aid, and asked a coach about the technique. “No, that is a waste of time. Go ahead and try it for ten shots to prove it to yourself. You will see that it will get blurry and be of no use.” Sure enough, the coach was right. Or was he?

Let’s think for a moment about the dynamics of the situation. What is the issue? The athlete is looking at the target instead of the front sight. Can that habit, or any habit, be broken instantly? Generally not. What happens when one looks from the front sight to the target? The blurry target becomes clear while the sharply focused front sight becomes blurry. That means a white dot on the sight will, by definition, also become blurry.

The use of the dot is not a failure. Instead, it is a training aid to the athlete to show that he is now looking at the wrong place! With the dot aiding in increasing his awareness, the athlete was able to correct the issue and build a new habit. Eventually, the white dot stopped getting blurry... and the proper visual technique was now habit. Because the athlete had an open mind, and despite the “conventional wisdom” he was given, he was open to improvement.

Belief Without Proof

Because we are taught to rely so heavily on logic, science, and math, we have difficulty believing anything we cannot see or prove to ourselves. This effect has profound impact on religion, though that topic is a separate discussion. It also has deep effects on how we approach everyday life in school, work, and in sport. How many times have we heard a parent, coach, co-worker, friend, or boss tell us something isn’t possible – when we believe otherwise? How many things have we not accomplished because we did not make the attempt, either because we or someone else believed the task to be impossible?

Eddie believes in the possibilities of the seemingly impossible. He also knows which of his employees have a similar mindset and openness to possibilities. Many years ago, he approached one of his employees and asked what he knew about a particularly difficult and tricky topic. “Nothing.” was the reply. Eddie continued: “Good! Would you explore the topic and let me know feasibility of creating a product?” In two weeks the employee had done his research and studies and reported that he thought it might be possible. Six months later they had the software product in production at a client. Both Eddie and the employee believed they could create the product, even though they had no advance proof that it could be done.

And so it is in sport. Not one Olympic champion ever had proof in hand that they would eventually hold the gold. How many others, lacking proof or even belief in the possibilities, gave up the chase or never even started?

The First Step

The key to success is to take the first step. Not just once, but numerous times throughout one’s journey. Have the guts, the faith, the belief to take steps in the direction you wish to travel. Are you assured of success? Of course not! Are you assured of an interesting and fulfilling journey? Most likely! After all, the journey is what you make of it.

The journey most likely will have its difficult times. This is the hardest part of the hard work of success. Shannon Miller has enjoyed phenomenal success as a gymnast. Given that in the sport of gymnastics one must be very young to be successful, it is easy to assume that a huge

dose of raw talent is the key. Find the most raw talent and there is your next medal winner. Surprise! Just as in shooting, golf, football (American or otherwise), and any other sport or pursuit, the ultimate prize goes to the hardest worker. Shannon did not have the most raw talent among her peers. Quite the contrary, she fell so much that her body was covered with bruises. She never quit. She always got up, kept training, and kept adding bruises. Eventually, she fell less and soared more. Her story, and that of air rifle Olympic champion Nancy Johnson, are but two examples. Neither knew the end outcome – both believed and were willing to take the first step.

In the summer of 2003, Jamie Beyerle and I held a six day “High Performance Shooters Camp” in Jacksonville, Florida. Twenty athletes immersed themselves in intense drills, competitions, and discussions. Jamie had just won her first World Cup gold medal and imparted her fierce competitiveness to the athletes. They realized that there is more to shooting well than mere technique. It takes heart and guts, or “teeth” as one coach describes it. Like all good athletes, Jamie has faced adversity and times of great difficulty. Yet she has always “taken the first step” even when not assured of success – and “attempted” anyway.

The slogan at our camp was “What would you attempt to accomplish if you knew you could not fail?” What have you failed to attempt because you feared that you might fail? Take the first step!

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(Biographical information as of August 2014)

On the Firing Line (Fifty-second in a series)
Where Are You Looking? – Part 1
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“But I Must Have a Precise Reference!”

Visual skills, along with many others, are acknowledged as being very important in the target shooting sports. A great deal of time, money, and effort are invested in attempting to optimize the athlete's visual environment. Special lenses, glasses, and apertures or other devices are often put to use. In some cases visual training activities and routines are utilized, though this is not yet as common as it could be.

As with many aspects of the sport, the visual fundamentals often become overlooked once an athlete passes the learning stage and moves to the “advanced” aspects.

Unlike shotgun athletes, target pistol shooters have it drilled into their head to look at the front sight. No, not at the target! While the idea of looking at the front sight is fairly universally understood and accepted, it turns out there are subtleties that are generally overlooked.

Where are you looking? No, really? Where? Just as with the pistol shooter in the previous article, we strive to look at the front sight, yet often end up with our focus out on the target and the front sight becomes blurry. Why is this? There are at least two primary reasons: eye physiology and outcome concern.

Our eyes, especially if using everyday corrective lenses or if in no need of correction, naturally focus at a great distance when relaxed. Bringing the plane of focus back from the distant target to the much closer front sight requires muscular effort. We may indeed see a sharply focused front sight at first, only to see it eventually become less distinct and then fairly blurred as our eye rapidly fatigues. This situation worsens deeper into the match or under pressure as the eye muscles fatigue, along with the rest of the mind and body.

For most people, adjusting their normal lens correction by +0.50 diopter sphere results in the front sight being so sharp that it almost seems to snap out of the picture. The eye is at rest and the front sight is crisp. For those who need no everyday eyewear correction, just wear a +0.50 diopter sphere lens.

At this point, many people notice the target is no longer sharply defined. See Figure 1 and notice that the target is not crisp and is not deep black. (In practice, the target is not as grey as is shown here, though it is still very indistinct.) Athletes often either reject the lens or add an adjustable iris to their shooting glasses in an effort to re-sharpen the target. Although adjustable apertures are useful in some situations, surprisingly this is not one of them in most cases.

It is a mistake to believe that the target must be sharp in order to shoot with great precision. This has been proven by many, especially those who have trained on a special training “target” that starts out with a black center that fades to white at the edge of the target card. There are no rings, no center black, no boundaries, no nothing – just a continuous fade from black to white. Despite the lack of clear aiming reference, it is easier for most advanced athletes to shoot very tight groups on this training target than on a regulation target!

Outcome concern is the other major reason our eye ends up out on the target. After all, we are looking at what we think is our “goal”. The target is not the goal; the target is only a distraction; visually, and especially mentally. Yes, the target is required for an aiming reference and to determine the score. Nothing more. Worried about a “bad” shot, how many times do we look out at the target in hopes it will not show in the white or that it will not be “too” bad? And in the process, we often make the shot worse than it would have been. This principle applies universally in all target shooting disciplines. Separate outcome from doing! This theme is covered in many of the earlier articles in this series.

We now turn our attention to the topic of where to look when actually on aim. Well, that is obvious, one might say. Constantly pistol shooters hear: “Look at the front sight!” Ah, yes, but exactly where? At the middle of the top edge? Scan back and forth across the top edge? Scan and also check the white gaps on either side? ...or?

When on aim, the eye should rest quietly on the center of mass of the part of the front sight that is visible through the rear sight. Figure 1 clearly shows a white dot on the spot where the eye must quietly sit during the aiming process. When an athlete builds a solid physical and technical routine, after setting up their position and checking everything to assure that the sights are aligned, they soon find that when quietly resting their eye on the white dot, they are able to perceive whether or not the sights are aligned without “looking around” at the sight picture. With the eye resting in one spot, and the brain having less processing to perform, the hold area is dramatically reduced. Remember, active visual processing, or merely thinking, opens up the hold. Nothing raises confidence like steadiness!

