

Frog DNA, Concentric Rings and Old-Fashioned Necromancy: Reconstructing Historical European Swordsmanship

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Most of the modern WMA community is based, not on living tradition, but rather on reconstruction of martial arts long dead. While these arts survive in detailed written and pictorial form, they were recorded for contemporary, not modern audiences. This means that anyone who finds himself acting as an instructor is also acting as an *interpreter*. In the absence of time machines or necromancy, the greatest challenge in reconstructing these extinct traditions from written texts is how to “fill in the blanks” when the author is either obtuse, or simply silent about technical or tactical details.

We must then begin to look outside our core sources to related works or similar martial arts to find *possible* answers. Steve Hick and I nicknamed this process “using FrogDNA”, after the process of dinosaur recreation used in Michael Crichton’s thriller, *Jurassic Park*. But much as the use of frog DNA led to unforeseen and disastrous consequences in that novel, by using too many assumptions or preconceptions based on previous or “similar” martial experience we reconstruct our “dinosaur”, with an ever-increasing risk of getting an end result that looks little-to-nothing like the original. This way we run the risk to create an animal different to the original. ¹.

This class looks at the “concentric rings” approach to reconstruction, in which the researcher begins with a core text and then slowly moves outward in time and place to corroborate or refute his initial conclusions. Beginning with the original text, the researcher moves first to related texts in a tradition, then to contemporary European works, followed by literary analysis of non-martial works from the period, before finally turning to hoplogical analysis of comparable, living arts. Using this method, the researcher seeks to gain a clear understanding of what the author *likely* meant, while minimizing how much of their interpretation comes from outside sources. We will use the problem of determining the role of measure in Fiore dei Liberi’s longsword techniques of wide and close play as a practical example, since it has been a recent debate in the community and Fiore’s work is what I know best.

The Necromancer’s Toolkit: Seven Rules for Reconstructing Historical Martial Arts

Understand the Difference Between a Living Art and a Book on that Art.

¹ As much as researchers of any discipline tend to work in a vacuum, in truth, there is nothing unique in the reconstruction of antique martial arts; clear parallels can be found in the reconstruction of medieval cooking, music or dance, where textual instructions exist, but with a technical vocabulary and methodology unique to the text’s time and place, assumptions of prior knowledge on the part of the reader, and a set of cultural aesthetics that may be at variance with the modern era. The methods by which scholars puzzle out a galliard, an ancient Roman lament or a Burgundian tart provides clear exemplars of both the possibilities and pratfalls of recreating a physical activity from a written source.

The HES community uses shorthand to discuss its various disciplines, saying, “I practice Capoferro,” or “I train from Ringeck”. We do not! We practice modern reconstructions of historical *schools* of fencing, with those reconstructions deriving from books left behind by masters of those historical schools. No one “did Capoferro”, besides Ridolfo Capoferro! Even his students trained in *the style, or school*, of Italian rapier fencing taught by Capoferro. We, on the other hand, are *reconstructing a system of fencing*, derived from the *book written by Capoferro*. This is a very different thing, for while his book teaches us what he considered fundamental skills of rapier fencing, and provides much of his repertoire, no book on a physical discipline can ever be complete. We do not, and cannot, know precisely what Capoferro taught in the training hall, nor how he taught it. We will never know what he considered an acceptable variation of the ideal, how deep a lunge was “deep enough”, let alone what drills he used to teach it. We can only know what Capoferro wrote, and we must accept that those two things are related, but not synonymous, or we are lost before we start.

Understand the Provenance of the Particular Manuscript You Are Studying:

While many of the surviving treatises were written by a single, known, and verifiable author, others are anonymous, while many – particularly in the medieval German lineage – are *compendia*, in which a scribe, not a master at arms, has recorded the teachings of multiple authors. Compendia can be particularly challenging, as the original source often does not survive or is unknown, and thus there is no way to be certain as to what the original author wrote, let alone who he may have been.

You Can’t Understand a Book without Understanding the Language.

Many of the historical treatises, particularly those prior to the 18th century, are written in antique forms of Italian, German or Spanish, and very few are in English, the native language of much of the modern WMA community. This means the researcher-student must either await a quality translation, or attempt the task himself. If you find yourself in the latter position, then remember this important rule: *never mistake word-by-word dictionary definitions for a translation!* Language has idiom, syntax and metaphor, and you cannot understand these things simply by sitting down with a dictionary and trying every meaning until you find one that seems to work. To translate a German or Italian fencing text, you must not only translate the words, and have a basic understanding of the grammar, you must understand how German or Italian authors conceptualize and express ideas. *Babblefish is not your friend!* Certainly buy the best dictionary you can, but get some training in the actual language itself and work with native speakers or those with academic proficiency in the language. Additionally, one should note that next to lexical, semantic, syntactic levels, any language also has a pragmatic level, meaning the words and expressions which obtain a secondary meaning (connotation) in certain contexts.

