Actors, Roles, and Behaviours –
The Image of Personal Combat in Medieval Fight Books

Bartłomiej Walczak
Independent Researcher

Abstract – This paper attempts to look at fight books as literary sources and apply this reasoning to ADVISE reconstruction methodology. First the concepts of Real and Imaginary Worlds is introduced, followed by the distinction between Actors and Roles. Based on descriptions, each Actor and Role can be assigned a set of Actions, Decisions, Intentions, and Goals that constitute their Behaviours. Depending on Perspective, such Behaviours can be divided into Expected and Unexpected. Reconstruction is then looked at as an effort to gain deeper insight into described Roles and Actors through enacting of their Behaviours. Applying these concepts to ADVISE methodology allows for more nuanced and stricter process by focusing on Actions in Phase One and Decisions in Phase Two. Phase Five introduces formal set theory notation that allows for a consistent high-level reasoning about the content of recorded message. Discussion addresses potential criticisms and further applications of this approach, demonstrating how it can bring more clarity to the whole process, especially when it comes to properly defining future experiments.

Keywords – ADVISE, Embodied Research, Fight Books, Historical European Martial Arts

I. INTRODUCTION

Fight books – regardless of being classified by some as part of a non-fiction literary genre – still remain first and foremost literary devices, and are therefore subject to the limitations of any written medium.[1] As such, their content is always in some way filtered, distorted, symbolic, and idealised, especially when they go beyond describing simple actions and delve into fencing theory or combat psychology.[2] Most research in the field of Historical European Martial Arts has been done under the assumption of an established close proximity – if not identity – between the fight book authors' contemporary historical realities and the world and actors

---

[1] Verlest, Dawson, and Jaquet, 'Introduction', pp. 18-22.

[2] Just the selection of material to be included in a treatise already acts as a filter and therefore only describes part of the period reality at best. The further the texts steer from purely pragmatic advice, the less certain the connection with actual practice becomes. See Burkart's 2016 'Limits of Understanding' for more details on limitations of transmission.

depicted in their works.[3] This connection, despite being at first glance straightforward and obvious, should not be taken for granted, especially when contrasted with other purely narrative sources.[4]

Establishing the relation of fight books' content to other historical records is difficult. While we can perform such analysis with regards to depictions and descriptions of material culture elements, such as weapons and armour, there is preciously little external material that we can compare the actual recorded advice to. As such, we are often left at the mercy of an author and all the limitations of the medium, and we can never be certain how well the recorded combat advice reflected the reality of combat at that time.[5] Assessing this proximity, however, is not the main goal of this paper. I would like to propose that by seriously treating fight books as literary devices, as descriptions, instead of just plain prescriptions, we can greatly enhance our efforts at reconstruction of recorded teachings. This perspective not only provides clearly established constraints to guide us throughout the whole process and make it more rigorous, but at the same time also hopefully settles an epistemic argument that has been ongoing between historians and practitioners about what is actually being reconstructed.

Toward this end, this article will first introduce the Two Worlds Concept, followed by Actors and Roles, which will guide us towards establishing their described Behaviours. Those, in turn, will help us define the boundaries of the reconstruction process. Finally, we will apply these concepts to one of the existing reconstruction frameworks to examine how they influence and change the process as a whole.

---

[3] The references are too numerous to mention. Every book and paper that talks about Historical European Martial Arts reconstruction follows this assumption. It is perhaps best expressed in Jaquet's 2016 chapter, 'Experimenting Historical European Martial Arts, a Scientific Method?' where the quotes of masters are taken at face value and immediately assumed they refer to an actual practice at the time they were written. Scant biographies of most fencing masters are usually examined through the lens of supporting their own words and bridging that gap. Burkart's 2016 article, 'Limits of Understanding', briefly touches on this subject by claiming that the fight books are vehicles for the discourse on the subject of martial arts, but then focuses mostly on the differences between modern and period cultures and problems with transmission, retaining the assumption about the intended identity of period and recorded practice. Even the more generic, extremely insightful distinction between practice and technique introduced by Spatz in *What a Body Can Do* makes a quiet assumption, that the recorded technique has had its correspondence with some practice that happened somewhere in time. While I also subscribe to the belief that in many cases this is a valid mental shortcut to make, it is not universally true and acknowledging this fact is important for the overall framework of reconstruction, as I describe later.

[4] Anglo, *The Martial Arts of Renaissance Europe*, pp. 18-21.

[5] Burkart, 'Limits of Understanding'.

II. CONCEPTS AND DEFINITIONS

II.1. Two Worlds

First, without going into lengthy philosophical discussions about the nature of truth and reality, let us simply postulate the existence of two worlds:

- A Real World in which the physical object (fight book) was created
- An Imagined World described or depicted in a given fight book.

For now we are not going to make any assumptions about the relationship between the two. We are also going to ignore all other subtleties, such as the whole process of conceiving, creating, and recording the imaginary world, or the question of fight book authorship. We are only interested in the fact that these two worlds exist and do not necessarily have to be the same or in extreme circumstances even similar.

II.2. Actors, Roles and Behaviours

Let us begin with a caveat: one can influence the world (real or imagined) through action, but also through inaction. For the sake of further argument such inaction, understood as wilful or involuntary refusal to change the present situation, will also be considered an Action.

There are two types of Agents that act in the world: Actors and Roles.