Having determined where to look with respect to the front sight, now we must determine where to hold. Pistol shooters have a lot of choices: 1) center of the target, 2) bottom edge of the black, 3) very thin line of white between the front sight and the edge of the black, 4) measured white space between the front sight and the bottom of the black that equals the white space on either side of the front sight, 5) deep down in the white, and possibly others. All have their proponents and detractors.

Center hold is very popular in standard pistol because of the mix of time limits for the 5 shot strings. It is essentially universal in the rapid stages of sport/center and in the rapid fire pistol event due to the design of the target. Some air and free shooters also choose this method.

Bottom edge of the black hold and thin line of white hold are two common aiming techniques, especially for the precision events and stages. Many athletes dislike the black-white-black-white “flicker” above the front sight as their area of hold takes the sight above and below the bottom edge of the black. Indeed, this aiming technique is distracting for this reason and magnifies the perception of movement, reducing athlete confidence.

Measured white hold reduces or eliminates the flicker problem (if the gap is large enough), while still providing an aiming reference that feeds the perceived “need” of many shooters to have a “precise” aiming reference. All that measuring is a very active visual and cognitive process and is profoundly counterproductive.

Deep down in the white, interesting things happen. First, the athlete notices a lack of distinct aiming reference. This scares off many an athlete and coach. Those who are willing to explore discover that, if they have learned to let their eye quietly rest on the front sight – yes, the white dot spot – the aiming area is “sensed” and the target is so far above the front sight that its movement is no longer a distraction. Note that the apparent movement is now the target’s since

the eye is gently following the front sight as if “locked on” and the perception of movement is diminished. Despite the target seeming to “float” well above the front sight, the brain is quite easily capable of finding the same “spot” for shot release. Of course, the aiming “spot” must be thought of as an area of hold and accepted without reservation. This hold method is very conducive to deeper shot process techniques that result in shot delivery that is more consistent, confident, and decisive.

This technique is especially powerful in air and free events, as many athletes have discovered. The dramatic reduction of distraction of the target movement and the calm of the Quiet Eye combine to allow the athlete to “instinctively know” where to hold. Yes, this takes guts and a bit of time to develop, though much less time than most imagine! It is a very powerful technique that results in very small confidently delivered groups. A quick “try” will give a false result and the technique will be prematurely and erroneously rejected.

Now you know why the bull is so high above the front sight in Figure 1.

Finally, we must explain why the gaps on either side of the front sight are so wide. Many pistol shooters, especially in the precision events of air and free, prefer very thin gaps and adjust their rear sight accordingly. Taken to an extreme, this is counterproductive, as will be seen in the discussion in the next article about rifle front aperture sizes. The same principles apply. This, and other related topics of interest to both rifle and pistol shooters, will be discussed in more detail in the next article.

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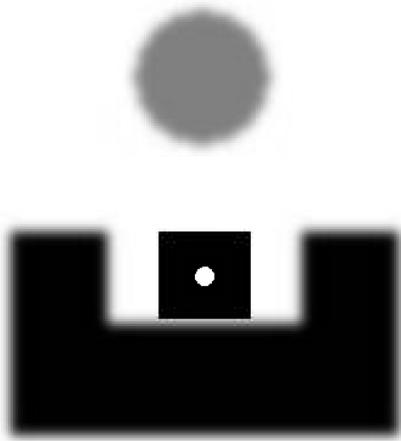


Figure 1 – Pistol Sight Picture

On the Firing Line (Fifty-third in a series)

Where Are You Looking? – Part 2

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**“I have a team full of shooters with a world class hold;
And almost none of them can deliver the shot!”**

In the previous article, we explored two important aspects of the sight picture for target pistol shooters, both resulting in seemingly large white spaces instead of what are mistakenly thought to be “precise” references. We now take this theme to rifle, with rather surprising results. Pistol shooters should carefully read this article just as rifle shooters should have carefully read the previous article. Both articles hold insights for both disciplines.

The quote at the beginning of this article is from a national team rifle coach several years ago. He was commenting to me on the ability of many of his athletes to confidently, decisively, and consistently deliver quality shot performances under pressure. Each athlete had their own challenges and reasons.

One challenge that many of them shared, and that almost none of them or their coaches understood, was that their front apertures were too small. The vast majority of intermediate and advancing shooters, and many elite shooters, have selected a size that is too small for them, especially if they have a great hold. Interestingly, and in contrast, a number of athletes and coaches, and a few elite shooters, use what appear to others to be huge front apertures.

What is going on here, and why do we make the assertion that most have their aperture too small?

First, we must explore why smaller apertures, consistent with one’s ability to hold the rifle steady, are thought to be best. As an athlete improves their ability to hold the rifle ever more steadily, they may choose on their own or be encouraged by others to reduce their front aperture size. In all cases, the size is generally recommended to be large enough to contain the hold so that the bull is not disappearing outside the front aperture ring. As a result of this advice, once an athlete develops a really tight hold, they may well choose an extremely tight aperture.

The reason given for small apertures in these cases is visual precision. Without a doubt the smallbore ten ring, and ten dot for air rifle, are very small and consistently hitting them demands a very high degree of precision on a repeatable basis. The “engineers” among us want measureable precision. Thus they choose the bottom of the black or thin line of white pistol holds and tight front apertures on rifles.

The good news is this provides an opportunity for improved visual precision. The bad news is this causes lots of eye movement and it increases the sensation of movement of the hold. These themes should be familiar from the previous article.

With tight front apertures, one is tempted to “check” all around the white ring between the bull and the front aperture ring to ensure it is even. This is done by following the ring in a circle or by bouncing around in sort of a star pattern. Additionally, the athlete is constantly trying to discern the very small white ring to evaluate their aim, thus straining the eye.

As an aside, a few years ago triangular apertures were made available on the market. An “engineer” had the bright idea that a triangle provided only three places to check, instead of the

entire ring. While that was true, it encouraged, indeed required, eye movement. Sure enough the apertures were a failure because holds opened up and results were worse than before. This was no surprise to athletes and coaches who understand the need for, and power of, the Quiet Eye.

When the eye is moving, the gun is moving more than it otherwise would. When the mind is thinking, the gun is moving more than it otherwise would. Yes, subtle eye movements and increased brain activity each cause the hold to open up.

The tight front aperture also magnifies the apparent movement of the gun. This erodes the athlete's confidence and destroys their ability to follow a high performance style of shot process. Trigger jerking and/or flutter finger become quite common in this situation. Many a severe, apparently incurable, triggering problem has been solved through nothing more than an appropriately chosen increase in the front aperture size.

The result of tight apertures is the perception of increased hold motion, eroded confidence, added eye strain, increased brain processing (visual and otherwise), significant and debilitating triggering issues, and a greatly increased difficulty in shooting. When the hold looks bad to the athlete, it may as well be horrid.

A penny's worth of gain through perceived aiming "precision" comes at the cost of a dollar's worth of performance degradation in several other critical areas.

Ten years ago, in the third article in this series, we explored the challenges an Olympian and very dominant rifle shooter was having in decisively delivering shots. The primary technical issue for that athlete was a front aperture that was too small.

