

FENCING FOR THE BLIND

A 12-MONTH PROGRAM

by

Steven Behrends

Prevot d'Armes

November, 2007

TABLE OF CONTENTS

List of figures	4
Acknowledgments.....	5
Prologue	6
Chapter 1 - Introduction	7
Chapter 2 – The Blind Person	9
History, Fiction and Reality.....	9
What is Blindness?.....	10
Causes of Blindness.....	11
Laws for the Blind	11
A Primer for Working with the Bind	12
Chapter 3 – The Blind Athlete.....	15
The Benefits of Sport.....	15
Sports for the Blind: Goal Ball.....	16
Blind Sports.....	16
Chapter 4 – The Blind Fencer	18
Lesson Format	18
Equipment Selection.....	18
Seeing the Lesson	19
Additional Resources	20
Beyond this Document.....	20
Chapter 5 – The Current state of Blind Fencing.....	21
The Carroll Center for the Blind	21
The Opponent Sensing Foil.....	21
Chapter 6 - Fencing Basics.....	22
Teaching the Guard Position	22
Footwork.....	22
Low Lines Actions.....	23
Chapter 7 - Teaching Basic Attacks	24
Overview	24
The Opposition	24
The Envelopment.....	25
The Glide.....	25
The Change Of Engagement	26
The Remise.....	26
Chapter 8 - Teaching Parries.....	28
Yielding Parries.....	28
Opposition Parries.....	29
Beat Parries.....	29
Searching for the Blade.....	30

Chapter 9 – Teaching Feints and Actions on the Blade	32
Overview	32
The Feint Thrust.....	32
The Feint of Disengage.....	32
The Press	33
The Beat.....	33
Chapter 10 - Teaching Choice Reaction Drills	35
Overview	35
On ‘Fence’	35
Example 1 – Press Reactions	36
Example 2 – Engagement Reactions.....	36
Chapter 11 - Teaching Tactics	38
Chapter 12 - Boutng Ideas for Blind Epee.....	39
Overview	39
Set-up of Strip and Equipment.....	40
Positioning the Fencers.....	40
Control/Flow of the Bout.....	42
Chapter 13 - Twelve-month Training Cycle.....	43
Bibliography	46

LIST OF FIGURES

<i>Number</i>	<i>Page</i>
Figure 1 – Sleep shades and surgical goggles	40
Figure 2 – Finding distance at the start of the bout	41
Figure 3 – Finding distance with a pronounced height difference	42

ACKNOWLEDGMENTS

The author wishes to thank the following people:

Cynthia – For opening a door and kicking me out it

Jennifer – For being there and being a friend, as well as an editor, throughout the journey

Sydney – A wonderful friend, a great sparring partner and a willing guinea pig when needed

Maestro Gillham – To be inspired to take the journey is important. To be shown how to find the road is priceless

Heather – My wife and best friend, who has supported my every step along the journey since the beginning, and has always kept a light on for me, no matter how long the journey was.

PROLOGUE

It is interesting to note that the sound a phone makes when Fate calls to drop an incredible opportunity in your lap is exactly the same sound it makes when it is someone calling to solicit funds for some worthy organization or another. Thus, when my phone rang in the spring of 2006, I had no clue what I was in for.

The woman calling me was interested in taking fencing lessons with our club. We had advertised our Beginning Fencing class in the local newspaper and were taking registrations. The caller said that she was interested in getting into fencing, but was blind and indicated this should not keep her from learning to fence.

Far from thinking of a way to discourage her attempting the class, I was busily thinking of ways to make it work. Thus it was that Violet joined our Beginning Fencing class.

While watching her learn the basics, I kept mulling over ideas of what other teaching methods and tactics would work well for her. Having been a competitive epeeist, I naturally started there, trying to find ways to teach her epee that would both incorporate everything that I knew about teaching epee, while adjusting for the fact that she could not see her opponent.

I spoke with Violet about my idea to teach her to fence epee. I did not propose doing it as an exercise, but as a training plan that would lead to her being able to bout, either with other blind fencers or with a sighted fencer who was deprived of sight.

What follows is information for the fencing coach who is going to be working with a blind student. Some general information is provided on working with a blind student as well as coaching tactics and methodologies that I found very useful. Finally, there is a twelve month training plan that puts all of it together.

In the final analysis, there is very little difference between the blind epeeist and a sighted epeeist.

Chapter 1

INTRODUCTION

Overview

This document will provide meaningful information to the fencing coach on how to teach the techniques and tactics of epee to a student who is blind. Information on general training ideas and methods for the athlete who is blind is included, as well as a brief overview of other efforts in training blind fencers performed by other fencing coaches.

I do not intend to make this a high-level discussion on ideas about training blind fencers. The bulk of this document is on specific training steps and ways of teaching specific fencing actions and tactics. This information is based directly on the work that I have done with a fencing student of mine who is blind. Everything in this manuscript is something that I have taught my student that worked and made sense. I have also included things that we did that did not work or did not make sense to ensure the coach who reads this material looking for guidance will know that certain actions or tactics had been tried and discarded and the reasoning for that course of action. I leave it to the reader to decide whether these actions and/or tactics could be adapted for use by other programs.

This work makes the assumption that the reader has experience and training in teaching fencing. The information provided will seek to explain how to teach specific actions and tactics with relation to a blind fencer. The particulars of making an action will not be included. There are many useful books and training classes that can provide this information. I would point the reader who needs this information to the following texts and resources:

- Ø *Fencing and the Master* by Laszlo Szabo

- Ø *Fencing The Modern International Style* by Istvan Luckovich

- Ø *Foil Technique and Terminology* by Jean Jacques Gillet

Ø USFCA Coaching Clinics (www.usfca.org)

Ø USFA Coaches College (www.usfacoaching.org)

A second assumption made is that electric equipment is available for boutng when the time comes and that a sighted coach, assistant or student will be helping. During the course of my training efforts, I would use “empathy glasses” to blind myself when boutng with my student. This served to give me a greater understanding of how the action actually felt to my student. To say the effect is unnerving at first is an understatement. It is one thing to perform an exercise or dill with one’s eyes closed. It is quite another when one is facing an opponent who is also armed and try quite hard to get the touch and are unable to see what they are doing. It is helpful to have a second coach who can view the action and make corrections and/or observations. A tripod mounted video camera can serve the same purpose but the feedback is delayed. The electrical equipment is useful to determine the timing of the hits. Boutng can be performed with practice equipment or even buzz boxes at the least, but it is more difficult.

