
From Text to Training

Developing a functional training plan any HEMA source text

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***From Text to Training* is a presentation given at *Festival of the Sword 2017*, Melbourne, Australia.**

In this presentation, I give a method for reading any HEMA source text in three passes in order to extract the information required to create an effective training plan based on the text.

In my experience, most practitioners approach a text by looking at individual techniques in turn and hope that by understanding each of them they will develop an understanding of the system as a whole. My approach is the reverse. I'm going to look at the system as a whole first then drill down into the detail. My approach allows the practitioner to determine which techniques are central to the text and the style of fighting, and which are incidental or applicable only in special circumstances.

My approach is based on a way of thinking about or conceptualising a sword fight that you may not have encountered before. It's based in the theories of John Boyd about strategic and tactical processes in competitive situations. Beware, though. This is Boyd as he really is, not Boyd as he is popularly known. More on him later.

Obligatory Quotation

“Every martial art is three or four things done well. Everything else is window dressing.” — Bruce Lee (?)

This statement has been attributed to Bruce Lee but I've not been able to confirm it. Apocryphal or not, it's a good starting point for describing the way in which I think of a fighting system and a source text.

Think of the techniques you use over and over in your fights. These are the three or four techniques that are the core of your fighting style. To turn the text into something you can use in, say,

competition, these are the techniques you need to find in the text.

I make the assumption that any complete fighting system will consist of:

- several key principles which underpin the text's concept of the fight;
- a few core techniques and actions which are used over and over and in many different combat situations;
- a list of the common situations a fencer can expect to encounter in a fight and methods for how to approach them.

If a source text does not show these attributes, it's likely to be a summary of the system of swordsmanship or, worse, “just a bag of tricks”.

1. Axioms

On the first pass reading through the text, search for what I call the Axioms. These are the foundational principles underlying the fighting system in the text and could be called statements of faith, “just so” stories or even bald assertions. They are easily identified by either a lack of any explanation or an excessively and largely irrelevant explanation.

Examples include any list of the “proper” number of guards, strikes, parries, counters, footwork, etc, although axioms of this type are of limited usefulness beyond giving the reader some basic terminology. Of greater usefulness are those axioms which give information about what a “proper” fight should look like and the aspects of the fight which should be foremost in the fencer's mind.

- In the introduction to his 1570 *Art of Combat*, Joachim Meyer talks about the “wonderful struggle” in which initiative is contested and passes back and forth between the combatants.
- Paternoster (1597) says that “a fight between two resolute and skilled fencers will last no

more than three tempi.”

- Cavalcabo (1597) follows the very Italian idea that attacking disorders the body and it is therefore better to provoke or invite your opponent into attacking first so you can defend then counterattack into the opponent’s compromised state.

These three examples present radically different mental models of a what a “proper” sword fight should look like. From each of these, the reader can find clues about what to look for in the actions of your opponent in the fight and what the key techniques in the text will seek to achieve.

2. Trigger >> Action

Actions

The second pass through the text comes in two stages. The first looks for the core actions of the fighting system. These are the movements or techniques in which you put your sword into your opponent. There will not be many of them and generally they will occur frequently and repeatedly. These are the three or four things mentioned in Lee quote above.

Actions may be simple or compound. They may or may not include some set up or preliminary movement. The focus here is on keeping the identified action to the minimum extent possible in terms of complexity and movement in order to describe an atomic building block from which more complex phrases and responses to a situation may be built.

The best example I can find is in Cavalcabo’s text. The following two techniques account for the majority of the actions described. Depending on the circumstance, they may be prefaced by a *cavazzione*, a feint or a provoking attack or a change of guard to invite the opponent to act. Regardless of what comes before, these two actions dominate the text in terms of frequency and applicability to common combat situations.

- Parry the opponent’s strike with your sword in *seconde*. Control the opponent’s weapon with your dagger while stepping to the left with the left foot. Thrust in *seconde*.
- Parry the opponent’s strike with your sword in *quarte*. Control the opponent’s weapon with your dagger while stepping to the left with the left foot. Thrust in *quarte*.