The appropriate size front aperture is not very tight. See Figure 1 of a typical front sight with a generously sized front aperture and a target bull. (The rear sight is not shown.) This diagram does not represent a specific target with a specific front aperture, meaning that it is not necessarily to scale. It does clearly illustrate two important factors: 1) a wide ring of white between the bull and the front aperture ring (which could be even wider than shown here), and 2) a very thin front aperture ring. More on these topics in a moment.

When introduced to an aperture of appropriate size, many a rifle athlete has been stunned at the almost immediate transformation in their shooting. Others have taken a short time to warm up to the sometimes dramatically changed sight picture, but ultimately are very pleased with how it feels to deliver the shot and with the results.

Observant readers will notice that no actual aperture sizes have been given thus far. "What size apertures do I need for air rifle and for smallbore rifle?" There is no single correct answer! ...except this answer: "It depends."

One must know the value of several variables in order to determine the correct answer. What size is the aiming bull? How far away is the target? How far is it from the surface of the athlete's eyeball to the aperture inside the front sight globe? (We do not touch the athlete's eye when measuring. We measure off to the side.)

Even knowing these variables, what is optimal? How do we know? We must answer this question first, in order to determining actual sizes.

Many years ago, Precision Shooting, in one of their magazines or annuals, published an article that discussed research on front aperture size. It turned out that the width of the white ring between the front aperture ring and the aiming black must cover at least 3 minutes of angle (MOA) from the shooter's point of view. (Unfortunately, the reference to the article could not be located by press time.)

About 50 to 60 years ago, the Soviets studied many aspects of rifle sights and sighting systems, among other things, in great detail. Front aperture size, aperture ring thickness, and interestingly, front aperture insert color, were among the numerous factors studied.

For shooting outdoors, they found light pink apertures to be most effective. Now you know why Anschutz sells that color! They also found that very thin front aperture rings were the most effective. Air events were not studied as they were not part of Olympic shooting at that time.

Sadly, the paper(s) with the results of the research activities cannot be found and apparently were never published in the UIT Journal. (Maybe since it would divulge their “secrets”?) However, references to the studies shed some light. Taking the published statements and translating them in terms of MOA, one gets identical results to the above article. This correlation got my attention!

Given the paucity of solid references, the correlation between the two items available, and the initially counter-intuitive aspects of this topic, empirical observations and test activities were performed over a number of years, in many different situations, with athletes of widely differing experience and skill levels – beginners to Olympians. In all cases, apertures selected to give 3 MOA or more of white ring width had a profoundly positive effect. Athletes were not told what size they were shooting with as we randomly changed sizes (ranging from absurdly small to absurdly large, and everything in between), though they could obviously see that the sizes differed throughout the session. A “step” function was observed, whereby using an aperture that was smaller than 3 MOA, even if the aperture diameter was only 0.1 millimeters too small, had a strongly negative impact on shooting performance and athlete confidence. Interestingly, apertures as much as 0.5 millimeters (or more) larger than required to give 3 MOA of white ring had essentially identical results to the 3 MOA size apertures.

Remember the minority of coaches and athletes, and those few elite athletes, with the really “big” apertures? Now you know one of their “secret” keys to success.

What about the common advice to change aperture sizes between positions? What about the advice to try a smaller aperture in order to decrease the hold area? Tread very lightly lest you return to the mine field!

In the case of an elite athlete with an extremely small hold area in the sling positions, one might consider a slightly smaller aperture. The hold area must be considerably smaller than in the standing position and the athlete must not already have any issues with decisiveness or clean triggering. Even then, careful experimentation is required.

In the standing position, some athletes have developed extremely small holds. (E.g. hold area contained well inside the diameter of a pellet on the air rifle target.) Again, very careful experimentation is required.

In both of the above cases, more often than not, the athlete and coach, in search of what they believe is good visual precision, talk themselves into using an aperture that is too small, rather than obeying all the signs to the contrary.

However, an increase in size for a shooter with a looser hold (e.g. a newly beginning shooter’s standing position) is certainly appropriate.

One is well advised in almost every case to stick with the 3 MOA rule as the bare minimum size. One may use an even larger aperture, 0.5 millimeters or more, with no problem. To go smaller, even by 0.1 millimeter, is fraught with serious peril. This has been observed over

and over, even with many elite athletes. Yes, there are exceptions. Regardless, it is very, very rarely safe to assume you are one of those exceptions. Refer again to the Olympic athlete in the third article in this series; only a handful of current athletes in this country shoot as well as that athlete and a 3 MOA or larger aperture was needed even in that case.

Why must the white space be 3 MOA or more?

If the band of white between the front aperture ring and the aiming black is too thin, there is so much “flicker” that it overwhelms the perception of the ring of white, making it more difficult for the mind to center the sights, and increasing the visual processing load in the brain. There are likely additional visual processing factors also involved.

Tight front apertures encourage “checking” with eye movement. The tighter the ring, the more the perception of movement is magnified, eroding the athlete’s confidence. The wider the front aperture ring, the smaller the aiming mark appears. Thin front aperture rings and unobstructed apertures (no cross bars) help reduce the perception of “grey bull” some shooters experience.

In pistol, using a wide rear notch in order to have wide gaps of white on either side of the front sight is very beneficial, especially when one is looking at the right spot. This is imperative in the rapid fire events and stages, and is very important in the precision events and stages. All the same theories apply.

Theory is of limited value without practical application. Let us now finally translate the 3 MOA rule into actual rifle front aperture sizes.

The question may be reduced to a single answer chart requiring one simple measurement, shown in Table 1. Measure the distance in inches from the surface of the athlete’s eyeball to the aperture inside the front sight globe. (Please remember, do not touch the athlete’s eye when measuring. Measure off to the side.) The chart uses eye distance in inches since that is the most commonly available measuring unit in the USA, and the apertures are listed in millimeters since that is the most common sizing unit used in most target rifle apertures. In some cases, two sizes are shown for a given distance. In those cases, it is best to choose the larger size of the two, especially if the eye distance is “. . .and a half” inch. Remember to always re-measure and adjust the front aperture size if you move the front sight forward or back as you refine your rifle setup and position to assure that you still have the correct size aperture.

As with many of the articles and ideas in this series, one’s perception and beliefs are tested by some of the ideas in this and the previous article and one is asked to consider ideas that seem counter-intuitive or are even thought to be wrong by some. The best athletes are the ones who work the hardest and have the most open minds. Results are results. Enjoy!

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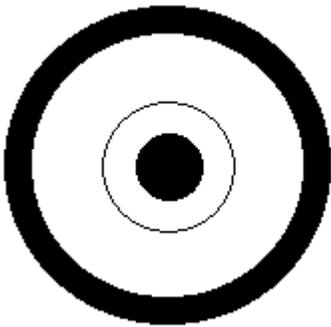


Figure 1 – Rifle Front Sight & Target – Note the very thin front aperture ring and the wide white ring between the aperture ring and the aiming black. Ideally, the front aperture should be floating as shown (no crossbars) and should usually be a very light salmon (pink) color. This diagram is not to scale, and the inner white ring is often even wider.