Finally, this training plan assumes an hour of one-on-one lessons per week. Based on that assumption, twelve months of material is provided here. This may be adjusted to suit the lesson format at your particular salle.

Chapter 2

THE BLIND PERSON

History, Fiction and Reality

“If you see a blind man, kick him. Why should you be any kinder to him than God has been?”¹ Thus goes an old saying in the Middle East. Quite obviously, being blind did not place you high in society! Blindness was viewed as a curse from God. Not just in the Middle East but elsewhere as well. If you were blind, you were being punished for some sin or transgression.

The blind have not fared well in the media or popular culture, either. In many movies, T.V. shows and literary works, the blind are depicted as slow and clumsy, silly and stupid. I remember very clearly watching “Mr. Magoo”, a cartoon with an older gentleman, nearly blind, who got into many rather silly situations and blunders due to his near total loss of vision. For variety, you also have the character of Blind Pew from Treasure Island, an evil blind person.

Of course, for contrast, we have the character of Matt Murdock, a blind D.A. who, when not prosecuting villains is persecuting them as the Dare Devil. Of course, he was endowed with radiation-induced super powers, so I do not think we can quite view him as a true example of a blind person.

So, where are the positive examples of blind persons? Growing up in the 80's, one can easily point to Stevie Wonder and Ray Charles. Certainly there are two blind men who made it very big in the music industry. The 80's also introduced me to an autobiography of Thomas Sullivan: “If You Could See What I Hear” and the movie very loosely based upon the book by the same name. Here we see a man who is blind not only making music but golfing, skydiving and, in one powerful scene in both the book and the movie, saving a toddler from drowning in a backyard swimming pool. Clearly, here is a

¹ Sardegna, *Living with Vision Problems*, p36

blind man who is living a full and “normal” life and not bumbling around having misadventures because he mistakes a coat rack for a colleague.

What is Blindness?

“Vision loss is one of the most common causes of functional disability among adults, and it’s impact on mobility, activities of daily living, or both is profound²”

Blindness is more than what it is normally thought of: a total lack of vision. Blindness also encompasses legal blindness. Legal blindness includes:

- A person who’s vision is, with corrective measure, 20/200 or lower
- A person who’s field of vision is 20 degrees or less
- A person who’s eyes provide no sensory input at all³

Keep in mind that the first two are the lower ranges of eye sight that a person can have and be considered legally blind. A person with 20 degrees or less of eyesight (called tunnel vision) can see perfectly well, just a very small area. The average adult with good vision can see a range of 180 degrees.

What a person who is completely blind sees will vary from person to person. They may see colors, lights, darkness, a mental image of what they are looking at or nothing at all, depending on how their mind reacts. In *Living with Vision Problems: The Sourcebook for Blindness and Vision Impairment*, one blind person summarized being blind for themselves as follows: “Darkness is what you see when you’re blindfolded. Totally blind people have no sight at all. They don’t see darkness, they see nothing. The same kind of nothing that a sighted person would see if he tried to look around using the palm of his hand as an organ of sight.”

² Wainapel, *PM&R Secrets*, p71

³ Wainapel, *PM&R Secrets*, p72-73

Causes of Blindness

There are many causes of blindness. It can affect any one of any age, from the new born to the elderly. In some cases it could be preventable and in some cases it is “just one of those things that happen.” Here are some general categories of the ways in which vision loss can occur.

Age-related – As our bodies age, our eyes become more and more susceptible to problems and diseases that will impact our vision. Small problems that may not have even been noticed in youth can become problems that may require glasses to correct, or lead to vision loss. More serious are conditions that can lead to blindness such as cataracts, glaucoma and macular degeneration.³

Congenital – A baby can be born into the world with vision impairment or blindness. Diseases and infections contracted in the uterus can damage the eyes. Damage to the eyes can also occur before, during or after birth through injury to the eyes or even an insufficient supply of oxygen. Finally, blindness can be caused by the inheritance of a genetic condition.

Disease – As listed before, there are diseases that affect the eyes. There are also diseases that affect the whole body that can damage the eyes. Among these are diabetes, hypertension (high blood pressure) and disorders of the thyroid. Each of these diseases can have a devastating impact upon the eyes, leading to vision loss or total blindness if not treated.

Accidents – Eye damage can occur in many ways. A household chemical sprayed in the face accidentally. Injuries sustained during a car accident. The eye can be damaged by flying debris while working with power tools without the proper safety glasses. A soldier is injured while on patrol. Accidents can happen at any time and cause trauma to the eye resulting in vision loss. Some can be prevented, such as wearing the proper protective gear when fencing. Some are truly accidents, without warning or chance to avoid them.

Laws for the Blind

“The greatest problem of disability is not the physical impairment itself, but the social consequences that result from people’s treatment of those who have impairments”⁴

In 1990, the Americans with Disabilities Act was passed. This law leveled the playing field for the blind and other disabled persons. The ADA spelled out how, and in what ways, it was illegal to

⁴ *Visual Impairment, the Environment and the American with Disabilities Act*, p569

discriminate against people or relatives of people with disabilities. Employment, public transportation and housing, State and Local government activities and telecommunications are all addressed in the legislation. With these laws in place, employees who lost their vision could not be fired from their jobs without the employer being able to make “reasonable accommodations” to allow the employee to perform the essential functions of their job. Cities started to put ramps at street corners and textured areas to identify them. It became illegal to bar a blind person with or without a guide dog from any establishment. Along with other legislation, known in some places as “White Cane Laws”, the ADA has helped to down the barriers for the blind to take part in everyday society.

A Primer for Working with the Blind

Odds are you, as a coach and an individual, have had limited contact with the blind community. Until Violet entered my club, I had not. As much as I was training Violet in fencing epee, she was teaching me about working with an athlete who is blind.

First off, if the person is in your club looking for instruction on fencing, they are probably able to get around on their own with minimal assistance. When I was first talking about teaching a blind person how to fence, I got some advice along the lines of, “You should make sure people know so they can look out for her.” This has proven quite unnecessary. A blind person can be as active an individual as anyone else. They can go to movies, watch T.V., read books, etc. A “blind person” is simply one who cannot see with their eyes.

When I work with Violet, I have kept my “assistance” to a minimum, only intervening when I thought I should, which has been seldom. I walk with her to the area of our room where we will do our work together, mostly to let her know it is time for our lesson and to talk to her a bit before we begin. She is able to maneuver around the room on her own. If your student needs help, they will probably ask. If you feel assistance might be appropriate, offer it and they will tell you if they need help or not. If you need to help your student get from one place to another, have them take your arm lightly and follow you. Do not grab their arm or pull them along.