An Actor is a real or an imagined being (usually a person) defined by their physical characteristics – their capabilities and limitations – even if not described as such in a direct manner. Imaginary Actors include fighters present in a given fight book and real-world Actors include people involved in a fight book's creation or actual combatants. Actors can be successful in their actions or can make involuntary mistakes.

A Role, on the other hand, is defined by a set of adopted Behaviours. A Behaviour consists of a set of Goals. Actions that can be taken to achieve one of the Goals, and Intentions that the Actions serve. Roles are archetypical, symbolic, and contrived. They never fail in their Actions, unless it is intentional. They serve as *exempla* to aspire to and usually are not bound by physical limitations in the way true Actors are. Sample roles include an Attacked or an Opponent.

The difference between Goals and Intentions can be summarised as follows: Intentions are short-term tactical objectives that drive the Action selection and execution, while Goals are long-term strategic objectives which will resolve the encounter in a desired manner. Each Intention manifests as a Decision of when and how to perform an Action. We are ignoring here those Intentions that do not result in an Action due to lack of physical capability of an Actor, because – as mentioned before – Roles never fail to perform Actions, unless it is intentional.

To better understand how these definitions work in practice, let's examine a sample sequence from one fight book:

When you approach him to fight, if he then strikes at you from above (*Oberhau*) from his right side to the head, then at the same time strike him wrathfully (*Zornhau*) at his sword from your right side from above without parrying. If he is weak at the sword, shoot the point far straight forward and thrust him in the face or chest, thus you will set him on.[6]

From this description we can easily discern two Actors ('he' and 'you') and the sequence of actions:

1. Actor A (he) attacks Actor B (you) with an *Oberhau* from the right

2. Actor B defends against this attack by striking a *Zornhau* against the opponent's sword

3. Actor B feels the blade pressure

4. Actor B thrusts Actor A in the face or the chest

We can, however, arrive at a much richer description by translating this into the language of Roles and Behaviours. In the following fragment I marked Roles in **bold**, Intentions in *italic*, Decisions in ***bold italic***, and underline Actions:

Actor A adopts **Role Opp (Opponent, Attacker)** and *intends to hurt* Actor B who adopts **Role Pr (Practitioner, Defender and Intended Audience)**. **Opp** ***decides they can strike an Oberhau***, and underline performs it. **Pr** notices this attack and *wants to ward it off in such a way that* **Pr** *can later immediately perform a follow-up action*, therefore **Pr** ***chooses to strike a Zornhau against the incoming attack***. **Opp** either ***decides*** not to act or has no opportunity to do so. Then **Pr** *wants to attack* **Opp** *in such a way that* **Opp** *will have to defend himself or be defeated*, and based on the blade positions and pressure **Pr** ***selects to perform the thrust in the face or chest*** of **Opp**. **Opp** fails to act and the thrust reaches the intended target. Through this action **Pr** achieves their Goal and concludes the encounter.

The Goals of both Opp and Pr align and do not seem to change throughout the whole encounter – both want to avoid injury and to end the fight in the way that the other will no longer be able to continue. But individual Actions, Intentions that drive them, and Decisions to execute them are opportunistic and situational. As we will also see later, it is much easier for us to discern the Decisions, while Intentions are much harder to divine.

---

[6] Cod. 44.A.8, fol. 13ʳ. Translation by the author.

From this example the difference between a Role and an Actor might not yet be clear enough. An Actor adopts, plays, enacts, or embodies a particular Role when they exhibit a particular Behaviour. For example, in a pictorial source, an Actor with a feathered hat performs the first strike, enacting the Role of an Attacker. Depending on the circumstances they can also be adopting the role of a Practitioner following their master's teachings, or an Opponent – when they are endangering the Practitioner. In another *exemplum* this situation might change and the feathered hat Actor becomes a Defender, while still remaining the Practitioner.

It is important to understand that the Roles themselves do not change, they are constant when considering each written or depicted *exemplum*. However, Actors can switch Roles and embody their different aspects. This switch can sometimes happen in the middle of a sequence (Defender becomes the Attacker), although it is quite rare.

II.3. Roles Relevant to Reconstruction Process

In the process of reconstruction we are significantly more interested in Roles. Actors are ephemeral, an artifact from a particular period, something that during reconstruction must be out of necessity replaced with researchers' own bodies. As such, this division can be seen as an extension to Spatz's concepts of technique and practice: Actors perform practice, while Roles embody the technique.[7] Such techniques are always idealised, archetypical, and transcend physical or mental limitations of an individual Actor.

Let us now examine Roles which we can most commonly encounter in fight books in more detail.[8] For the sake of readability, from now on I am going to forego capitalisation of actors and roles in lieu of the capitalisation of the names of particular roles.

The first and obvious division is between Attacker (somebody who initiates the action aimed at harming the opponent) and Defender (somebody, who reacts to this initial stimuli). Let us stress here that having initiative is not synonymous with being Attacker, and Attacker does not need to actually deliver the blow first. Attacker's wide or slow motion could cause Defender to deliver a faster response, but this does not cause the roles to change. Defender was still reacting to the initial attack action intended or undertaken by Attacker. On the other hand, if an actor performs an action that is not

---

[7] Spatz, *What a Body Can Do*.