**Minimum Rifle Front Aperture Size
Millimeters
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Eye Dist. Inches	ISSF Air 10m	ISSF SB 50m	USAS SB 50ft	USNRA SB A-36 50ft	USNRA SB A-17 50ft	USNRA SB A-7 50ft
28	3.5	2.9	2.8	2.7	3.0	3.1
29	3.6	3.0	2.9	2.8	3.1	3.2
30	3.7	3.1	3.0	2.9	3.2	3.3
31	3.8	3.2	3.1	3.0	3.3	3.4
32	3.9	3.3	3.2	3.1	3.4	3.5
33	4.0	3.4	3.3	3.2	3.5	3.6/3.7
34	4.1/4.2	3.5	3.4	3.3	3.6/3.7	3.7/3.8
35	4.3	3.6	3.5	3.4	3.7/3.8	3.9
36	4.4	3.7	3.6	3.5	3.9	4.0
37	4.5	3.8	3.7	3.6	4.0	4.1
38	4.6/4.7	3.9	3.8	3.7	4.1	4.2
39	4.7/4.8	4.0	3.9	3.8	4.2	4.3
40	4.9	4.1	4.0	3.9	4.3	4.4
41	5.0	4.2	4.1	4.0	4.4	4.5
42		4.3	4.2	4.1	4.5	4.6/4.7
43		4.4	4.3	4.2	4.6	4.7/4.8
44		4.5	4.4	4.3	4.7	4.9
45		4.6	4.5	4.4	4.8	5.0
46		4.7	4.6	4.5	4.9	
47		4.8	4.7	4.6	5.0	
48		4.9	4.8	4.7		

Table 1 – Minimum Rifle Front Aperture Size – Millimeters – Use of apertures smaller than listed, even by only 0.1 mm, cause numerous triggering, confidence, and shot process problems.

On the Firing Line (Fifty-fourth in a series)

Christmas Tens

©2011 JP O'Connor

**“I'd never had that floating peaceful shooting feeling carry over at ALL,
Let alone so strongly into the NEXT DAY!”**

Releasing a shot is easy. Trivially easy. That is, in a practice session when no one is watching and when we do not care about the result. What about when we do care about the outcome or in competition? How often do we painfully struggle to release a shot that counts? Why do we struggle so? Why do we repeat thought and activity patterns that perpetuate the pain and that leave us still well short of our outcome goals?

Have you ever had a shot where the gun seemingly shot “by itself”? That is, a completely effortless and painless shot. You were completely disengaged from the activity at the moment of delivery – and may even have been startled by the shot going off. “I wasn't ready!” How often does this happen to you? What causes this phenomenon? Is it desirable or should it be avoided?

The answer that one hears to the last question depends on who you ask. When describing such a shot to one particular coach, his response was that such shot deliveries were serious errors and to be avoided at all costs. “We call those ‘Christmas tens.’ Those are incorrect shots and must be avoided.” Instead, this coach taught athletes to take full, active control of the shot process and release. The “accidental” shots that released “by themselves” were errors to be avoided in this coach's opinion.

And yet, many athletes when asked if they have experienced the “accidental” or “by itself” shot, will respond that they have indeed had such an experience. Upon further query and reflection, they almost always report that the shot was a deep ten or a good bust (nothing but dust). Yet, they do not try to learn why this happened or how to use the technique because “We aren't trained that way.”, or “I don't trust it.”, or “I get too many fliers that way.”

The “Christmas ten” or “automagical shot” is not an error. It is not an unearned lucky gift. It is an honestly earned reward. Indeed, it is a reward for hard work, appropriate focus, and for a properly managed shot process – especially for properly managing the mental (e.g. appropriately directed focus and awareness) and emotional (e.g. outcome and control issues, and anger management) aspects of the process. Because trusting the deeper parts of the mind is a very “eastern” concept and we grow up within a very “western” culture, we are predisposed to ignore these “strange” ideas.

Because we are so focused on outcome, because we are ingrained in physical and technical matters, and because we are culturally biased away from anything psychological, we depend on physical and technical aspects of releasing the shot, all while under active thought and control.

Time after time athletes and coaches will say that shooting is 90% (or some other large percent) “mental”, without really understanding what that truly means and then spend 99% of their time and effort on physical and technical aspects. We pay lip service to the mental and emotional aspects, fooling ourselves into believing that we know what they are, that we have

them mastered, and that we just need more practice or technical adjustments. We are rarely taught about the immense, seemingly unbelievable, power of the human mind, much less how to “tap in” to that power for our shooting or any other performance activity.

In 2002, after reading a description of these things, Abhinav Bindra wrote: “I have been a shooter trying always to make things [happen]. Meaning I have been always very conscious. But accidentally sometimes it happens to me that I got into the zone of forgetfulness and shot 597, 596,598. ... It is the biggest key to performance which can be written only once experienced. I have experienced it 2 times in my life where I did exactly what you [recently] wrote [about]... results were 596 and 597 at World Cups.”

At the time, Abhinav held the junior men’s world record for air rifle, having won a World Cup at age 18, and was ranked tenth in the world overall in that event. He is also the current World Champion (2006) and current Olympic Champion (2008) in men’s air rifle. Despite these experiences and “eastern” childhood, he was later exposed to “western” training, which caused him some difficulty. Also he now often uses a more active process that he and others call “manufacturing the shot” when he is unable to train as much as he felt necessary.

Not too many years ago, a quite lengthy discussion thread took place on a popular online target shooting forum. The topic was about the so-called “subconscious shot.” The originator of the thread, a well-respected and experienced pistol shooter, explored his experiences and engaged others in the topic. It was clear from the postings that a very small handful of the participants understood the topic fairly well, while most were lost. While the handful had experienced the “surprise shot” and noticed the typically excellent results, they were unsure if this could be trained and reliably applied in competition. They did an excellent job of describing the experience, yet were troubled by “fliers” which came too often and which were quite wide of the mark.

Whenever an athlete makes a fundamental change in their “program” they must expect their results to be less than before while they train the new aspect. This is backwards from how most athletes and coaches evaluate a change: after a trial that is too short to be valid, they accept or reject the technique based solely on whether the score went up or down. The results are not valid. Similarly, these athletes needed to maintain their levels of score and could not or would not train the new technique enough.

When one has been trained to shoot with active thought and active “control” of the process, it is hard to relinquish the perceived control and it is hard to work with a new technique that is so foreign to our culture and training. Athletes who have made this change have discovered that, yes, the groups do open up and the fliers are pretty bad – at first. Then, just as when they were beginners, the groups shrink, the fliers become fewer in number and less severe, and before they realize it they have surpassed their old level of outcome.

The fliers are caused by the athlete trying to take active control right at the moment of shot release!

What causes the good “surprise shot”? When the active part of the mind, which usually is “controlling” the shot, harshly judging mistakes, and worrying about the past or future, is for some reason not doing those things due to fatigue or distraction, sometimes the deeper parts of the mind – which actually do all shooting and actually know how to hit center every time without fail – are suddenly allowed to manage the shot process. The resultant shot surprises the active

thought part of the mind because it was somewhere else. Of course, it cannot admit that this is a good way to shoot because it was not in “control” – despite the resultant “ten point deep.”

This is not mysterious or unreliable. Collegiate and even high school students have been trained to use these techniques with great success.

In one case, two “Type A”, male, over-analytical, engineering students – after 2-1/2 days of an intense and very advanced rifle camp, were shocked to discover this whole new way of shooting. They could not miss the ten ring. Sometimes after a shot they would realize that they had forgotten to look in the spotting scope because they already knew the shot was a deep ten. This was despite their previous dependency on the scope to see how bad their shots were. It was no surprise to learn later that they abandoned this method and went back to their old ways – and old scores. After all, they were at an age that “knows best” and where “fitting in” with everyone else is more important than anything. It isn’t easy to be exceptional!