Similarly, she is capable of finding her own equipment. She uses her cane to help guide her across the room while we walk together. When we reach our spot, she'll drop her cane next to the wall and we'll do our lesson. When we have finished, she locates her cane and returns across the room where her coat and bag are. Both she can locate with ease. On occasion I have assisted by simply giving a verbal direction if it seemed needed. "Other way", if she is moving down the wall away from her cane, etc. Show your blind student where things are so they are able to find them for themselves. They may need a little assistance at first, but it will not take too long for them to become quite comfortable there. If you are not sure if your student wants your help, go ahead and ask. But do not insist that they need your help or force them to take your help if they do not want it.

It is important to not be afraid of words. "Did you see...?", "Watch what I do...." Yes, they may have "seen" the movie or show and will make comments on it. A methodology for the blind student to watch a coach will be presented later. We live in the age of "correctness" and worry about offending someone. Unless a coach goes out of their way to be offensive, or unless the student is particularly sensitive, words shouldn't cause a problem. After all, blind people use these words, too!

One coach that I talked to about my endeavors was worried about accidents. The student cannot see! Something may happen. Yes, an accident could happen, like the time when I was bouting with Violet. She set her mask down and when she went to pick it up again she banged her head on the edge of the table. She had not been paying attention to what she was doing. By the same token, I reached into a hot oven to get a baking dish out, having opened the oven door with the hand wearing the oven mitt and grabbed the pan with my bare hand. As a coach, it is critical to be observant of the students. Even then, the risk of accidents can only be reduced, not eliminated. I have seen no reason there should be more accidents with an observant blind student than any other.

When working with a blind person, the coach should always announce themselves as they approach and identify themselves in some way. The student will probably come to recognize the voice, and mine did fairly quickly, but it is common courtesy to do so. Especially when first working with the student, this is a good idea. The coach should also let the student know anytime they are going to leave the lesson area. This is also just common courtesy. So is looking at them while talking to them.

They will be able to tell if the coach is looking away. As a coach, I am usually scanning the room from time to time to see what is going on and what the other classes and students are doing, but when I talk to Violet, I always try to be facing her.

Finally, if the student has a guide dog, do not interfere with it. It is not a pet; it is a working dog doing a very important job. Also, it is also illegal to forbid it entry into any facility.

Chapter 3

THE BLIND ATHLETE

The Benefits of Sport

An athlete who is blind is only different from an athlete with sight in that they do not have full, if any, use of their vision. All of the benefits of sports that exist for the human being with vision are also true for the human being with visual impairment: improved muscle tone, flexibility, cardiovascular benefits, etc. These are all things that would benefit nearly every one. For the visually impaired, participation in sport can have some additional benefits.

Building/Returning Confidence

When a person loses their vision, it can bring about a loss in their confidence, at least temporarily. Task that they use to perform almost without conscious thought suddenly have become seemingly insurmountable obstacles. Consider moving through your house or apartment. As an exercise, blindfold yourself and attempt to navigate from one room to another without bumping into things. Or sit down to your next meal without being able to see what you are doing. These are things we do every day without consideration, but when we lose our visual reference points, they can become tasks that require the utmost concentration. Participation in sporting activities is a way to help improve confidence in a person's physical and mental abilities.

Improving Posture and Balance

Research on children who have blind since birth have shown a tendency towards poor posture, including rounded shoulders, a forward inclination of the head and lordosis, a forward thrusting of the hips.⁵ While a lot of research has not been performed on the postural impacts of blindness, these tendencies can be attributed to a decrease in spatial awareness and a fear of tripping or falling.

⁵ Sleuwenkoek, *Perceptual-motor performance and the social development of visually impaired children*, p 362

Research has shown that vision is a component of balance. In studies performed with persons both sighted and blind it was found that those with sight had better balance than those that did not, even when blind folded. It was also shown that persons with visual impairment who are athletes had better balance than the non-athletic visually impaired person. Participation in sports can help improve a sense of spatial awareness and better posture, helping to improve balance.⁶

Sports for the Blind: Goal Ball

Created in 1946 by Austrian Hans Lorenz, goal ball was designed to be a rehabilitation sport for blind veterans of WW II. Goal ball is a sport specifically designed with blind athletes in mind. All participants, regardless of visual ability, wear blindfolds. Played on the hands and knees, teams consist of three people, attempting to roll a rubber ball into the opposing team's goal, much as in soccer. The rubber ball contains a bell inside for auditory tracking.

Goal ball has many benefits for blind athletes. As with other intense physical activities, goal ball can help increase physical strength and agility, improve cardiovascular functions and even help improve auditory tracking as the athletes attempt to locate and track the ball. Additionally, as this is a team sport, it helps to build bonds between the other athletes and promotes teamwork. Finally, when it is played at the community level, all athletes, regardless of visual abilities, are able to play, thus helping to break down barriers of understanding between the sighted and the visually impaired.

Blind Sports

A person needs only to look at the Olympic games to see that there are a wide variety of sporting events available to the athlete and those who wish to be athletes, and the Olympic games are at best a subset of all of the ways in which humans pit themselves against each other, against themselves and against nature in the name of sport. So, excluding goal ball, a sport specifically intended for the blind athlete, which of these many athletic endeavors can blind athletes participate in? The answer is: many, with only a few modifications in some cases.

⁶ Aydog, *Dynamic Postural Stability in Blind Athletes using the Biodex Stability System*, pp415-418

One can begin with cycling. Performed competitively or recreationally, this is accomplished on a two-person bicycle (a tandem). A sighted pilot sits in the front seat while a blind rider sits behind. While it does require some initial practice, both can enjoy this popular activity as a refreshing and enjoyable outing, or as a competitive event.

Bowling is a very popular sport for both blind and sighted athletes. Blind athletes are either lined up to the pins by a sighted assistant, or a guide pole is set-up behind the foul line to allow the bowler to line-up on the pins. The same is true about golf. A caddie or assistant helps with lining up the athlete for longer range shots and creates a sound target by tapping the flag in the cup for putting. The sound target can also be used for the blind swimmer, indicating a distance from the wall so they can execute their flip turn. Otherwise, there is no difference for the blind swimmer.

Judo is another activity where the blind can participate with very few special accommodations. In his treatise, *Judo for Visually Impaired Athletes*, Bruno Carmeni, an Italian judo Olympian, coach and advocate, points out that a judoka never looks at their opponent's face, but focuses instead on the feeling of their opponent in order to find the most favorable position to attack or defend from. Indeed, blind practitioners of Judo can and do perform well against sighted opponents.