[8] The proposed list of roles is a mixture of my own research and well established paleography. It's entirely possible that an application of various role-finding methods from Discourse Role Analysis, such as the one presented recently by Stuhler, can result in an update, but I doubt that the changes will be significant. See Stuhler, 'What's in a Category? A New Approach to Discourse Role Analysis'.

offensive, for example by moving to a different guard or making some kind of a provocation, they do not become Attacker. There is some grey area when feints or complex preparatory actions are being used, but that does not seem to be such a common occurrence in the source material, at least when considering texts from before the sixteenth century. When in doubt, make a first guess and then adjust later.

The division into Practitioners and Opponents is perhaps less obvious. Practitioners are those who either had received the instructions before and the treatise serves them as a reminder, or the audience who will become more knowledgeable – and hopefully skilled – after they internalise the recorded teachings. Opponents are the ones whom Practitioners are expected to encounter and succeed against.

Another role that occasionally appears in fight books is Bad Fencer.[9] It is the person who does not understand how to fight in earnest and commits the most egregious mistakes, which Practitioner should avoid at all costs. Their actions are most often a subset of Opponent's, but it's worthwhile to single them out, as they can sometimes be contrasted with the actions of Master who does everything right.[10]

In some fight books we can also find explicitly mentioned roles of Teacher and their Student.[11] This division is implicit in all sources, because Teacher serves as a vehicle to transmit the actual knowledge contained inside the source and Student is also the Intended Audience. However, these two roles are not particularly helpful during the initial stages of reconstruction. Student's goal is to become as proficient as Teacher. Student's role is embodied by every reconstructor most of the time. Teacher, on the other hand, serves as a role model, a guide, and a clear statement of Student's lower rank. Embodying this role – if possible at all – happens partially when we teach others what we have learned. The act of teaching can give us additional insight into techniques, but can only happen after we have already internalised them, at least partially.

For the sake of completeness let me now briefly describe the most important real world roles that can affect the medium and the transmission:

- *Originator* is the person whose teachings are being transmitted. It does not matter if they were the first person to invent them, but they are the ones who claim their effectiveness and they imagined the world with its Actors where their teachings are effective. Note that the existing attributions do not necessarily correctly point to the true Originator.

---

[9] Exemplified by *Leychmeistre* in Hs 3227a and *Püffel* in Cod. 44.A.8.

[10] Such as crowned masters in various manuscripts by Fiore dei Liberi, including MS M.383 and MS Ludwig XV 13.

[11] See for example Saviolo, *His Practise, in Two Bookes*.

- *Author* is the original author of the wording, regardless whether they were the one who actually put the words on paper, or not. They conceived the material in its current form and they have the message that they want to convey. And even if they claim to be explaining the meaning of the words of the Originator, we are still hearing only the Author's interpretation of what the Originator conceived.

- *Editor* compiled the teachings into their existing form, deciding on the overall content that made it inside the manuscript or the book. They influence what gets omitted and they can change the underlying message by deciding on the order of its parts. Throughout history it is of course possible for multiple people to adopt the Editor's role, especially if a manuscript was rebound, or had missing or recovered pages.

- *Scribe* wrote the words down and/or copied them from another source. They influence the message through their mistakes.

- *Illustrator/Illuminator* created the images that illustrate the Author's world and message. While Scribe's job is pretty straightforward, the Illustrator's job introduces more possibilities of distortion than just words, and as such this role is also qualitatively different. Most often we don't need to differentiate this role further, even though the act of creating illustrations often involved drawing, inking and painting or woodcutting.

- *Intended Audience* is conceived by the Author as imaginary readers that the book was intended for. The message – both its form and content – was tailored for them by definition, taking their worldview, knowledge, skill, and experience into account. Sometimes the Author and the Intended Audience can be the same person (in case of personal notes). This role should not be confused with the actor who embodied it – for example an actual living prince to whom a treatise was addressed. Intended Audience is only the imagination of the actual person in the Author's mind.

- *Actual Audience* are those who actually read or study the source.

One role can be played by several actors, as already mentioned. The actual Originator of the *Merkverse* was supposedly Johannes Liechtenauer, but the Originator of their gloss in Cod 44.A.8 is somebody else.[12] Likewise, several actual scribes fulfilled the role of Scribe during production of Vienna Gladiatoria, and so on.[13]

Diplomatic is mostly interested in the actual actors fulfilling those roles in the real world and their impact on the shape of the sources and transmitted message, but for the

---

[12] Cod 44.A.8, fols 9ᵛ-38ᵛ.

[13] Hils, 'Gladiatoria'.

purposes of reconstruction we are mostly interested in the roles from the world presented in the text: Attacker and Defender, Practitioner and Opponent, Master and Bad Fencer.

II.4. Perspective and Expected Behaviour

At this point we can introduce two final concepts in this paper: Perspective and Expected Behaviour (EB).

Perspective should be understood as the point of view from which things are being assessed. Each agent observes the world and has their own mental model of reality. That model also includes mental simulations or projections of what other agents in this world can do. The set of all such projections of everything that another agent can do constitute that agent's Expected Behaviour. Expected Behaviour is always considered from the Perspective of another agent.

In the real world, agents will most likely be truly independent, but in the imagined one described to us by its Author, the Perspective of each agent is limited by that Author – explicitly or not. Being able to discern which Perspective is being talked about is required to formally define Expected Behaviour, which we shall do later.

Perspective will also allow us to compare skills and knowledge of various roles. Most of the time we will be using Author's perspective, because this is how the teachings are usually presented. Even in the case when Author was different than Originator and purports to relate the words of Originator or explain to us what Originator meant, in the end we only have access to the Author's Perspective. We can therefore assume that their Perspective is default and only mark it when it's different. In the process of recording techniques, a truly objective Perspective does not exist.