Digging deeper, we examine a situation that took place in spring 2003. A rifle shooter in her late 20s was referred to a new coach by a mutual friend who was on the National Team. The coach was to work with her while she was in a new town attending graduate school. The two met, discussed her situation, goals, and desires, and put together a plan. Their first training session, really a day long clinic, was outdoors working with 50 meter smallbore rifle in the standing position. Based on their discussions and plans, they worked through her entire game, gently polishing deep and subtle components of all aspects of her game: physical, technical, mental, and emotional. They spent a few hours at this task and the athlete responded excitedly as her confidence grew and as her capabilities improved. Even when adding intensity training later in the clinic, she rose to the task and accomplished a great deal under very intense pressure.

And then it happened. At one point in one of the shooting sessions that day, the coach noticed a profound change in the athlete during a shot. She became much steadier than her already excellent balance and steadiness, all the tiny muscle tremors disappeared, her body, face, and eyes became calm, the rifle settled on target as if held by magnets, the shot release came almost at the instant the rifle arrived on the area of aim, and it was released with incredible smoothness, like melting snow slipping off a bamboo leaf.

The athlete, having noticed a profound change in herself, and having been surprised by the completely different “feel” of the shot process, turned her head to the coach with a look of awe. The coach, knowing what had happened and not wanting to destroy the moment, smiled, and without a word gently gestured for her to return to shooting. Shot after shot she prepared herself mentally, focused on the “doing” of the Present Moment, then aggressively and decisively performed her shot process without care or worry of outcome, and allowed the shot to “shoot itself” without trying to “take control” of the shot herself. She was stunned at the results, at the ease of shot delivery, and in the feelings it evoked within her as she shot.

The next day she wrote: “You’ve taken me back to the source of all shooting... why’s and how’s and it is AMAZING! Until now, I’d never had that floating peaceful shooting feeling carry over at ALL, let alone so strongly into the NEXT DAY!!!”

What had happened? How did she do this? Through careful assessment and polish of her already excellent physical and technical game (only very minor, subtle adjustments of technique were required), she gained confidence and the foundation was set for working on the mental and emotional aspects of her game. She was a quick study, intelligent and thoughtful in her analysis

and evaluations, self-aware, and had a very open mind. She was a coach's dream. They worked on her self-talk and self-thought, replacing unhelpful techniques with techniques proven to facilitate and aid ultimate performance.

As all this work "came together" for her, she began to trust herself and her game. Her trust became deep enough that she could begin to "let go" of the "need" to take "control" of the process. Eventually, she just "allowed it to happen" and that is when she and the coach noticed the big change during one of her shots, and then on the subsequent shots.

This did not take place in a comfortable and familiar environment, nor in a pressure free "practice" session. She was on an unfamiliar range (noted for its tricky conditions and for being a great place to learn how to shoot in the wind and mirage), with a friendly yet tough and demanding coach she had only just met, with loud center fire rifle noise around her, while performing unfamiliar intensity drills that truly emulate the intensity of the highest levels of competition. The conditions she faced were quite challenging. She channeled the pressure in positive ways, had faith in her capabilities, and challenged herself to perform without regard or concern of success or failure.

Those who have studied "flow" (popularly called the "zone") will recognize that the degree of challenge she faced, while debilitating to many athletes, is actually an aid to the well – and properly – trained athlete. She experienced "flow" and the "automagical" shot which seemed to "shoot by itself" – and was astounded with the results.

Yes, there are lots of things going on around you; things can go badly, very badly, in a hurry. And yet, you must calmly allow the shot to release itself. Sometimes it is like "Bambi Meets Godzilla!" (Old timers: did you see this film short?) You must be inwardly calm, quiet, confident, and decisive while in the eye of the hurricane.

Remember, tens or nice clay target busts are like babies, puppies, and kittens... you can helplessly and angrily chase them all over the house and never catch any of them, or sit down on the floor, relax and smile, and effortlessly and instantly catch all of them. The choice is yours.

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(Biographical information as of August 2014)



Photo Caption: In The Eye Of The Hurricane – Calm, Quiet, Confident, Decisive

On the Firing Line (Fifty-fifth in a series)

Physical – Technical – Mental – Emotional – Part 1

©2014 JP O'Connor

**“I thought it was an engineering problem:
Equipment, ammunition, positions, training, and done.
That was only the beginning!”**

Many athletes, coaches, and parents believe that purchase of good equipment and ammunition, range time, and some hard work on the part of the athlete and coach will lead to great results. This is certainly a good start, though not enough. Eventually, the athlete experiences “match nerves” in various forms and the game changes. Athlete and coach struggle to find the “secret” to success. The quote above is from a parent (an engineer) who had finally discovered this dynamic.

This problem is much more common in our sport since we have fewer participants who understand the principles of training and competing that are more broadly known in a number of other sports. We are improving; though have further yet to go. Even in those other sports, only small percentages reach the highest levels of performance and score. Why is this?

Our culture is all about taking control, making things happen, strength, speed, being the best, and winning. We emphasize science, technology, engineering, and math (STEM) in our education system. We talk about teaching students to think critically, yet make them memorize static facts and then test their memory. We follow celebrities and the media castigates the slightest mistake without benefit of fairness or critical thought. We train the active thought part of the mind and we feed our ego.

Lost in all that noise are the techniques and methods of utilizing the majority of our inner power, hidden and untapped in the deeper part of our mind. Lost in all that noise are the keys to thriving under pressure, achieving exceedingly high levels of performance, enjoying the moment, and receiving top scores as a result.

Even in the areas where we place great emphasis and have great knowledge, we often thrash around with constant change. The positions need tweaking, the equipment needs perpetual adjustment, the ammunition isn't good enough, new accessories need to be added, and so on. This constant change destroys the “program” deep within us that allows ultimate performance.

A comprehensive program that covers all the important factors is needed to provide athletes and coaches with a broad view of all the important factors along with depth of content that provide both what is important and how to teach or implement the factors.

While studying this sport as practiced outside this country, and while studying applied sport psychology as it is practiced outside this sport, a number of factors emerged, which fall roughly into four major areas: Physical, Technical, Mental, and Emotional. This article provides the very briefest of introductions to the physical areas as they apply to our sport. The next three articles will explore the technical, mental, and emotional aspects.

Physical

The physical parts of this game encompass a number of areas, some obvious and others less so. Certainly physical training is important, as are sound positions.

The lowest level of the physical foundation includes breathing, sleep, hydration, and nutrition. All four of these areas generally have plenty of room for improvement, and they do have a profound impact on a shooting athlete's performance.

Next is general fitness. Can you run a mile without gasping for air? Can you stand on your firing point or stations for a couple of hours without any pain and with minimal fatigue? Can you hold the firearm up with no shakiness or strain at all? Are you flexible or stiff in your movements and/or when in position as appropriate?

Physical training must be appropriately designed for the sport and for the specific athlete's situation. Rather than building bulky, fast, coarse, anaerobic muscle, one must build toned, slow, smooth, aerobic muscle. This is done with lighter resistance or weight and many more sets and reps. Instead of the vein-popping bodybuilder look, one ends up with natural musculature that is easy to maintain, is conducive to high performance in this sport, and has a side benefit of helping prepare for swim suit season (for those who care).

Work with coaches and physical trainers if you have access to them, and refer to reliable sources of information. If starting a physical training routine, make sure your doctor gives you the OK. Start slowly and simply.