How about some more extreme sports? In 1992, the World Blind Sailing Championships were formed in New Zealand. A four-person crew, two blind, two sighted, race the boats around the course.⁷ The event is going strong yet today. How about alpine skiing? The blind compete here as well, navigating the course with a sighted partner who helps guide them down the slopes. Mountaineering? On May 25, 2001, Eric Weihenmayer became the first blind person to reach the summit of Mt. Everest. A year later, he had completed the goal of reaching the summit of the seven tallest mountains in the world.

While it cannot be said that an athlete who is blind can participate in every sport that the human spirit can create, there are relatively few limitations on the athlete, especially for the athlete with a spirit of determination and adventure, who is willing to take the risks and find a way.

Chapter 4

THE BLIND FENCER

Lesson Format

At the club where I teach, we use both group and individual lessons. Both formats should be familiar to most coaches. The group format usually involves the coach standing in front of the group demonstrating a skill for the class to work on. In my methodology for teaching, watching involves tactile contact. Given this limitation, the group lesson format did not appear to be possible. A blind student, based upon my work thus far, will require one-on-one work or participating in a very small class setting where there can be a lot of interaction with the coach that does not create a deficit for the other students.

The ideas on teaching that I lay out here are intended for one-on-one instruction. Despite giving the matter much thought, I have had trouble finding a way to make these ideas work in a large group environment, short of giving each student individual attention as we learn new material. While verbal descriptions of an action are useful, they are not a viable substitute for tactile sensation under these circumstances. One possibility would be to use paired drills with one sighted student and one blind student.

Unless you are working for a school for the blind, or in a situation where you are likely to be in contact with many blind athletes, there should be no need for a large group methodology.

Equipment Selection

Many of the cues that I gave my student were done with pressure or disengaging the blades. There were times, however, that the cue involved forward motion of the teaching blade with engagement. I have found that a blade with “character”, meaning one that has some surface irregularities along the

⁷ Sardegna, *Living with Vision Problems: The Sourcebook for Blindness and Vision Impairment*, p 266

length of the blade, was better able to convey the tactile sensation of forward movement than a brand new, smooth blade. When I started to perform the cues with a blade that had scoring down the side of the blade from tournament use, my student was able to quickly recognize when the point was moving towards her and react accordingly. These cues will be discussed along with the actions in a later chapter.

We tried scoring the side of a new blade with a file to see if it would produce the same effect. While there was some improvement, there was still more tactile sensation using a blade that had seen a lot of use.

“Seeing” the Lesson

There are times when you are teaching that you will need to show your student something: the correct hand position, the relationship of two blades in space, etc. These things are fairly easy with a sighted student, but this becomes more of a challenge with a fencer that cannot see what the blades are doing or where your hand is positioned.

In these instances, I have moved next to my student and had her place her hand on top of mine. In this way she was able to feel what my hand was doing as it performed the action and my description then made sense to her. In the same vein, if I wanted her to “see” how the blades were positioned, we would freeze the action at the point that I was interested in and she would feel the blades with her off-hand to get a feel for what they were doing. In certain situations, I would have another student assist while my student would rest her hand on mine or feel how the blades were moving. All parties should be wearing masks and the two armed individuals who are performing the action should be moving fairly slowly.

Finally, there have been times that I have simply forgotten that my student cannot see me. These are situations where the coach must be cognizant of where the student’s blade is and where it is going. If the coach has their mask off or up and the blades are not pointed down, they must be ready to control the student’s blade if it becomes necessary. The coach should make sure the student knows when their mask is up. Simply stating “I am raising my mask now” works quite well.

Additional Resources

The information here is not meant to be all-inclusive. If you have further questions about working with the blind, I would suggest the following organizations:

- Ø National Federation of the Blind

- Ø American Council of the Blind

- Ø United States Association of Blind Athletes

Beyond this Document

This document provides basics on teaching standard epee actions to a blind fencer. There are some things it does not address, such as footwork or the blind fencing the sighted. While I have not specifically written about it, that does not mean we have not experimented with it. Once you, the innovated and interested fencing coach, work your way through this material with your blind student, I would strongly encourage you to go beyond the ideas and information here and see what you and your student can accomplish. As I have found during this process, the only thing limiting you is imagination.

Chapter 5

THE CURRENT STATE OF BLIND FENCING

During the research that I performed, trying to learn more about fencing for the blind, I discovered there is very little being done at this time, or at least very little that has made it into publication where I could find it. I have provided the basics of the information that I was able to learn below as a starting place for your future reference and work.

The Carroll Center for the Blind

The Carroll Center for the Blind is a private, non-profit rehabilitation agency located in Newton, Massachusetts, that serves the blind and visually impaired. The purpose of this organization is to provide its students with the training in skills of blindness and confidence building experiences to live independently.⁸ Fencing is offered as a part of their curriculum. Currently taught by Eric Sollee, fencing has been offered at the Carroll Center for over 50 years, earning much acclaim and recognition over the years. The Carroll Center may be reached via contact information on their website.

The Opponent-Sensing Foil

At the Norfolk Fencing Club in England, a fencer is working on a foil that can “sense” the opponent. The weapon uses technology built into the handle to determine the location of the opponent and provide a stimulus in the form of a vibration to the fencer, the intensity of which is determined by the intervening distance to the target. The weapon is still in development at this time.

⁸ From the Carroll Center for the Blind website

Chapter 6

FENCING BASICS

Teaching the Guard Position

When teaching the en guard position to beginners, there is invariably a lot of “show and do”. I only use verbal instructions when I need to point out corrections. This obviously is not possible when working with a student who cannot follow your example by viewing your actions.

In order to teach your student the on guard position, you will have to talk them into it. A clear description of how to assume the stance is required. Points to emphasize are that the elbow is over the knee and that the toes of the forward foot point forward. My student actually used the idea that her thrusts should be placed over her front toe. Once she started doing this, her thrusts became significantly more accurate.

As a word of caution, before adjusting your student’s form (I will sometimes tap an offending knee with my weapon) make sure you warn your student. While your sighted students will see the blade moving towards their knee, or the hands reaching for the offending arm, your blind student will not and will likely be surprised when these corrections are done the first few times. Be considerate and let your student know what you are doing before you do it.

Footwork

The methodology for teaching epee fencing to the blind that I am presenting here involves both fencers stationary and in an en guard stance. This document makes no attempts to address teaching footwork to a blind fencer. We did explore various possibilities of making footwork a viable option, but we encountered several problems that we have been unable to resolve.