III. APPLICATION TO THE RECONSTRUCTION PROCESS

We are now going to apply these concepts to an already existing reconstruction methodology named ADVISE, because its terminology and structure make it very easy to accommodate the necessary changes and to showcase the benefits that stem from this approach.[14]

To accommodate the Two Worlds Concept we switch from the assumption that we are reconstructing 'real-world historical techniques' to the premise that we are attempting to reconstruct the original author's wilful depiction of how personal combat should be (or was) conducted. This outlook relieves us from the immediate need to engage in hypotheticals and to justify the effectiveness of the recorded teachings in the modern real world against all unexpected actions that could have been or can be executed

---

14 Walczak, Bartlomiej, 'Bringing Lost Teachings Back To Life'.

against an actor playing the role of Practitioner. We are no longer looking for the optimal performance overall, but an optimal performance against a limited, pretty much defined set of Behaviours.

Having said that, the process of reconstruction itself is by necessity in many ways a test of the correspondence of the two worlds by the sheer fact of being performed in the real world by real actors. Despite all the caveats and drawbacks, such as supplanting imaginary period trained actors with modern *naïve* ones, as well as all the trade-offs and distortions introduced by training tools, modern methodology and non-martial context, we can still observe how the process of learning changes actors and their ability to perform described actions. Being able to arrive at a convincing execution of imagined actions in modern real world is a significant clue that the teachings may have greater relevance to period combatives or martial practice.[15] On the other hand, the inability to deliver a convincing performance is – of course – less conclusive. There can be numerous reasons why the imaginary actors would have been deemed capable of such a feat, while we today are not; the implausibility of recorded techniques is not the only possible answer.[16]

Another experiment that happens as a by-product of undertaking the reconstruction process independently from others, is the crowdsourcing of ideas, as suggested by Talaga.[17] With all the usual caveats, when multiple groups from varying cultural and martial backgrounds attempt to analyse the same teachings and reach similar conclusions and execution, it is possible to formulate stronger judgement about adequacy or convergence, than when a single group does it alone.

I mention these global experiments only to make the readers aware of such a possibility, and to dispel the impression that the paradigm of not making *a priori* assumptions about the relationship of the imaginary world to the real one makes the reconstruction entirely worthless as a source of possible knowledge. On the contrary, it allows the convergence

---

[15] For the sake of keeping this article within reasonable limits, I am not going to discuss the meaning of the word 'convincing' here. It is highly subjective and depends on martial experience of all actors involved, including those who make the assessment, which is something that also inevitably changes during practice. Such a definition therefore becomes a moving target.

[16] Discussion about which techniques and martial arts in general are 'real' and effective is probably as old as martial arts themselves. It is worth noting that even fencers from the period could have problems envisaging execution of some of the more complex actions, as evidenced for example by the note that Paulus Hector Mair made on the margin of the horseback fighting teachings in Jorg Wilhalm treatise: 'This technique cannot be performed' (Cod.I.6.2°.3 fol. 41ʳ). Similarly, the only teachings for dagger combat that feature actual grabbing – as opposed to intercepting – an opponent's arm with a single hand are ascribed to Martin Hundsfeld. My speculation is that his physique allowed him to successfully execute techniques, which others found challenging.

[17] Talaga, Maciej, 'Crowdsourcing w Służbie Archeologii Wiedzy?'.

(or the lack of) to emerge naturally during practice, instead of forcing it on the subject matter and possibly distorting the practice and the outcome to fit invalid assumptions. However, the actual experiments dealing with correspondence of the real and imaginary worlds constitute a much broader subject that goes well beyond the scope of this paper.

Let us now move on to the details of how we can actually apply the concepts of Roles and Behaviours.

III.1. Phase One – Analysis

Actions that define Behaviours are already present in ADVISE in the form of Elementary Actions (EAs) extracted during the Analysis phase. We only need to enhance the original catalogue of Elementary Actions by ascribing each to one or more roles. The following rules should be used:

- EAs that constitute initial attacks are assigned to Attacker, unless a preparatory action, such as stepping into distance, is explicitly mentioned.

- EAs performed to counter the initial attack are assigned to Defender.

- EAs performed against Intended Audience (usually easily recognized by the phrase 'when someone does this to you' or similar) are assigned to Opponent.

- EAs performed by Intended Audience (usually accompanied by the phrase 'when you want to') are assigned to Practitioner.

- EAs that Practitioner is advised never to perform and all their requirements are assigned to Bad Fencer and also to Opponent.

- EAs that Practitioner are strongly advised to perform to which there are no counters can also be assigned to Master.

- A counter to a particular technique automatically assigns all EAs from the countered technique also to Opponent, and the initial attack to Practitioner. In extreme cases it may also mean that Practitioner can be attributed all other EAs assigned to Attacker.[18]

In the case of aforementioned *Zornhau-Ort* technique, we can establish a very small number of EAs:

- *Oberhau* made by Attacker/Opponent – $EA_{Oberhau}(Opp)$

---

[18] There is a possibility that a given counter was not originally intended against an actual technique that Opponent could perform, but more as a safeguard or an example of when this particular technique was considered vulnerable. However, from our point of view these options are indistinguishable and we should rather err on the side of teaching being less original and Opponent more being more skilled, than on Author being overly cautious.