Trust the Author, but Remember that He’s Fallible.

Even today, with modern editorial methods, spell check, grammar checking, and all the rest, errors enter into books. Whatever their skills with the sword, fencing masters of the past were sometimes excellent writers, sometimes execrable ones, and their writing reflects this. Even the best of authors (or his paid scribe) simply sometimes misspells one word for another (such as *finestra* for *sinestra*) or writes “right” when he means “left”. Always begin by assuming the author knows his craft, and that what he wrote is what he meant. When the text and art, or multiple copies of the same work, simply can’t be reconciled with each other be willing to look at the possibility that the author may have made an error.

Compendia are particularly susceptible to these problems, as the compiler likely was a scribe, not a martial artist, and he may or may not have been familiar with the material he was recording. This does not make a compendia's material any less useful or "valid", but we must remember that each degree of separation that exists between a master at arms and the text describing his art creates the possibility for variation, alteration and outright error to enter into the work. For example, we do not have Johannes Liechtenauer's teachings; we have them as recorded and commentated by other masters, such as Sigmund Ringeck. But we do not have Ringeck's commentaries, either. Instead, we have a selection of them, as recorded by an unknown compiler. Thus, we are separated from Ringeck's own thoughts and teachings by at least a single scribe – working from an unknown source – and assuming he transmitted the master's teaching perfectly, we are still forced to look at Liechtenauer himself through the lens of a later master, whose direct relationship to the founder cannot be known.

Understand What the Artwork is Meant to Convey.

This is particularly important, depending on the period you study. Prior to the 17th century, 3-point perspective and foreshortening was a developing skill, so the proportion of the figures, the angle they hold their weapons at, even the exact measure they stand from one another is not "photo realistic", and is often intentionally contrived. Perhaps more importantly, 14th and 15th century artwork is not meant to be "photo realistic", since it is hard to make your illustrations "photographic", when you have no conception of what a photo is! If you are working with earlier sources, it is crucial that you understand how a medieval artist conceptualized his world. (For more on this, see Sean Haye's class, *Analyzing the Artwork that Depicts the Art of Fighting*.)

When in Doubt, Trust the Words, not the Artwork.

Many fencing texts are illustrated; few were illustrated by their author. Of those few that were, even fewer profit from having been illustrated by an amateur. It was expensive to produce a manuscript or a printed book with copperplates and woodcuts, and occasional, often subtle, mistakes occur in the illustrations (as the author's themselves sometimes note). When a conflict between the artwork and the text arises, attempt to reconcile them, but always give primacy to the words of the master at arms, not the artwork he commissioned.

Read Beyond the Text.

Fencing texts do not exist in a vacuum. If you are studying the massive rapier fencing book by Salvator Fabris, you are studying a book that exists within the larger context of Italian rapier fencing, c. 1600. But it also exists within the larger context of both European fencing, c. 1600, and the wider history of Italian fencing. Even if our goal is to reproduce one master's style as closely as possible, failure to understand his art in context can lead us to egregious interpretive mistakes that could be easily avoided by a little additional reading. So to truly understand Fabris' art and how he meant it to be used, as well as to comprehend any vagaries in his text, it may become necessary to at least review the other rapier texts of his contemporaries, Capoferro and Giganti, and to look at the work of masters of both the earlier "transitional" period, such as di Grassi or Agrippa, and later Italian masters of the 17th century, such as Marcelli. This seventh rule provides the basis for the theory of "concentric rings" that follows.

Building a Better Dinosaur: The Concentric Ring Approach

Now that we have a set of basic rules to govern how we read and interpret a particular fencing text, we need a process that will lead us from our core source to filial texts and related martial

arts, so that we keep those frogs, and their dangerous DNA, back in their aquariums where they belong! Here is the systematic process I have found helpful.

Chose a Core Text(s). The first step is to define what the art is you are trying to reconstruct. Is it medieval swordsmanship or 19th century pugilism? Backsword fencing or French smallsword? Whatever the answer, you should begin with a broad category and drill down from there to a single, baseline text. Once you have made this decision, begin applying rules one through six of the “Necromancer’s Toolkit” to that text.

For example, I begin with “medieval swordsmanship”, which gives me one of three traditions to work within: the Liechtenauer, dei Liberi or English lineages. I chose the dei Liberi school, which is represented by a body of five different manuscripts. However, as the writings of Fiore dei Liberi himself comprise four of those manuscripts, my “baseline” becomes using those works specifically attributable to the founder himself, with an emphasis on the Getty Ms, which is the largest and most detailed. So my translation, research and interpretation begins with the Getty Ms, and where I run into any unanswered questions or seeming inconsistencies, I will then immediately look to the Morgan and Pisani-Dossi manuscripts for answers. If I still cannot find a clear answer, or if dei Liberi himself is silent on a subject, it then becomes time to look elsewhere.