The first problem lay in controlling distance. I was unable to find a method that would keep two fencers at the proper distance from each other. There was discussion about using something held by

both fencers that could be used to indicate when the distance was closing: a piece of rope, for example. Another suggestion that I came across was using a bell or some other signaling device. None of these options seemed to be workable for a true bouts situation, but I did not spend an inordinate amount of time with these ideas.

The second problem that I encountered was keeping the fencer moving in a straight line. There seems to be a tendency to veer to the “inside”. I noticed this both in my student and in myself when I would wear the empathy glasses. There was some speculation on using a frame with a guide rail, something the fencer could rest their non-weapon hand on as they moved forward and backward to keep them moving in a linear fashion. This would require a special set-up that most salle d’arm would not have and it would still not address the issue of keeping proper distance.

Low Line Actions

In our situation, low-line actions were not found to be very useful. In the final analysis of each action, it was easily defeated by a quick thrust in high-line. The only times any thrust worked in low-line was a riposte from prime, ripostes after performing a yielding fifth parry, as well and the occasional situation where the student was trying to hit something having been forced into a low-line position, although these were less controlled and not intentional. To sum up, low-line actions are not effective for blind fencers at this distance.

Chapter 7

TEACHING BASIC ATTACKS

Overview

This section will cover the differences in teaching basic attacks to a blind student that I have encountered. As stated earlier, the actual mechanics of these actions will only be included if they differ from the “normal” execution.

As we did not cover change of engagement until my student had a greater comfort level with performing basic actions from engagement, we started by performing all actions from sixth engagement and then later from a fourth engagement, first by beginning from a fourth engagement and later after a change of engagement.

The Opposition Thrust

Begin with a basic description of the opposition thrust, including how it is done and its purpose. If possible, have your student “watch” by putting their hand over yours while you perform the action. Stop after the take to allow the student to feel the position of the hand and both blades in space. This will work best if you can perform the action against another student with the blind student as an observer.

Start by placing your blade in a “post-take” position by placing the teaching epee blade against the guard and forte and allow the student to find the correct hand position and practice the thrust. Later, move the blade into its correct place in engagement to have the student perform the take. Eventually, the blade position can be varied in engagement to force the student to find the blade to perform the opposition thrust.

We encountered two problems with this action. The first one that we encountered was the point “wandering” when my student shifted her hand out to perform the opposition. To fix this, I held the

point in position while she moved her hand into position. This gave her an idea of the feel of the action. She would stop and feel with her off-hand how the blade was positioned in space. The second was delivering the point to the target. By emphasizing that the opponent's blade could be used as a guide to find the target she was able to begin to consistently find the upper arm target.

The Envelopment Thrust

In execution, the envelopment is the same. Start by describing the action and how it sweeps the opponent's blade aside as the attack develops using a circular action. I found that using clockwise/counter clockwise worked well to describe the action. The thrust can use the opponent's blade as a guide to the target. It did work best when she completed the take before performing the thrust. This was mostly a factor of the distance that we were working at.

Many of the mistakes my blind student made are the same as the ones my other sighted students make. Too much pressure will affect the accuracy of the thrust. Additionally, once my student was able to perform the action well enough to make it work, she would sometimes make the action too small to clear the guard. She would also grip too tightly, which affected the execution of the action.

One thing that worked quite well was to identify three points of movement: hand, forearm and elbow. I would emphasize the elbow should remain pointing down, the forearm relatively parallel to the ground and was used to slide the hand forward and backward. The hand remained steady with only the fingers being used to manipulate the weapon. Using these three points made it much easier to verbally correct the mistakes my student was making and helped her achieve consistency of execution.

The Glide Thrust

In execution, the glide is the same. The biggest thing the beginner blind fencer will have to watch is the amount of pressure they use. My sighted students are able to correct their point placement during the thrust. A blind fencer will not have that option. Care must be taken to avoid putting too much pressure into the engagement. A firm, but not excessive pressure, works best. If it is enough to make the tip move off target as they thrust, it is probably too much.

Emphasize to the student that the opponent's blade can be used as a guide to find the target area. To help practice a straight thrust, stand the student against a wall so their weapon arm is flush against the wall. Have them practice extending their arm this way. We found this was a good way to get the feel of the straight thrust.

Be sure to emphasize the lifting of the hand towards the end of the action, or have them place their hand over yours while you perform the action. To start with, use verbal cues. Later, you can use change of engagement or change in pressure, much as you would with any student.

The Change of Engagement

In execution, the change of engagement is performed no different for the blind student. The biggest challenge is to find the proper size of the disengage action. Too big and the action takes too long. Too small and the blade gets hung up on the guard. A sighted student can see and adjust the action accordingly. For the blind student, this tuning is something that needs to be arrived at through practice and help from the coach.

The ending strength of the engagement also needs to be adjusted and practiced. When working with my student, the engagement following the change ranged from nearly a beat to having barely enough force to register contact. At first I strove to have the ending engagement firm but not forceful. Later, the strength of the contact varies with the tactics being used.

We began using verbal cues to signal the change of engagement. Later, as she became more comfortable with the action, we switched to using pressure upon the blade to signal the change of engagement. Once the change of engagement was working well, we started using it as a cue for other actions.

The Remise

This remise both is and is not the remise we all know and love in epee. The classic remise is performed identical to the textbook definition of the action. The student gets parried and performs and immediate remise, either direct or indirect.

The remise I taught was to handle the situation where the student has performed their action and missed the target completely, their tip off in the void and they have no clue as to where their target is. Having bouted with blinders on, this is very disconcerting.

Upon completion of an action where no target is impacted and no blade contact made that would indicate where the opponent is, the student immediately withdrew their arm to the center of their body, slightly forward of a guard position, and then performed an immediate, quick straight thrust forward. Ideally, the target is the arm. In reality, it is whatever the student can hit. This action is a last-ditch effort to hit something before getting hit.

This method has proven very effective for Violet. We incorporate it into every drill that we do. Anytime, in any situation, if her blade is lost in space on an attack, rather than searching for the opponent's blade, she performs this action until she finds something for a target. After a few months, this action is automatic, fast and very effective at getting the point.

Obviously, this action is unique to the blind fencer. A sighted fencer would be able to see that they missed by passing with an inch of the shoulder and quickly correct their blade position with a classic remise. For the blind fencer, this action serves the same purpose.

Chapter 8

TEACHING PARRIES

Yielding Parries

We started with a description of how yielding parries work. It also helped using “arm fencing” to illustrate the action. The tactile sensation of the intended action of the blades seemed to help with the understanding of the action. Emphasizing that little pressure is needed to perform the action also helped execution.