- *Zornhau* made by Defender/Practitioner – $EA_{Zornhau}(Pr)$
- *Thrust* made by Defender/Practitioner - $EA_{thrust}(Pr)$

Note, that we are not forgoing the original categorisation of EAs into attacks and defences. While Defender can still perform attacks and Attacker can still defend, this original division still has its important place in the process.

Through this process we can determine Actions. Therefore my suggestion is to rename this phase to 'Actions'.

To have the full description of Behaviours, we still need Goals, Decisions, and Intentions. These are handled in the second phase.

III.2. Phase Two – Division into Groups

Before any EA is executed, it needs to be selected from all possible options. This selection process is informed in the long run by the Goal and immediately by an Intention. The Intentions are usually very hard to discern from the text, therefore at first we focus on the Decisions (D, formerly Decision Points), which are usually quite explicit. Also, after an EA is executed and the Goal has not been achieved, there is a need to follow up.[19] The *exempla* in the source material almost always present a single – though sometimes diverging – possible chain of EAs and Ds, leading to some kind of resolution (G). Interestingly, the expected result is hardly ever explicitly described. The sequences usually end with some final EA, such as 'stab him in the face', 'strike him to the head', or 'break his arm', but also 'and you can take his dagger away' or 'and this way you can throw him'.[20] The overall Goal seems to be ending the confrontation in one's favour. The exact manner, however – killing, incapacitation, wounding, or disarming – is hardly ever specified beforehand and has to be inferred. Occasionally we can also encounter an ending that refers to the rules of engagement, such as 'then lead him towards the ring'.[21]

An inventory of these final EAs and expected results for each Role gives us insight into their Goals and frames the encounter. This will inform and drive the later phases of reconstruction, especially Verification and Synthesis. We might also find out that the Goals of Practitioner and Opponent are slightly different, indicating the asymmetrical nature of the fight.

---

[19] While it is true that during real world practice and confrontations almost everyone happens to execute some number of EAs without a clearly defined intent and – more importantly – a follow-up, this is never a case in *exempla* provided in flight books. In the idealised world all techniques are reduced to essential motions executed in perfect conditions for the Goal to be realised. Suboptimal execution is only present when a counter is described.

[20] All these examples are taken from Cod. 44.A.8, but are common to other sources as well.

[21] Possibly the ring of straw that circumvented the field of judicial combat. Cod. 44.A.8, fol. 69ᵛ.

Decisions as to which EAs execute – how, when and in what order – are being made at different times during fight, especially for complex actions such as feints or compounded attacks. Repeated practice usually reveals the time window within which a given Decision (D) has to be made for an EA to still remain a viable option. The length of that window is to a large extent situational, depending on actual actors, specifically their physical and mental limitations and their skills.

Describing these windows is notoriously difficult. A technique can only be successful if the ongoing act of observation begins a Decision Process (DP) which results in an actionable Decision (formerly Decision Point), and the next EA is executed before the time window closes. Originally ADVISE collapsed all this into a single Decision Point, but because we need to introduce the concept of inaction that often results from the incomplete Decision Process, we need to take that into account and expand the definition.

We can apply the following heuristics when extracting DPs and Ds:

- when a particular agent retains initiative, DPs divide each EA and each DP is punctuated by an actionable D,

- D is always a precursor to EA,

- when an EA execution chain is broken and the initiative is seized, it means that opposing agent's DP reached D during that EA execution.

- when an agent does not undertake any action when they could be, we should mark it as an incomplete DP.

- if another technique (B) shows a counter or an action where technique A had none, we should retroactively mark an incomplete DP in A.

In effect, each technique can now be reduced to a chain of successive EAs, DPs, and Ds, even if the actual practice is more complex. For convenience we can collapse a successful DP and D into a simple D. Let us go back to the initial example of the *Zornhau-Ort* sequence and attempt to identify these elements:

$$D_{attack}(Opp) \rightarrow EA_{Oberhau}(Opp) \qquad \rightarrow DP_{inaction}(Opp) \qquad \rightarrow DP_{inaction}(Opp)$$
$$\rightarrow D_{recognition}(Pr) \rightarrow EA_{Zornhau}(Pr) \rightarrow D_{Fuehlen}(Pr) \rightarrow EA_{thrust}(Pr) \rightarrow G(Pr)$$

DPs are important for us to attempt to understand the Intention behind each EA. First, Opponent Decides to perform the attack and chooses the EA of an *Oberhau*. Before the execution finishes, Practitioner needs to recognise the incoming attack ('if he strikes at you from above') and make a Decision to execute their own response (*Zornhau*). Next, as soon as the blades meet, Practitioner needs to make another Decision ('if he is weak') and perform the final EA, this being the thrust to the face or the chest. When that happens, the sequence is concluded, and we assume that Practitioner achieved their Goal.