Texts by Other Masters in the Same School. At some point after you have made a thorough study of your root text, and have been working with physical interpretation, you will feel you have a general idea of the master’s system. Nevertheless, you will likely have a series of questions or contradictions that *seem* to have appeared in the text and you will probably have little understanding of how this system relates to its contemporaries. This is the point in which you must apply rule seven from the “Necromancer’s Toolkit”.

So in our example, after working with the Getty Ms for some time, I may feel that there are a number of techniques where dei Liberi could have been clearer. By looking at the related Morgan and Pisani-Dossi texts, I am able to resolve many of the technical questions, but I find that I can’t firmly grasp some of the tactical ones; not *what* to do, but *why* to do it. So I now need to look at the writing of other masters in the same tradition. With the dei Liberi school, that leaves me one option, Filippo Vadi, a master of the late 15th century, whose own treatise uses rhyming couplets and illustrations that are similar to, although not precisely the same as, the Pisani-Dossi manuscript.²

Texts by Masters of Related Schools. Although it is somewhat artificial to lump the different European schools into categories of *nationality*, we can arrange them *geographically*. Simply put, fencing masters of a certain region clearly encountered and influence each other, and develop certain technical and tactical sensibilities that influenced their fighting arts for centuries. For example, English masters clearly favored strong, static parries, or “stoppes”, usually made by stepping into an attack. This leads to an emphasis on double-time actions. These “stoppes” appear during the 15th century, in the very first English texts, and remain a constant of English

² Since this article was first written, a fourth dei Liberi manuscript has been found: Florius de Arte Luctandi, Bibliotheque National Ms. Latin 11269, which shares a number of commonalities with the Pisani-Dossi and Vadi manuscripts, including the rhyming captions. As none of the captions are exact copies of those in the other texts, it suggests they may all derive from an unknown common source or reflect transcription by memory from an oral tradition.

fencing well into the 19th century. By the same token, although most medieval masters used rising, false edge cuts to deflect attacks, they received special emphasis from Italian masters, and false edge parries remained a component of Italian fencing straight through to the 19th century.

Continuing our example of the dei Liberi school, if Vadi fails to clearly provide the answers I need, my next step should be to turn to the masters of the Bolognese school. Although the surviving texts of this tradition are from the early 16th century, Dardi, the school's founder was a near contemporary of dei Liberi (within a half generation), who founded his school in a city little more than a day's ride away from the court of Ferrara. Besides being a product of the same culture, both schools trained in a wide variety of similar weapons, in and out of armour, and used a closely related technical nomenclature for their guards, blows and footwork, often even replicating the same plays.

Texts by Masters of the Same Era. Throughout their long history, European martial arts continued to evolve and refine themselves, particularly during the sweeping military innovations of the 16th and 17th centuries. The world of 1600 was radically different than that of 1450, and although weapons such as the longsword, halberd and dagger were still being taught, even within a long-lived lineage, such as the Liechtenauer tradition, we can see clear changes in how those arts were being practiced. Therefore, once we realize that we must move outside of our core text and begin to look at related traditions, we should look at all European contemporary traditions, as these are the arts that our own "school" would have grown up fighting with and against.

In our dei Liberi example, we know that Maestro Fiore was active in the late 14th century and his tradition survived until at least the late 15th century. He was from the far north-east of Italy, in a region closely connected with the German states, and tells us that he could have learned from German and Italian masters. Therefore, once I move beyond dei Liberi and Vadi's writing, I should also look at the Liechtenauer tradition at the same time I look to Bologna, specifically those texts written between the late 14th and mid-15th centuries, when I know that Maestro Fiore's "school" was flourishing.

Common Themes of Historical Western Martial Arts

Although Iberia is as long way from Swabia, stunningly so in the days before the train or automobile, the mobility of Europeans was astounding, particularly military and mercantile men. While we have to distinguish between Elizabethan England and Philippan Spain on the one hand, we have to realize that they are both sub-sets of a larger, European culture on the other. This is reflected in the martial arts as well. Fencing treatises are products of the literary and intellectual climate of the era they were written, so, regardless of nation, most European texts feature many common elements of structure and language; the more true this is as distinctive, international schools of fencing rose in the 17th and 18th centuries. Combined with a common level of military technology and culture, we find that not only might most 15th or 18th century Europeans have a broadly similar style of combat, they had a common way of conceptualize it.