Given that the student first learns the opposition and envelopment, it seemed to make sense to teach the prime yielding parry first. I found that the best way to show the action was to perform the parry against an attack performed by another student and have Violet put her hand on top of mine as I performed the parry slowly and to examine the blade position at the end of the action. Care must be taken to remind the student to avoid using excessive pressure. This caused Violet’s point to move excessively, making it very difficult to hit with the riposte, something a fencer who can see the target can correct when they are ready to deliver the thrust. When using prime against an envelopment, Violet would keep her hand loose until she could feel the lateral motion of the attack. That was her cue to begin the prime parry.

After we covered the bind I introduced the yielding fifth parry and riposte. If anything, this was far easier to accomplish than the prime was. Again, having Violet watch as I performed the action with another student made the learning process much easier. Care must be taken to emphasize the correct hand position at the end of the action. For both of these parries, the point must remain fixed pointing to the opponent. Otherwise, the thrust at the end becomes “hit or miss” and the student will have to rely on remising to find the target.

Opposition Parries

After the yielding parries, the opposition parries were the most effective at deflecting an attack while maintaining control and detection of the attacking blade. Opposition parries were most effective against the glide attacks and executed very similar to the visual variety. Upon detecting a glide attack, Violet would simply slide her hand into position thereby parrying the thrust and maintaining contact with my blade while she closed for the touch.

The biggest challenge in teaching these parries was the tendency for the point to wander in space. When Violet would perform the action, both her hand and her point would be displaced in space, rather than just forming an angle with her hand. To overcome this, I would hold her tip fixed in space while she performed the action. She would also tip her hand over and allow the attacking blade to slide off; another common mistake corrected by emphasizing the correct orientation of the blade during actions.

We did not cue this action verbally, but would have her perform the action on detection of a glide attack in either engagement. This action is another one where having blades that generate a sensation when they slide along each other is important if the thrust is to be detected and parried.

Beat Parries

The beat parry was shown to be more risky in execution due to loss of blade contact and more difficult to riposte properly due to the point getting lost in space. While not offering the degree of control or certainty as the yielding or opposition parries, the beat parries did prove effective in certain situations.

The beat parry proved to be most effective against a bind attack starting from fourth engagement (circular 8 parry riposte) and the opposition sixth thrust (circular 4 parry riposte). We experimented with both yielding and beat parries against these attacks and Violet preferred, and was able to most effectively execute, the beat parries.

Due to the distance, the hand must be withdrawn slightly to make enough time to get the beat in properly and make it effective. In spite of the fact that the parry is performed with a beat, the riposte should be performed with the hand in a position to perform an opposition riposte if the attacking blade is encountered. Ripostes should be made to the body as this is the more certain target. A hit to the arm on the way in would be a bonus, but more difficult to accomplish.

Searching for the Blade

Inevitably, there comes a time when the fencer will lose contact with their opponent's blade and have no idea where it is. When that happens, the fencer will be faced with certain choices.

The instinctive tendency (as I found out when I was bouting) is to start frantically looking for the opponent's blade before it hits you. This is not very effective. Watching Violet looking for the blade is very much like her using her cane. With her point downward, she would sweep her blade back and forth until she located the blade. Once I became adjusted to not being able to see the action, I would counter a lost blade with a quick thrust. This also proved effective.

We also experimented with a more orderly search pattern. Upon losing contact with my blade Violet would perform, in order, a circular six, a semi-circular eight and a prime parry. Upon any blade contact, she would immediately take an action as follows:

- Ø If the blade was found high and outside with the circular six, finish the parry and riposte
- Ø If the blade was found low and outside with the circular 6, quickly switch to semi-circular 8 and finish the parry and riposte.
- Ø If the blade is found low and outside with the semi-circular 8, finish the parry and riposte
- Ø If the blade is found to the inside when moving to the semi-circular 8, perform a yielding fifth parry and riposte
- Ø If no contact is found, perform the prime, sweeping the entire body, and riposte.

While this pattern may sound like it requires a lot of thought, once it is learned it can be performed very fast. Once Violet got it into her muscle memory, I was forced to teach the final steps of the action by simply withdrawing my arm because I could not evade her blade fast enough and she would find me in advance of the position that I wanted her to practice from.

Chapter 9

TEACHING FEINTS AND ACTIONS ON THE BLADE

Overview

This section will cover the different actions used to build compound attacks. Due to the close distance between fencers, some adjustments had to be made. Also, the fact that the fencers cannot see the actions being performed by their opponent has dictated that feints of any kinds are done differently and now are depended solely upon tactile sensation.

The Feint Thrust

The feint thrust is both like and unlike the regular feint of attack. The biggest difference is, of course, is that the person being attacked cannot see the feint. In this situation, the feint is performed from engagement and is a situation where having blades that will generate a sensation when they rub against each other is required.

The feint is performed by performing a quick, short thrust forward to draw a reaction. The engagement should be held with more firmness. Similar to a visual feint, the feint thrust must be performed with the proper timing, intensity and control. The most instinctive reaction to the feint seemed to be an opposition parry and riposte. A deceive and thrust following the reaction to the feint, as with a visual feint worked very well. As with any feint, tactics can be built around this action.

The Feint of Disengage

This action is literally performing a feint of leaving the engagement. The action is performed by leaving engagement for a brief moment, then immediately placing the hand in an opposition parry position. The most likely reaction from the opponent facing a lost of engagement is to perform a quick thrust. When this thrust is delivered, the attacker literally parries themselves and, if done properly, lands on the defending point.

This action is technically a counter time action. Due to the distance this action is performed at, it has proven difficult to counter unless it is anticipated.

The Press

This action on the blade seemed to be one of the more effective and more certain attacks that we worked on, mostly because of the amount of blade contact. In teaching the press and in execution, it is identical to the regular press attack, right down to the mistakes the student makes.

Care must be taken not to press too deeply to avoid displacing the tip too far from the target. Emphasize keeping the point towards the target to help land the attack after the press. For the most part, there were three responses to the press: 1) do nothing, in which case the student ended the attack with a thrust 2) disengage from the press, in which case the student performed an immediate thrust or 3) press back, in which case the student performed a change of engagement ending with a beat or opposition and thrust. While there may be other tactical solutions to the press, these made the most sense in our situation.

The press is also well suited to simple choice reaction drills, given the number of possible reactions to the press. I introduced my student to choice reaction drills with the press. The only thing to keep in mind as they begin to use it in bouting is, given the distance or lack thereof, the responses to the reaction to the press must be immediate.