Body core strength is important for all athletes and is frequently overlooked. One set of exercises designed specifically for this sport is known as "Ambercise" because it was developed for and by Amber Darland (one of the best rifle athletes in the nation when she was active), along with a member of the USOC training staff several years ago. Copies of one version of the program are available on my Pilkington's web page and via my blog (URLs below). Some of the routines seem a bit "odd" to some folks and they won't do them. "How good do you want to be?"

Additionally, most female athletes need to pay special attention to enhancing upper body strength and endurance while most male athletes need to pay special attention to enhancing lower body strength and endurance.

Overall fitness has a huge effect on an athlete's performance (including basics such as balance), and possibly most importantly, physical fitness is the foundation of mental toughness. If for no other reason than this, physical training is critically important.

Another important aspect of the physical part of this sport is the topic of positions, which encompass the concepts of outer position and inner position.

Outer position is that which the coach or spectator can see from their point of view. Where are the feet placed? Why? How are the hips positioned? Why? And on and on and on ad nauseum. The details are limitless. Fundamentally, the positions must depend upon the bones, ligaments, and where appropriate, the sling. Muscles and tendons should be removed from the equation as much as is possible. (Well trained rifle athletes often discover that they need almost no muscle to stand still.)

Often, athletes will have positions that are contorted or twisted, which are very "springy" and full of movement. Sometimes this is due to lack of knowledge and other times it is due to a belief that this is what is needed for that athlete.

We are constantly told that "everyone is different" and that is used to justify sometimes odd and counterproductive positions and techniques. Are we different? Of course! Are we the same? Before answering, think about the similarities. When, as a middle-aged male, I stand next

to a petite teenage girl, and ask if we are different or the same, the group laughs because the answer is obvious: we are very different. Then we discover that she and I have one head, two eyes, two hands, two legs, and so forth. For all our differences, we share many similarities.

While not every athlete is or should end up with a “textbook” position, that is the common starting point. Start with sound fundamentals, then understand when and why to “break the rules” before doing so. Too often we just change things with no sound reason.

Another important aspect is the effect of the position on the athlete’s long term health. Too many rifle athletes complain of lower back problems. In many cases, this is due to a position that is contorted more than it should be or it is due to body core weakness. Frequently, both factors are at work. Coaches must look carefully at each athlete and work with them to establish sound positions that are not damaging. For example, many standing rifle athletes use a position with way too much twist, bend, and slouch in the mistaken belief that this helps their steadiness. Quite the opposite is true.

Inner position is something only the athlete can sense. Feelings of and awareness of balance and steadiness, and sensations of muscle tension or relaxation are all components of the inner position. An athlete can develop their awareness of these cues and use them to great advantage to establish exactly the same position and balance for each shot or series. These seemingly subtle differences have a huge effect on performance for the elite athlete.

The physical aspects of the game seem obvious. Yet we overlook the importance of actually being fit and flexible. More importantly, we overlook the negative impact on performance when we do nothing in the physical area.

Seek out good reference materials and local experts. Your physical fitness, and your positions, will benefit.

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Sidebar:

This series of On The Firing Line articles began thirteen years ago and ran for 54 installments through 2011. After a three year break, the series resumes with this 55th installment. Parts of the series have been adapted for archery as “On the Shooting Line” published by USA Archery and many articles have been translated into Japanese and published by their Olympic shooting national governing body. Olympic Coach Magazine, published by the US Olympic Committee, the National Association of Soccer Coaches, and others, have referenced or reprinted selected articles. Readers are encouraged to review the archive of previous articles for many ideas on how to improve their performance and results.

On the Firing Line (Fifty-sixth in a series)

Physical – Technical – Mental – Emotional – Part 2

©2014 JP O'Connor

**“Correct technology and technique are critical to success;
Clearly necessary, but not sufficient by themselves.”**

Champion athletes bring together an effective blend of physical, technical, mental, and emotional aspects of performance in order to thrive and excel under pressure. In the previous article, we touched briefly on many of the physical aspects of the sport. Now we turn our attention to the next important major area, some of the technical parts of the sport.

Technical

Each of the three Olympic shooting disciplines have demanding requirements around technology, positions, and technique.

A quick glance at a target rifle makes it obvious that there are numerous adjustments, each of which must be optimized for the athlete. There are many different styles of rifle, stock, butt plate, sights, and numerous accessories. Pistols have far fewer adjustments, though there are still adjustments to sight radius, sight widths, and any number of variations in grip design, setup, and customization. Shotgun may appear to the uninitiated to be rather “simplicistic” in comparison, until one learns about all the factors involved in fitting the shotgun to the athlete.

All three disciplines have varying adjustments for trigger placement and trigger setup. Many athletes get caught in the trap of eternally adjusting and changing their firearm in search of those next few points. True, the firearm must be properly adjusted and fitted in order to excel. Once a solid baseline is established, the athlete must then leave well enough alone, train and compete, and then make adjustments only when there is a clear reason to make a specific change.

Proper positions, initially covered in the previous article, excellent balance, and proper natural point of aim are also critical to success. First, the technical aspects of positions are explored.

Rifle tends to have very detailed, technical positions due to the nature of the positions and the rifle. Athletes who have a standing position with lots of “banana back” where the hips are well out over the toes and the shoulders are back over the heels are going to have significant back problems in the future as well as have to constantly fight a very “springy” position. Even if the position is mostly upright, twisting the hips around toward the target, even a small amount, also results in a “springy” position. The most important fundamental of any position is the use of bone and ligament instead of muscle and tendon in building the position.

Pistol positions appear simple at first. Though much more Spartan than rifle, pistol positions also require proper use of the physiology. The support arm must use muscle in a way that minimizes fatigue and maximizes stability. The majority of pistol shooters use a position where the heels are directly in line toward the target. Others find that a roughly 20 to 30 degree

turn toward the target is best for them. Ideally, heels, hips, and shoulders are all on the same plain. Work with your coach, experiment, and trust your instincts.

Shotgun also appears to be quite simple, though one cannot just randomly walk up and shoot well! Indeed, it should be very simple and natural, yet the proper setup is required to allow smooth movements. The position and orientation of the feet, details of the stance, weight distribution, and of the overall position, set the stage for a successful, flowing, and confident shot.

Balance is known to be very important, yet the techniques of understanding and properly affecting balance not always understood. When standing naturally, most people have their feet pointed a bit toward either side. Thus, the feet are not parallel and the toes are farther apart than the heels. This results in a stance that is dynamic and has the balance point roughly between the heels and the balls of the feet. In this stance, there is some natural body sway. By maintaining the balance roughly in the middle of the foot there is no danger of falling over, yet there can be significant sway. For rifle and pistol shooting, with their upright and static standing positions, putting most of the weight on the heels and having the balance point just at the front of the shins, produces a stance that is very, very steady, especially for athletes who have or develop good balance sense.

Going ice skating for 2 hours each week for 8 months will result in an incredibly steady stance, partly due to the balance training demands of skating and partly due to the excellent muscle tone and endurance in the leg muscles. With calmer, stronger, more enduring muscles combined with trained balance sensing, corrections are much more subtle and the stance is unbelievably steady. This is but one example of ways to train the balance.

Natural point of aim (NPA) is also a critical foundation for rifle and pistol. Shotgun also has an analogous concept, though it takes a somewhat different form. Many people describe NPA as "...getting the rifle/pistol to point at the target." While not incorrect, it misses the essence of NPA. In reality, NPA is all about the athlete discovering where the rifle/pistol wants to point when we are relaxed into position. We must not impose our will! Once we discover where the rifle/pistol wants to point, we then make adjustments, check again, and repeat until we have aligned where the rifle or pistol wants to point with the center of the target. Again, we must not impose our will.