For example, once I have exhausted the Bolognese or 15th century German treatises, my next step is too look at how any of the late medieval traditions may have addressed the problem. When working with dei Liberi's armoured poleaxe plays, I would already have moved to the instructions of Vadi and the one Bolognese master who teaches this weapon. I would have looked at 15th century German masters such as Talhoffer and Paulus Kal. Now, I would be ready to

range further a field, and would find a unique, but contemporary, Bolognese text, *Jeu de la hache*. Beyond this, I might move back in the 16th century, looking at English bill and German and Italian halberd play – related, but distinct weapons, usually used with less armour. My goal would be to see how these similar arts addressed similar problems - using the weapons hooks, managing its length, feinting or disengaging from the bind with a 5 lb + weapon, etc. – to at least develop a basic tactical vocabulary common to *all* European polearm play. This way I can fill in my blanks with a solution that is least derived from consistent and universal first principles.

Solutions to Similar Problems by Similar Non-Western Martial Arts.

Finally, all martial arts are driven by the underlying laws of physics, applied to the same bipedal primate using either its natural weapons or a variety of lever arms. There are only so many ways to lock an elbow or thrust a spear. However, the devil is in the details. Since this is where the researcher is injecting the greatest amount of “FrogDNA”, before the scholar begins to pull from non-Western sources to answer his remaining questions, it is critical that he first understand the fundamental principles and mechanics of the art he is interpreting, and second, that he feel he has exhausted his “native” sources. It is entirely too easy to have a background in an art, such as Aikido, and assume that a throw is a throw is a throw, while missing the point that Aikido has a specific way it steps and projects its throws, that may have little in common with Western grappling.

When looking outside of WMAs for answer, the first step is to choose an art that most closely approximates the one you are reconstructing. With our example of the dei Liberi school, I would need to find an art that taught grappling, knife combat and the use of the two-handed sword, spear and polearm, ideally used in and out of armour. There are a number of arts that teach a few of these elements, but very few arts that meet all of those qualifications. Yet the further I move from the same assumed combat environment, the less useful the comparisons will be.

Practically, this means that while something like modern Mixed Martial Arts may provide a great deal of insight into grappling, it is usually applied as a ring sport, not a battlefield art, and has no insights into relating and integrating that grappling to swordsmanship. Therefore, a MMA practitioner may recognize dei Liberi’s armbars and throws, but may not understand why there is such a lack of chokes or ground fighting techniques. An art like Penkat Silat certainly was meant for mortal combat, and uses a variety of knives, staves and swords, but both the climate and tribal culture of Indonesia eliminated anything approximating armoured or mounted combat, and this changes what stances and techniques are emphasized.

Traditional, feudal Japanese martial arts, which combine grappling, two-handed swords and polearms, sometimes in and out of relatively full and heavy armour. Therefore the techniques and tactics these arts developed had to address a similar set of problems, and becomes perhaps the closest approximation to dei Liberi’s art we will find in living traditions. Form follows function. So once I have exhausted my native sources, this provides my first foreign analog. Had my example been different – say backsword fencing – then the foreign art would have been different, perhaps Escrima or Chinese jian and dao (straight sword and saber) fencing. Regardless, the final step is to then find reliable exponents and source for that tradition that can provide you useful data, as well as a basic understanding of its unique cultural, as opposed to purely martial, characteristics so that you don’t miss the forest for the trees.

Conclusion: Franken-Fechter; Or a Modern Prometheus...

In the end, one of the few great truths of the world is that the dead stay dead. We cannot “resurrect” the martial art of Fiore dei Liberi, anymore than we can the man himself. We must be honest with ourselves and acknowledge that a book is not a living tradition, and even a living tradition, not necessarily a snapshot of how things were done “back in the day”. Even were we to “get it right”, whatever that means, we’ll never truly know, for we are left performing before the unseeing eyes of unspeaking masters.

But all is not lost. Even though the garden has, in some cases, been barren for generations, instructional books, primary accounts, iconography, contemporary literature and surviving artifacts all remain as “root stock”. By grafting our own research, analysis and experimentation to that root-stock, we can grow *new* flowers in the garden of the Western tradition. But it is a delicate process, and we must be careful to maintain as much of the original source as possible, and keep it central to our work. The end result will not, and cannot, be the same, but it may be close; a reasonable descendant of what came before.

But to do this we must first accept that we will need to go beyond a single source, or even a single tradition, in a search for context. Having accepted that, we then need to reconcile ourselves to the fact that once we leave our art’s native time and place we are *firmly* in the realm of “FrogDNA”. What kind of frog we use, and how much of his genetics, needs to be considered carefully, or the results can be disastrous.

Acknowledgments

My thanks to Sean Hayes, Steven Hick and Dr. Manouchehr Khorasani, all of whom provided suggestions and improvements to various drafts of this paper.

NB: A slightly different version of this paper can be found in [In the Service of Mar: Proceedings from the Western Martial Arts Workshop \(1998 - 2008\), Volume II](#) (Freelance Academy Press, 2015)