The Beat

The beat proved to be an effective move, but a much riskier one. It can be very disruptive to the defending blade, potentially making them lose their point in space. At the same time, it can also cause the attacker to lose their relationship to the target as well.

The beat must be performed small and controlled with no wind-up, much as it is normally taught. We found that the effect is similar as with a sighted fencer. When the engagement is lost, the student immediately detects the fact and reacts accordingly. Once engagement is left to perform the beat, any delay will give the opponent time to avoid the beat. If there is no blade contact prior to the beat, it

becomes almost impossible to perform; mere random chance if the defending blade is found and struck. My student and I were able to clearly establish this. In execution, it is no different than a regular beat. Tactically, it can be applied to compound attacks as it would with sighted fencing.

Chapter 10

TEACHING CHOICE REACTION DRILLS

Overview

While this topic is broken out into its own chapter, it is an integral part of teaching the actions, as you probably well know. We teach how to perform an action, drill the student until they are able to perform it correctly at a variety of distances with and without movement, etc. And then, at some point, we put the move into one or more contexts. We move it closer and closer to actual bouts. Otherwise, how will the student know how to use it properly when the time comes?

I have little doubt the experienced coach will be able to take the work that I have done and modify their own coaching techniques with information that I provide here. However, I will include three sample drills that I started Violet off with. There is little point to document all the drills of this type we have done. I am sure most coaches will have a suite of drills of their own to draw from with few modifications. This is more to get the coach thinking about how to apply the material

Example 1 – On “Fence”

As the title would suggest, we drilled possible ways to start a bout. As both fencers are engaged in sixth position, I came up with four possibilities to start out with.

1. On no immediate response from the opponent, perform a glide attack
2. On an immediate glide attack made by the opponent, perform an opposition parry riposte.
3. On an attempt of an opposition thrust, perform a circular 4 beat parry with opposition riposte
4. On loss of engagement, perform an immediate stop hit to the arm.

There are obviously more, but these made the most sense to begin with and too many more made the drill very confusing for the student at this stage of her development. Going forward, it would be easy to perform substitutions, especially for the student-initiated actions.

Example 2 – Press Reactions

This is a classic student-initiated choice-reaction drill.

From engagement, the student performs a press (usually from a fourth engagement) against the coach's blade.

1. If the coach does nothing, perform a thrust to the arm
2. If the coach disengages from the press, perform a thrust to the arm
3. If the coach attempts to return the press, disengage and thrust to the arm, with or without opposition.

This one was particularly good at getting the student to take the initiative instead of waiting for a cue from the coach. The drill can be formed with the blades already in engagement, or upon achieving engagement, whether by the student searching for and finding the coaches blade or by the coach initiating engagement.

Example 3 – Engagement Reactions

This was a good exercise to get the student to focus on the variations in pressure on their blade. As I engaged the student's blade, I would use differing pressures ranging from very light to almost a press, and the student would react in a set way:

1. On a light engagement, the student would perform a glide attack
2. On a more firm engagement, the student would perform an opposition thrust

3. On an engagement bordering on a press (VERY forceful), the student would perform a change of engagement ending with a beat and thrust.

Care should be taken to make each of these three actions distinctive at first so there is no confusion between them. Once the student shows comfort with the action, you can then blur them some for added realism/difficulty.

Chapter 11

TEACHING TACTICS

Beyond the actions that are taught to the fencer, tactics, the “why” of the actions, must also be taught. This is true for my other students and this is also true for my blind student as well. As I started to review my various training plans and ideas for my epee students, I looked at them again from the standpoint of not being able to see your opponent’s reactions, or that your opponent cannot see what you are doing to draw their reaction.

Surprisingly enough, while implementation of the ideas is different, as noted earlier in this thesis, conceptually all of the tactics that I teach held valid for fencing blind as well. The tactical wheel applies easily and readily. Second intention, counter time, even simple attacks. All exist as they are defined.

Teaching these concepts, therefore, has been no different for me as I work with Violet. We will be working on a drill. For example, let us consider a counter attack drill where I leave engagement to perform some action. As soon as she detects a loss of engagement, she performs an immediate thrust to my upper arm. After a few touches like this, I leave engagement for a brief moment, and then establish line in opposition sixth against the thrust that is coming. When it does she is not only parried but hit by the line as she comes forward. She has just received an introduction to counter time. This is no different than when I teach new tactics to my students; especially when it follows directly from something that we are already working on.

The coach must be able to clearly communicate the tactical ideas, explaining how they work, citing examples, and perform demonstrations to help emphasize the idea as they would do for any other student.

Chapter 12

BOUTING IDEAS FOR BLIND EPEE

Overview

For years, as a coach, I have been telling my students that, with very few exceptions, the fencing that they see in the movies or on television is not “real” fencing. Imagine my surprise when I find the answer to the question of how a blind fencer could do bouting by watching a movie! In *The Mystery of the Spanish Chest*, a Hercules Poirot mystery on Public Television, two gentlemen are dueling with sabers at extension distance to settle some matter of honor. They are not permitted to advance or retreat, using only bladework. It did not seem highly realistic, but it suggested to me a way in which the bouting could be accomplished.

As an interesting side note, one of the things that I have listed in the 12-month training plan below is to have your student fence your other epee students, who need to be wearing a blindfold or something to cover the eyes and block all sight. You should find this benefits both fencers. When I had one of my advanced epeeists try this for the first time, she remarked that once she got past the disorientation of not being able to see, there was very little difference from her normal fencing actions. I have had several of my epeeists try bouting using this method and they have all indicated that the experience was, on the whole, quite fun and a potentially useful training exercise as well.

Sleep shades seem to work the best as they fit well under a mask and are not too heavy. Goggles with the lenses blacked out also work well, but are a bit larger and do not always work well under a mask. (Figure 1) Avoid anything that will be too heavy or can slip down easily. Cotton or other sweat absorbing fabrics should be avoided, especially if the blindfold is to be shared amongst several fencers.



Figure 1: Sleep shades and surgical goggles used as blindfolds

Set-up of Strip and Equipment.

When we set-up the scoring strip for our bouts the only difference is that the reels are positioned a few feet behind and to the side of the fencers. While the fencers do not move during the bout, it is best to have them out of the way. Similarly, the table should be kept at the appropriate distance from the bout area, rather than right up close, even though the fencers are not moving. The same safety rules apply.