We must also not use our eyes to point at the target and call it good. Our checks must include the eyes being closed long enough to allow the visually induced muscle tensions to dissipate, and even then, we must wait until we are balanced before opening our eyes, else the check will be false. A detailed NPA routine has been developed which is rigorous, takes into account the "will" and visual factors, and works extremely well. A write up is scheduled to be online by the time this article is in print.

Shotgun has a different dynamic. The athlete plans where they want to break the target and adjusts accordingly when setting up their stance. The goal is to facilitate a smooth, comfortable movement of the shotgun to the target and break point. Details are left to the shotgun coaches to explain for us.

Another important technical aspect is vision. All shooting athletes should get their eyes checked each year. Even a slight change in prescription has a profound effect on one's ability to see clearly when aiming. Many pistol shooters discover that having the eye doctor provide a

second “occupational” prescription that is +0.5 diopter different from the athlete’s normal prescription and placing this lens in a shooting frame provides a sharp, clear view of the front sight with no fatigue. Vision is of critical importance for shotgun, with its rapidly moving targets.

Clearly, there are numerous additional technical aspects of target shooting that remain unmentioned in an article this short. Get something that works, use it, learn it, and then you will be able to discern what needs to be adjusted or changed. The beginner cannot buy all the gear, set it up perfectly, and never change it again. Similarly, constant changes are a sure bet to frustration.

The books by Heinz Reinkemeier are especially useful in understanding the physical and technical aspects of rifle and pistol, along with the mental and emotional aspects. See the “Resources” page of the blog for details and links. If readers will send me suggestions for truly excellent shotgun books, I will gladly post those on my blog. Of course, there are many great coaches around the country who are happy to work with you.

In the next two installments of this series, we provide a short overview the mental and emotional aspects of high performance and thriving under pressure. Finally, we will bring all of these aspects together as we look at the actual delivery of a shot.

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Links:

High Performance Olympic Target Shooting blog, books, and additional resources
<http://jpoconnor.wordpress.com/>

On The Firing Line article series and additional resources
<http://www.pilkguns.com/jparticles/jpcontents.htm>

On the Firing Line (Fifty-seventh in a series)

Physical – Technical – Mental – Emotional – Part 3

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**“The happiest travelers are the ones
Who roll with the punches.”**

Once a level of understanding and experience with the physical and technical aspects of a sport is attained, the athlete then runs into the “other” side of the sport when they notice that their confidence and competence in practice fail them in competition. Welcome to “the mental game” as it is so often called.

Many people understand the importance of “the mental game” yet have limited understanding of its many facets and how to go about improving. There two major areas: mental and emotional. The mental components provide the foundation while the emotional aspects provide the inner strength and resilience to reliably and consistently thrive under pressure with confidence, capability, and deep enjoyment.

Mental

The mental aspects of sport are numerous. Some of the most important foundations are goal setting, mental rehearsal, mental activation level (called arousal level in the literature), self-talk, and attention control. This list is by no means comprehensive and merely provides a foothold into the topic. Additionally, we will address emotional aspects in the next installment.

Many athletes groan at the mention of goal setting. It can be a dry exercise, seemingly with no purpose. However, merely showing up to practice and shooting will not allow an athlete to grow and thrive to the degree that they wish. Any challenging journey needs a plan or roadmap. A good goal set that is frequently maintained and modified as the athlete grows provides direction and motivation.

A good set of goals addresses desired outcomes, over which the athlete has no direct control, as well as performance (behavior) components, over which the athlete has or can learn to have direct control and which support the outcome goals. This difference is critical to understand and consider. If the athlete puts all his or her “eggs in one basket” consisting only of outcome goals, there is great risk of devastating failure from which the athlete cannot recover. (It is painful and heartbreaking to experience – or witness.)

Performance (the doing, not the score outcome) is vitally important and must have at least equal emphasis as outcome goals. These performance goals support the desired outcome goals, and interestingly are goals unto themselves from which the athlete may draw great satisfaction when they are accomplished.

The goal set also involves specific actions and task activities. These action or task goals support the performance (behavior) goals. Most short term goals are action goals. Most outcome goals are long term goals. A mature goal set includes all combinations of outcome, performance, and action goals with short, middle, and long term time frames.

Mental rehearsal, often called imagery or visualization, is a very powerful skill that can be developed through understanding and practice. The term mental rehearsal is preferred over imagery or visualization since many people do not “see” images or visualizations and since the most important aspect of mental rehearsal is recreating the internal “feelings” of the activity in order to “experience” all aspects of the activity on one’s mind.

True performance comes from deep within the “deeper part” of the mind rather than from the highly verbal “active thought” part of the mind. The former is where our best performances come from while the latter becomes an interference and obstacle once the athlete is past the initial learning phase of a specific activity or skill.

The “deeper part” of our mind cannot distinguish the difference between performing an activity and mentally rehearsing the activity. Thus, for training our mind, mental rehearsal has the same benefit as actual training. Certainly we must also train in order to build physical and technical capability and familiarity; however mental rehearsal allows us to perform even more “training” of our mind. Ultimately, in competition, it is our mind which decides the outcome.

Mental activation level is a way of discussing how “hyped up” an athlete is when performing. When an athlete is too calm, their performance is sub-par. Conversely, when an athlete is “hyped up” too much, their performance also suffers. This latter condition is quite common!

For each athlete, there is an optimal level of mental activation for a given activity. For most people, having some adrenaline (not too much!) and excitement puts their mind and body in an optimal state for performance. The senses and mind are on full alert, the body is able to respond, and the athlete discovers new levels of capability.

When one is too hyped up, knowing how to reduce the mental activation level is a powerful tool in the competitor’s toolbox. One technique is to gently deep breathe, also known as belly breathing. If athletes have learned and trained this technique, it is a physical thing they can decide to do right in the heat of competition which will calm their body and their mind. This has the added benefit of quieting all the chatter going on in their head. After a pause to belly breathe for several breaths, the athlete may then regain an appropriate mental activation level, refocus, and go back to work. Another technique is to pick out a tiny item and quietly stare at it for a minute. Pick out something tiny, such as a spot on the back of your hand or arm where a single hair comes out of the skin. Stare at it. Soon, one will become less excited and again the chatter will subside. Then rest your eyes while you set up for the next shot, and enjoy.

Learning how to increase or decrease one’s mental activation level, and then learning one’s personal optimal level, will allow an athlete to perform much better with increased enjoyment.

Self-talk is all the things we say to ourselves as we shoot. Too often, these things are critical, negative, counter-productive, and unfriendly. In training, when I see athletes visibly react to a shot they don’t like, I will sometimes ask them if they would like to share what they just said to themselves. Their facial reaction is often hilarious! Universally, they do not want to share what they said. I then ask how they would feel if I had said the same thing to them. They always say they would be very upset with me if I had. If we are supposed to be our own best friend and supporter, why are we so harsh to ourselves?

Remember how the deeper part of the mind cannot distinguish between mental rehearsal and actually doing an activity? Another interesting aspect of the deeper part of the mind is that it

only processes positives. That is, it does not understand negation. When someone says “Don’t shoot an 8!” the deeper mind hears “Shoot an 8!” This is not helpful!