Triggers

In the second stage of this pass through the text, and for each of the identified core actions, list what the opponent does immediately beforehand to prompt you to perform the identified action. What does the opponent do that triggers you to use this techniques and not another? Some extrapolation may be necessary as the text rarely will talk explicitly in these terms.

The trigger is something you can see or feel the opponent do. It cannot be a feeling or a state of mind or any other thing. It is something you can observe directly. It is an immediate stimulus, not a considered or thought out position.

Here’s two examples. Note that each provides a defined and definite sensory stimulus.

- You stand in *quarte* or another inside guard and your opponent launches a thrust to your open upper outside quarter. This is your trigger to perform Cavalcabo’s core action #1 above – parry in *seconde*, control with the dagger while stepping left, thrust in *seconde*.
- You and your opponent bind in *tierce* to the outside and you feel the pressure of the opponent’s blade suddenly removed. This is the trigger to turn your hand into *quarte* and thrust with opposition, a key action in the generalised Italian rapier tradition.

John R. Boyd and the Real OODA

Let’s make an aside into the theoretical underpinning of this approach. Allow me introduce you to Colonel John R. Boyd: a US Korean War pilot, trainer and strategist. He has been called the “modern Sun Tzu” and he revolutionised strategic thinking within competitive situations. You will undoubtedly have heard of his Observe - Orient - Decide - Act or OODA loop.

But

Everything you know about it is likely to be superficial, misguided and downright wrong. His work has been abused in popular psychology circles to prop up bad management practices and siphon funds from gullible corporate training budgets. Read Boyd’s work in the original but – be warned – he’s not easy to understand at first reading.

Boyd’s genius lies in taking what seems to be a chaotic and intuitive situation and overlaying on it a process not only for determining the best action to take in the heat of the moment but for

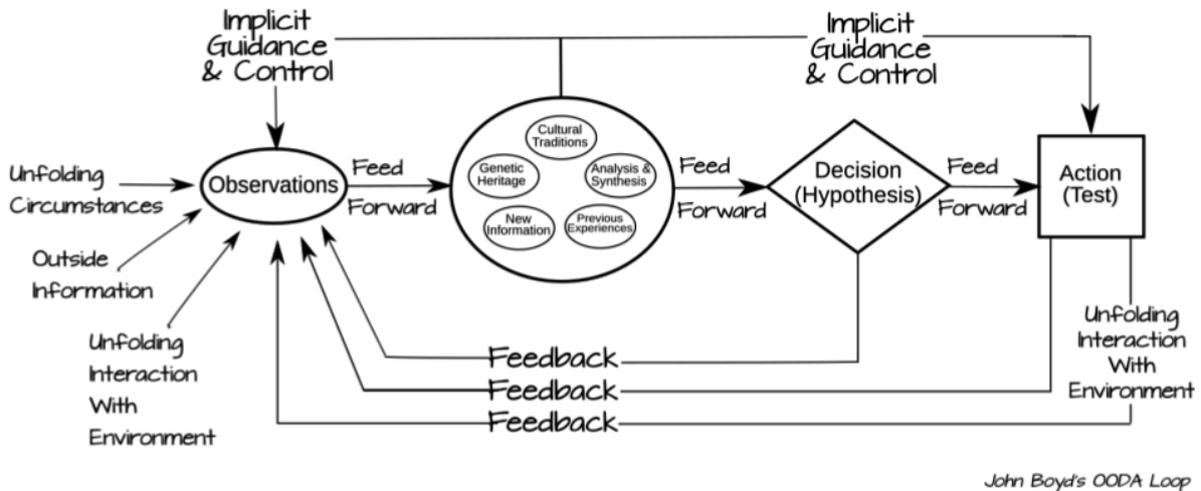


Figure 1: Boyd's "real" OODA

preparing yourself to thrive amid the chaos. The deeper you embed this OODA process into your training and into your fighting practice, the more likely it is that you will intuitively out-think and out-act your opponent.