The initial Decision of Opponent/Attacker is not mentioned explicitly, but it must be present for the initial attack to happen and for the response to also be adequate to the presented threat. Similarly, the Opponent's Decision Process that does not reach the Decision is required for the technique to succeed twice, otherwise they would have retaken the initiative, at least for a moment, which is actually described in the follow up *exemplum* defining *Abnehmen*:

> When you strike him with the wrathful cut (*Zornhau*), drive your point far towards his face or breast as described before. If he defends by deflecting your point and strongly sets it aside, then travel with your sword on his blade upwards, leaving his sword, and strike him to the other side […].[22]

The remaining part of this *exemplum* is not important for this argument, and neither are the details about its setup. What is clearly shown here is that Opponent prevents Practitioner from reaching the Goal with the use of the first *Zornhau* technique by executing a timely defence, which required them to finish the Decision Process and reach their own Decision before the thrust arrived at its target. We could write it down like so:

$$\rightarrow DP_{inaction}(Opp) \qquad\qquad \rightarrow D_{deflection}(Opp) \rightarrow EA_{deflection}(Opp)$$
$$EA_{Zornhau}(Pr) \rightarrow D_{Fuehlen}(Pr) \rightarrow EA_{thrust}(Pr) \qquad\qquad \rightarrow D_{Abnehmen}(Pr) \rightarrow EA_{Abnehmen}(Pr) \rightarrow$$

Practitioner successfully recognizes that the defence is not endangering them (Decision Process reaching a Decision) and immediately continues with another attack.

Phase two of ADVISE depends on examination and exploration of these Decision Processes, both successful and failed. Focusing on them and practicing different variations we begin to notice when a particular Decision remains optimal and when it seems better to switch to another (already known) EA. Through repeated practice we get a better mental and embodied understanding of Actions and Intentions that drive them and each role's Goals in a way that far exceeds the semantic layer of the recorded teachings. Thanks to this repeated practice we can arrive to the more verbose and nuanced description of the *exemplum* presented earlier, such as:

Actor A adopts **Role Opp (Opponent, Attacker)** *intends to hurt* Actor B. B adopts **Role Pr (Practitioner, Defender and Intended Audience)** and *decides he can strike an Oberhau*, and <u>performs it</u>. **Pr** notices this attack and *wants to ward it off in such a way that* **Pr** *can later perform a follow-up action*, therefore **Pr** *chooses to <u>strike a Zornhau against the incoming attack</u>*. **Opp** either *decides <u>not to act</u>* or <u>has no opportunity to do so</u>. Then **Pr** *wants to attack* **Opp** *in such a way that* **Opp** *will have to defend himself or be defeated*, and based on the blade positions and pressure **Pr** *selects to <u>perform the thrust</u>*

---

[22] Cod. 44.A.8, fol. 13ᵛ. Translation by the author.

in the face or chest of **Opp**. **Opp** <u>fails to act</u> and the thrust reaches the intended target. This achieves the Goal of **Pr** and concludes the encounter.

The process outlined above helps to formalise the second (Division into Groups) phase of ADVISE and more easily uncovers the tactical layer of the teachings – something that previously was not really well defined in that methodology. By focusing practice on exploring DPs and asking direct questions about Decisions and Intentions, tactics emerge naturally and spontaneously. This framework allows us also to be more specific in defining individual experiments and describing their results. Therefore my another suggestion is also to rename this phase to 'Decisions'.

The outcome of this phase should also give us each role's Expected Behaviour from Author's perspective.

III.3. Phases Three, Four, and Six – Verification, Interpolation, and External Input

Defining Expected Behaviours for various roles has significant impact on the Verification phase of ADVISE. Thanks to these constraints we can now have more clarity and liberty to assume various roles and switch between them during practice. We are less prone to introduce anachronisms and contaminations into the original material, when we act within the confines of discovered EBs. Asking actors to restrict their behaviours to EBs of a particular role also makes the criteria on how to judge our mastery of execution much stricter. Verification no longer forces practitioners to stretch their interpretations to handle cases beyond their original intended use and over-optimise the execution, because they are not part of the imagined world. And at the same time researchers are still free to do so as part of an actual experiment.

Interpolation is not significantly affected by the new concepts except from receiving additional focus on following EBs of particular roles which helps to reduce the number of possible options and make it a more guided exercise.

We will handle the changes in the Synthesis phase in a section below.

As far as External Input goes, it is not significantly influenced either. The inclusion criteria for external material now expand by adding the rule of not altering EBs of existing roles.

III.4. Phase Five – Synthesis and Formal Notation

Thanks to the concepts introduced above, we can now also perform Synthesis in a much more formal way. To this effect we shall borrow notation from set algebra, something that has previously been attempted.[23]

Let us start with formal definition of Expected Behaviour:

Interacting sets of Elementary Actions (EA), reached Decisions (D), revealed Intentions (Int), and achieved or desired Goals (G) assigned to a particular Role form an Expected Behaviour (EB) of that Role from the Perspective of the Author of the teachings.

Here is this statement described using the set notation ($\odot$ denotes any interaction between the sets):

$$EA(Role) = \{ EA_1, EA_2, \ldots, EA_n \}, \text{ where } EA_i \text{ is assigned to Role}$$

$$D(Role) = \{ D_1, D_2, \ldots, D_n \}, \text{ where } D_i \text{ is assigned to Role}$$

$$Int(Role) = \{ Int_1, Int_2, \ldots, Int_n \}, \text{ where } Int_i \text{ is assigned to Role}$$

$$G(Role) = \{ G_1, G_2, \ldots, G_n \}, \text{ where } G_i \text{ is assigned to Role}$$

$$EB(Role|Auth) = EA(Role) \odot D(Role) \odot Int(Role) \odot G(Role).$$

As previously mentioned, Author's Perspective is often the default one, so let's define it as such:

$$EB(Role) = EB(Role|Auth)$$

Of course, the Expected Behaviour is not everything that an agent can do during an encounter. To account for that let us introduce another term – *Unexpected Behaviour* (UB) – that describes everything else that is not EB (is complementary to EB):

$$UB(Role) = EB(Role)^C$$

This relationship is only valid when the same perspective is used. Strictly speaking, when an Actor exhibits the UB(Role), they are no longer adopting that Role. This is the crucial difference between an Actor and a Role – a given Role is *always* defined by its EB. An Actor is free to switch between various Roles.