Positioning the Fencers

When the fencers are hooked up, have them test guards. The fencers will have to hold each others tips and press them against the guards themselves. After that, have them come on guard opposite each other so that the weapon arms are in alignment. Then, have each fencer extend their weapon arm straight out in front of them. Adjust their positions relative to each other so that the point of their opponent's weapon rests on their shoulder. (Figure 2) In a situation where there is a big difference in height, a middle ground should be found that favors neither opponent. (Figure 3) In any situation, though, the minimum distance should be extension distance to the forward shoulder. Care should be taken when the fencers assume the guard position that their blades are engaged in the

middle of the blade. There is a tendency, especially with a height difference, to have an engagement with strong against a weak. In fairness to both fencers, the director must correct this situation.



Figure 2 – Finding distance at the start of the bout



Figure 3 – Finding distance with a pronounced height difference

Control/Flow of the Bout

Once the fencers are on guard at the proper distance, the director starts the bout. Everything that a director would do during a regular match applies here as well although, given the distance and circumstances, foot shots should be rare, if not absent completely.

In the event a fencer becomes confused or simply loses the feel of where the opponent is, a halt is NOT called. A part of the training that Violet and I did was how to handle this situation using the remise we devised or via a fast search for the opponent's blade (see Chapter 5). Only if, in the confusion, the fencer does something that could be dangerous to them or those around them should a halt be called.

Everyone who has fenced with the empathy glasses on has reported a very strong urge to move their feet, myself included. The sighted competitor is used to using their feet to open distance. To know an opponent is in front of you close enough to hit you with an extension makes it hard to stand still. One thing we have considered doing was to award a card, or its equivalent in this situation. If a fencer moves their feet during the course of a bout, it is a yellow card for the first offense and a red for each subsequent offense.

Leaning is another situation that has been observed during the course of a bout. There seems to be a tendency for a fencer to lean away from their opponent slightly. As in wheelchair fencing, this is an effective way to open distance on the opponent for defense, either intentionally or as a natural aversion to being hit. In either case, care should be taken to return fencers to a proper, upright guard position at the start of each point.

Chapter 13

TWELVE-MONTH TRAINING CYCLE

Overview

What follows is a suggested 12-month training plan for a blind athlete. All of the actions listed below are found detailed elsewhere in this document. In places where there is a general statement (e.g. Bouting drills) it is assumed the fencing coach knows what they are and how to perform them, being more of a general fencing concept than specific to blind fencing.

Month One

- Ø Cover the basics of epee: theory and tactics
- Ø Cover on guard position for epee
- Ø Engagement vs. disengagement/change of engagement
- Ø 6th and 4th engagements
- Ø Glide attack in 6th
- Ø Introduce opposition thrust in 6th

Month Two

- Ø Opposition thrust in 6th
- Ø Remises, finding the lost blade
- Ø Envelopment thrust in 6th
- Ø Yielding parries – theory and implementation
- Ø Prime yielding parry against an opposition/envelopment
- Ø Introduction to opposition parry and riposte

Month Three

- Ø Opposition 6th parry riposte against a glide
- Ø Introduce choice-reaction drills - “From Fence”

Month Four

- Ø Changes of engagement
- Ø Glide attack from 4th engagement
- Ø Opposition thrust from 4th engagement
- Ø Choice reaction drills – “On Engagement”
- Ø Introduce the bind thrust from 4th engagement

Month Five

- Ø Bind attack from 4th engagement
- Ø Yielding parry 5th against bind thrust
- Ø Choice reaction drills
- Ø Introduce beats

Month Six

- Ø Beats/beat thrust
- Ø Circular beat parry 4 (against opposition)
- Ø Circular beat parry 8 (against bind)
- Ø Choice reaction drills

Month Seven

- Ø Tactical wheel: theory and application
- Ø Bouting ideas and implementation
- Ø Introduction to bouting: dry or electric
- Ø Press attack
- Ø Choice reaction drills: “Press Attack”

Month Eight

- Ø Feints: thrust and disengage
- Ø Bouting
- Ø Introduce tactical phrases/application of tactical wheel

Month Nine

- Ø Applying simple tactical wheel: open-eyes drills
- Ø Dealing with “lost” blade: search vs. quick thrust
- Ø Search pattern for finding a blade

Month Ten

- Ø Refining existing actions
- Ø Open-eyes drills/tactical phrases
- Ø Bouting drills/bouting

Month Eleven

- Ø Work on depth of phrases, combining multiple actions
- Ø Bouting drills/Bouting with different opponents
- Ø Correct technical execution during bouting

Month Twelve

- Ø Bouting drills/bouting with different opponents of different skills
- Ø Correct technical/tactical execution during bouting as needed

BIBLIOGRAPHY

- Sardegna, Jill *Living with Vision Problems: The Sourcebook for Blindness and Vision Impairment*, New York, NY: Checkmark Books, 2002.
- Blind Fencer Given a Fighting Chance*, Posted to the Diss Mercury web site (www.dissmercury.co.uk) on 12/28/2006
- Carmeni, Bruno, *Judo for Visually Impaired Athletes, 1997*, [http://www.judoinfo.com/blind - Carmeni.rtf](http://www.judoinfo.com/blind-Carmeni.rtf)
- Aydog, et. al, *Dynamic Postural Stability in Blind Athletes using the Biodex Stability System*, International Journal of Sports Medicine, V27, 2006, pp 415-418
- Sleeuwenhoek, Hanneke, et al *Perceptual-motor performance and the social development of visually impaired children*, Journal of Visual Impairment & Blindness, Jul/Aug 1995, Part 1 of 2, Vol 89, Issue 4
- USFA Coaches College (www.usfacoaching.org)
- National Federation of the Blind (www.nfb.org)
- Touch the Top (www.touchthetop.com)
- Sollee, Eric, Carroll Center for the Blind, Transcript of a phone message, 9/18/2006
- Szabo, Laszlo *Fencing and the Master*, Sport, Budapest, 1977
- Luckovich, Istvan *Fencing The Modern International Style*, Sport, Budapest, 1975
- USFCA Coaching Clinics (www.usfca.org)
- American Council of the Blind (www.acb.org)
- United States Association of Blind Athletes (www.usaba.org)
- The Carroll Center for the Blind www.Carroll.org
- Visual Impairment, the Environment and the American with Disabilities Act (30)*, The Lighthouse Handbook on Vision Impairment and Vision Rehabilitation, Volume 1, Oxford University Press, Inc., New York, NY, 2000
- Wainapel, *Rehabilitation of Persons with Severe Visual Impairment or Blindness*, PM&R Secrets, Hanley & Belfus, Inc. Philadelphia, PA, 1997
- United Cerebral Palsy web site (<http://www.ucp.org>)