“We do what we say and we become what we believe.” Self-talk is a form of mental rehearsal. What are you telling yourself about yourself? Is it positive? Is it constructive? Is it taking you in the direction you want to go? Become aware of what you are saying to yourself, stop when you catch it happening, and turn it around to positive things. Instead of “You stupid idiot!” after a bad shot, one might be better served with “I over held, forced the shot, and didn’t reject decisively like I know I can. I will allow the shot to unfold and reject if it doesn’t happen soon enough or if it isn’t unfolding properly.” This is much more helpful and affirming for the next shot and for the athlete’s overall development as a competitor.

Attention control is another important aspect of high performance. Where are we mentally focused? Is it helpful to us? Anything in the past or future (even if only a second or two in the past or future) is not helpful. We need to be only in the Present Moment and focused only on the task at hand.

Often, when athletes look around during a match, they are told “Don’t look back, keep looking forward, keep your head in the game.” One international athlete told me that she would look around on purpose so that she could resolve any curiosity (“Who just walked on the range?”), let the thought run, and then refocus without distraction. Just because an athlete does not look around doesn’t indicate where their attention falls.

Let the distracting thoughts run so they can dissipate, breathe to become relaxed and quiet in body, mind, and spirit, refocus, quietly pay attention (without control or judgment) to what is happening in the Present Moment, and allow yourself to perform a shot process.

We have touched on only a few of the myriad aspects of the so-called “mental game” in this article. The books “Body Mind Mastery”, “Extraordinary Golf”, and “Sport Psychology and Competition – The Psyche of the Shot” listed on the Resources page of my blog are excellent references.

In the next installment of this series, we provide a short overview of the emotional aspects of high performance and thriving under pressure.

The “On The Firing Line” series is published by the national governing bodies for Olympic shooting in Japan and the USA, and has been adapted for archery as “On the Shooting Line” published by USA Archery. Olympic Coach Magazine, the National Association of Soccer Coaches, and others have referenced selected articles. The entire series is available online at www.pilkguns.com.

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at <http://www.pilkguns.com/jparticles/jpcontents.htm> and via his blog at <http://jpoconnor.wordpress.com/>. Email questions and suggestions to jpoc@acm.org.

Links:

“High Performance Olympic Target Shooting” blog, books, and additional resources
<http://jpoconnor.wordpress.com/>

“On The Firing Line” article series and additional resources
<http://www.pilkguns.com/jparticles/jpcontents.htm>

On the Firing Line (Fifty-eighth in a series)

Physical – Technical – Mental – Emotional – Part 4

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**“Heroes and cowards feel the same fear;
Heroes just act differently.”**

The so-called “mental game” includes many facets, such as goal setting, mental rehearsal, mental activation level (called arousal level in the literature), self-talk, and attention control, among many others. Combining the physical, technical, and mental aspects of performance is very important. There is a fourth major aspect required to complete the puzzle: the emotional components of performing with excellence while under pressure.

Don't worry, guys, we are not going to ask you to get in touch with your “feminine side” or anything of the sort. Have you ever been angry? That is but one example of a universal emotion (or emotional block). Learning and utilizing the emotional aspects of performance provide many of the “missing pieces” in our quest for excellence in competition.

Emotional

Why do athletes and coaches do what they do? Why do they invest all the long, lonely hours of toil? They do this because they are motivated to achieving a goal that is important to them. Motivation can come only from within the individual. Their desire drives them. Coaches, parents, and fellow athletes cannot motivate a person; they can only hope to inspire the athlete.

Athletes must “keep in touch” with themselves, their desires, and their priorities. If a goal is important, work for it. If you are unwilling to do the work, is the goal real, or merely a dream or wish? Be honest with yourself. Be honest with others. Set goals that mean something to you. Then, the goal will pull you willingly toward success, instead of seeming to be an obstacle or unachievable.

When we desire something, when we feel motivated to work for something, when we are happy and confident, there is a strong flow of positive emotional energy. It fuels our passion and work. It brings us warm feelings of love, comfort, and confidence. When we have put in the time and effort and have a strong flow of positive emotional energy, we are “on top of the world” and can achieve the seemingly impossible.

There are blocks to this positive flow, and they are fatal to high performance. Champions learn how to become aware of and resolve these blocks in order to reach their goals.

Anger is a block that takes place when reality does not meet our expectations. We want that perfect shot, and too often become angry when our shot does not result in a clean bust or a deep ten. Our reaction then ensures the next shot is no better, and often worse. Then we really get angry! Self-destruction and a meltdown is the typical result. Become aware of your emotions and of their profound effect on your performance, which in turn affects the outcomes.

Fear of failure or embarrassment is another emotional block. We become unable to think, move, or even breathe. We also become inflexible and unable to adapt to the demands of the moment. Our focus is everywhere it shouldn't be instead of observing and just doing in the Present Moment. Face your fears, identify them as nothing more than obstacles and fantasies that

we construct within our own minds, and then turn your focus away onto positive topics. You must look toward forward progress, rather than look over your shoulder at what you fear.

While it is important to acknowledge the presence of fear, anger, doubt, and other emotional blocks, it is even more important that we not fixate on those aspects. Too often, we get stuck with our focus on the fear. Instead, move forward despite those negative feelings. We can learn to do this. Become aware of what is happening (focus on fear or other negative aspect) and then make a decision to refocus on what is happening right now. Breathe, relax, and refocus on what is important.

Notice the dynamic. Rather than let our emotions control us and dictate our performance, we can, just as with the physical and technical aspects of performance, learn to become aware of and positively change the mental and emotional aspects of our performance.

Rather than fall victim to the “two nines crisis” by allowing it to overtake our focus and emotions, we can let go of the result, learn from the performance, refocus, and move on to “This Shot Now” as our mindset.

Years ago, for three years, I had the privilege of working intensively with an exceptionally motivated and hardworking athlete. Taking nothing away from any other athlete, this athlete practically redefined the definition of commitment and hard work. As she started to advance into the elite ranks, at the age of 17, I asked her “What is the difference between a day when you shoot 390, with no hope of making the final, and a 398?” Her answer was immediate: “The confidence I bring to the line.” When she was confident, she was free to allow herself to “just shoot” the way she knew would move her forward. When she was not confident, that became her focus and she could not excel.

The champion, delivering the last shot in the final, is not calm. However, he or she has trained for that moment and learned to thrive in the face of the pressure. Peace and capability do not come when all is calm and quiet. Rather, they come to the athlete who has prepared for the storm, and learned to have an appropriate level of mental and emotional activation in the midst of the maelstrom. Think of it as being in the eye of a hurricane. There is nothing except you, your equipment, your training, your mental and emotional skills; nothing else.

We have touched on only a few of the countless aspects of the emotional dimensions of performance in this article. The books “Body Mind Mastery”, “Extraordinary Golf”, and “Sport Psychology and Competition – The Psyche of the Shot” listed on the Resources page of my blog are excellent references. Pages 139-164 in Psyche of the Shot are an especially valuable resource in the area of emotion in sport performance. The entire book is one of the best psychological resources within our sport, comprehensively covering all facets of applied sports psychology in an accessible and practical manner.

It is clearly important to be physically fit, to have excellent equipment that is properly adjusted, and to train properly and frequently. That gets you in the pack. To break out, explore and train the mental and emotional aspects of performing in public under pressure. This is the not so secret “secret weapon” of dominant performers.

The happiest and most fulfilled athletes, whether they are an Olympic champion or an intermediate level junior stuck on a frustrating plateau, are the ones who relish the journey and look inside themselves for the answers. Their passion is indomitable and their enjoyment is boundless.

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