The concept of UB is particularly useful, when we begin looking at different perspectives and advantage that the teachings are supposed to bring:

---

[23] Talaga and Talaga, 'Do You Even Zornhaw? A Set-Theoretic Approach to HEMA Reconstruction'.

- *Mastery Advantage* – optimising the decision and execution process by removing ineffective techniques used by Bad Fencer (BF) – usually a reduced set of EAs, different Ds.

- *Novelty Advantage* – teaching new, more effective techniques used by Master/Teacher (MT) – new EAs, sometimes new Ds.

In total then, the Advantage is:

$$EB(Pr) = EB(Opp) \setminus EB(BF) \cup EB(MT)$$

Obviously, Master never performs any Bad Fencing:

$$EB(MT) \times EB(BF) = \emptyset$$

The Novelty Advantage is particularly useful, because Practitioner's Expected Behaviour will be Unexpected to his Opponent, who will, for instance, not be familiar with recorded techniques and thus sufficiently surprised by an unexpected attack[24] that makes their Decision Process longer or an unknown counteraction that nullifies their own attacks.

$$EB(MT\,|\,Auth) = UB(MT\,|\,Opp)$$

Of course, Author does not know what the Unexpected Behaviour of Practitioner's Opponent is going to be, because then by definition it would not have been Unexpected or the actor would no longer be adopting the role of Opponent.

$$UB(Opp\,|\,Auth) = \emptyset$$

The general idea of all teachings seems to be to minimise the Opponent's Unexpected Behaviour (preparation), while attempting to retain one's own Unexpected Behaviours in relation to the Opponent (element of surprise).

$$UB(Opp\,|\,Pr) \rightarrow \emptyset$$

$$UB(Pr\,|\,Opp) \rightarrow UB(MT\,|\,Opp)$$

All this allows us to make a number of both qualitative and quantitative statements and general observations that would be otherwise difficult or even impossible:

- *G(Opp)* $\cup$ *G(Pr)* defines the way the encounter can end.

- *G(Opp)* $\times$ *G(Pr)* being significantly smaller than *G(Opp)* $\cup$ *G(Pr)* points to asymmetrical combat with differing goals.

- *EB(Pr)* $\cup$ *EB(Opp)* defines all possible actions in the imagined world.

---

[24] The *Schielhau*, which according to the author of Hs 3227a is the cut that 'few masters know anything about, can possibly be an example of such a technique.

- *EB(Att)* gives us the list of all possible initial attacks covered in the treatise.

- *EB(Def)* gives us the list of all possible defences against initial attacks covered in the treatise.

- *EB(Att)* ✕ *EB(Def)* gives us all actions that can be used for both offence and for defence

- *EB(Pr)* should ideally be an improvement over *EB(Opp)*

- *EB(MT)* ∖ *EB(Opp)* describes the novelty of the teachings

- *EB(Pr)* ∖ *EB(Opp)* is the informational advantage that the teachings are supposed to give the Intended Audience after they internalise and embody them.

- *EB(Opp)* ∖ *EB(Pr)* ∖ *EB(BF)* gives us mistakes or discouraged – but not yet egregious – behaviour that Intended Audience should avoid.

- If *EB(Pr)* ≋ *EB(Opp)*, then we might assume that the teachings are not extremely novel, and the knowledge is most likely common. It's also very likely that the combat is pretty much symmetrical.

- If *EB(Pr)* differs significantly from *EB(Opp)* and *EB(Opp)* ≋ *EB(Att)*, then we are most likely looking at the situation of self-defense and possibly highly asymmetrical combat.

This notation is not really required to perform any practical reconstruction, therefore I do not expect it to be widely adopted in the field, but it still gives us a common, well-defined language for performing concise, high-level reasoning about the content with more discipline and less vagueness than using purely descriptive methods.

IV. DISCUSSION

By applying the concepts of Two Worlds, Roles, Actors, and Behaviours towards fight book reconstruction we arrive at the notions of Expected and Unexpected Behaviours and Perspective. These allow us to perform additional analysis and reasoning about the content and context of fight books.

If we assume that the extracted Practitioner's Expected Behaviour is the model for Intended Audience to follow, imitate, and apply, while Opponent's Expected Behaviour presents obstacles that Intended Audience could have encountered and should be able to overcome, we can distil the educational component regardless of its actual presentation and whether the intended purpose of a particular source was educational or not.

Of course, the confrontation of the imaginary world with reality can have different results than Author intended, mostly due to Unexpected Behaviours of opposing Actors, different contexts, and other external factors, but also because of the possible incompatibility of the imagined world with actual physical reality, even during the period when the ideas were conceived and recorded.