Figure 1 is one of only two diagrams of the "OODA Loop" Boyd himself drew during his career. This one is from a 1995 five slide presentation called *The Essence of Winning and Losing*. It looks very different to the circle of arrows that most people are familiar with.

Notice the feedback arrows along the bottom of the diagram. For starters, there is more than one feedback loop. This is what you do in training to better your fight. It's about refinement and improvement and figuring out how and why a technique works or doesn't in a given situation.

A sword fight does not work like this. In the midst of a fight, there is little time for considered feedback. There is only action and reaction, stimulus and response, trigger and action. You cannot stop to think while your opponent is stabbing you.

Implicit Guidance and Control

Of greater importance for our purpose are the two arrows at the top of the diagram labelled **Implicit Guidance and Control**, one linking Orient process to Observe, the other linking the Orient and Act processes. Notice how this latter bypasses the Decision process. This is key. This is the doctrine that says Trigger A => Action A, Trigger B => Action B.

It is easiest to think of Implicit Guidance and

Control as your training within the tradition you fight under. The axioms in part determine your mental model of what a "proper" sword fight looks like and shapes your orientation, in Boyd's terms. Your training teaches you what details out of all the complexity and overwhelming sensory inputs in a fight you need to pay attention to: your triggers. Your training determines which pre-programmed Pavlovian response is best used against a particular trigger: your actions. Combined, this is your system of implicit guidance and control.

This is what you do in a sword fight. **Trigger => Action** is the fastest way you can act. The agony of decision is removed and it turns fencing at this level into a Pavlovian, muscle-memory set of stimulus/response pairs. This is how you win.

There is an interesting corollary here. If you can interrupt the opponent's implicit guidance and control pathway, you force them to deliberately iterate through the Observe - Orient - Decide - Act feedback loop in combat making their reactions slow. You can always act faster than your opponent if you can make your opponent slow.

How to do this is the topic of another presentation.

3. Situation >> Strategy

So far, we've described looking for the clues in the text that outline how to react to your opponent. In the third and last pass through the text, let's look for how to make your opponent react to you. Again, this pass consists of two stages.

Situation

In the first stage, look for the combat situations that the text says must be dealt with. These focus on how the opponent in the text presents himself or herself. Situations are usually described as either types of opponent you may encounter or specific combinations of stance, distance, guard, etc that must be managed. Few texts state these situations explicitly and it often takes a degree of experience to tease the threads from the text.

To identify these situation, if they are not explicitly called out, go back to what the author tells you to look for. Look for the clues to the opponent's behaviour. How does the opponent in the text do what they do? Are they overly aggressive? Overly defensive? A good example of this is the four types of opponent identified by Meyer in his 1570 *Art of Combat*.

Another more immediate form of situation is the textual opponent's attitude, stance and posture. For example, does the opponent always present the sword extended or always keep it withdrawn? Does the opponent pass forward to apply pressure? Does the opponent pass backwards at the slightest twitch? Cavalcabo uses these situations as chapter titles. For example, "Against those who hold the dagger strongly advanced, and the sword retired".

The key here is that these are not stimuli which must be reacted to or have the immediacy of the triggers discussed above. They are patterns of behaviour displayed by the opponent in the text which may be taken advantage of. This is where the mind game of the sword fight comes into play.

Strategy

In the second stage, find the text's strategies for dealing with each situation. These will not be as clear cut as the **Trigger => Action** idea above but is roughly similar in principle. I define a strategy as a posture, stance or behaviour that you adopt to constrain your opponent to act in a limited number of ways that you can predict and plan for. For a given situation, a strategy outlines how to limit your opponent's range of likely action. This in turn narrows the number of stimuli you need to watch for. In short, a strategy encourages your opponent to give you the triggers you want to act on.

Counter-guards are a good example to introduce the concept as they encode the idea of having a pre-planned and pre-positioned defensive action which closes the line the opponent is looking to

exploit and provides you with a narrow set of pre-defined options for responding to any move by the opponent. For example, if I stand in *quarte*, my opponent is unlikely to attack my inside line. My opponent is more likely to attack my open outside line, allowing me to react with, say, Cavalcabo's first key action.

More tangibly, Meyer's cutting to the quarters and the provoker/taker/hitter strategies both aim to break an opponent's guard with your first action to create an opening you can exploit with your second action. Cavalcabo advises that in the situation where you are find yourself "against those who want to cover your sword with theirs," you should present your sword with an extended arm slightly to the outside. In this way, if and when the opponent goes to bind your blade, he or she creates an opening on the opposite side which can be exploited by a simple *cavazzione* and thrust.

The **Situation => Strategy** pass through the text identifies the ways in which the author wants you to take and keep the initiative of the fight and force your opponent to react to you.

Takeaways for Training

Developing a training plan from this three-pass reading of the text itself consists of three streams: drilling the key actions, drilling these actions in context, and training to use the best action or set of actions to control the initiative of the fight.

The first priority is to drill the basic actions themselves regularly and frequently until they become embedded deep in muscle memory. These are the core building blocks of the system and you must be able to perform them automatically and without thinking. This is best done through solo drills. I suggest taking your time here to ensure you can perform the actions smoothly and confidently.

The second priority is linking the actions you've trained to triggers for use. I suggest training these as partner drills, where the partner provides a particular and defined trigger (say, a thrust to the upper outside quarter) to which you can provide the appropriate action in response. Start slowly and with one **Trigger => Action** pair. Gradually increase the speed and the number of triggers. Train yourself to distinguish between similar triggers. The linkage between trigger and action must become as automatic as the actions themselves.

Training around **Situation >> Strategy** is a little nebulous as the concept covers a wider range of options dealing with with the assumed model

of a “proper” fight (the **Axioms**) and manipulating your opponent’s actions.

More narrowly, you need to train to observe and recognise the types of opponent or combat situations described in the text and to apply the correct strategy against each. Further, you need to figure out and understand how and in what manner the strategy reduces the possible menu of actions open to your opponent and identify the triggers likely to arise from any action your opponent may make. Train this in co-operative free play or controlled play in which the partner takes on the role of a particular type of opponent or presents particular behaviours for you to take advantage of.

More broadly, you need to develop an understanding of the archetypal combat encounter or the epitome of the sword fight described in the text. What are its key attributes? Is it the interplay of opponents struggling for initiative as suggested by Meyer or is it the quick and brutal affair suggested by Patenostrier, over in barely three *tempi*? Compare this to the context in which you fight. A bout to a set time limit is more like Meyer’s fight. A bout to a set points total is more like Patenostrier’s fight. By understanding your own sword fighting context, you can better understand why particular techniques from a given text work and why another does not. Context is everything.

Summary

I’ve presented a systematic method for reading a HEMA source text in three passes, each pass identifying a different aspect of the fight. The three passes are grounded in the work of Colonel

John R. Boyd and specifically the Implicit Guidance and Control aspect of his OODA process.

In summary, the three passes are:

1. Find the axioms, the principles underlying the text. These shape what you look for in the fight and, as a combatant, how to approach the context of the fight.
2. Identified the techniques which end the fight, the moves that occur in the text over and over again. Now, train these actions. Do this through basic drilling, correction, more drilling, refinement, etc. They must become embedded in muscle memory. But the actions are of little use by themselves. Train them as responses to defined and definite triggers. As soon as the trigger is presented, the action must occur without thinking in a Pavlovian manner.
3. Learn to recognise the different types of behaviour your opponent can display. This is a lot more subjective and it’s where the fencer’s mental game comes into play. You can’t dictate what your opponent will do but you can set up the circumstances in which the opponent is more likely to act in ways you want them to. Train to adopt the appropriate strategies for a given situation in order to direct the opponent’s behaviour, directing that behaviour towards one or more triggers for you to react to.

Finally, this is not the only way to read a HEMA source text or find a training program in the words but simply another way to do it. I find it useful for seeing the overall of the fighting system described and for figuring out where my deep dive efforts into the text may be better aimed.

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