Being Unintended Audience of fight books means that there exists a gap that any reconstructor always has to bridge. The differences, as compared to Intended Audience, are numerous and are not limited to just physical and cultural traits. One of reconstruction's goals is to minimise them through various means, including strict methodology, historical/archaeological education, reconstruction of tools, and the training of one's body. The question of how close we can converge has been the subject of much ongoing research.[25]

The general attitude of some scholars that purports essential, qualitative difference between modern and fourteenth/fifteenth-century practitioners can definitely be taken as a precaution, but should not prevent us from continuing our efforts. Such experiments have already shown the incorrectness of arbitrary statements about feasibility or realism of the depicted world, such as the one expressed by Anglo about I.33 foot positions being unrealistic.[26] These boundaries are stretched more and more with each new hands-on experiment. Therefore, bridging the gap between Unintended and Intended Audience does not seem impossible, despite being a very real challenge. And every step on this journey deepens our understanding of period combatives and abilities of human body.

Confronting interpretations with Unexpected Behaviours is of course possible and can also be an interesting experiment to be performed during the Verification or Synthesis stages. However, such UBs should never be a force that drives us to alter the reconstruction only to make sure that they are covered by the interpretation. While this would be a natural direction to go if we wanted to expand and evolve the original teachings, or make them applicable in modern times, it moves us away from the model described by EBs and more towards the realm of 'recreating' or 'experiencing', rather than 'reconstructing' or 'experimenting'.[27]

Therefore, the first step of reconstruction should always be to model the encounter between Practitioner and Opponent, each role constrained by their own EBs, as this is the default perspective offered by Author. This of course sets Opponent at a

---

[25] See Jaquet et al, 'Range of Motion and Energy Cost of Locomotion of the Late Medieval Armoured Fighter'; Talaga et al 'Archaeology of Motion. Experiencing the Past through Embodiment'; Talaga 'Getting Medieval on the Body. Preliminary Results of an Autoethnographic Study on Late-Medieval Fitness'.

[26] Anglo, *The Martial Arts of Renaissance Europe*, p. 45.

[27] Jaquet, 'Experimenting Historical European Martial Arts, a Scientific Method?'.

disadvantage, but is a necessary exercise, especially for perfecting execution of each Elementary Action and their chaining into various techniques.

Conversely, setting the EBs of Attacker and Defender as general constraints, we can also attempt to model combat between two individuals of equal understanding of the recorded teachings, such as two students of the same master. This can be another interesting experiment on its own, possibly transferring us mentally more into the sixteenth century, when the secret knowledge had already spread, at least when it comes to longsword combat, and when the element of surprise seems to have played a much lesser role, and personal skill was of greater importance. Certainly, new techniques and counter techniques would appear out of necessity, and one could argue, that to some extent this is what we are seeing today with the tournament scene in HEMA. Still, if we do not stray too far from the constraints, it remains a valuable tool.

Finally, allowing both reconstructors to utilise all EBs creates the field for a symmetrical combat with very little constraints, though in some cases it can lead to enacting completely fictional scenarios. For example, symmetrical dagger combat seems to be an oddity rather than the norm, but it is extremely difficult to simulate the supposed nature of original confrontations where this weapon was actually used in earnest.

I hope that I have been able to present enough advantages that adopting the Actor/Role/Behaviour approach and the formal notation brings to the methodology of reconstruction. As the conclusion of this section, I recommend that the described process gets incorporated into ADVISE and also that the first two phases are renamed to respectively 'Actions' and 'Decisions' to better reflect their current main focus, giving us the following new names:

1. Actions
2. Decisions
3. Verification
4. Interpolation
5. Synthesis
6. External Input

V. CONCLUSION

In this paper I introduced a new approach to fight books and from there derived several new concepts to enhance the process of Historical European Martial Arts reconstruction.

First, treating fight books as literary devices and their contents as worlds imagined by their authors allows us to perform a significant amount of internal textual critique without an immediate need to address the subject of plausibility and correspondence of

the content with reality, whether past or present. Thanks to this approach we can identify roles and actors involved in the process, both imaginary and real. This then lets us extract the educational element of a particular fight book and perform another important analysis: identifying the Elementary Actions carried out by each role, Decisions they made, their Goals and Intentions, all of which culminates in describing their Expected Behaviours.

Introducing this additional layer into the hands-on reconstruction frees us from the burden of proving the validity of the teachings. It is no longer necessary to immediately find an optimal real-world execution. The reconstruction can happen within the confines of the imaginary world, and its confrontation with other ideas or real world application can be just another experiment that we perform, not the driving force of the whole process. This of course should not detract us from attempts to perfect our understanding and execution, but is more inclusive and allows various levels of participation.

Secondly, this approach hopefully settles the ongoing epistemic argument of what actually gets reconstructed. Practitioners often claim that their efforts lead towards reconstruction of combat 'as it was'. Historians rebuke this by suggesting the impossibility of comparison of the reconstructed performance and the ephemeral nature of actual practice, sometimes stressing this to the point of absurdity.[28] By shifting the perspective from attempts to reconstruct a piece of history towards attempts to replicating the world described in the manuscripts, we eliminate the need to justify the connection between the modern and historical reality, resolving at least one of the issues. Additionally we then also stop pretending to be reconstructing 'the optimal technique that would work in the real world'. This line of reasoning inevitably ends up with questions about context and situations not described in the source material, leading to distortions of the execution required to succeeding under a different set of constraints present in modern day competitions. By switching 'the real world' with the imagined, described, and orderly world, we manage to avoid this pitfall altogether.

Thirdly, for reconstruction this step provides additional structure in terms of clearly defining what the constraints are, as well as the possibility of coming up with various experiments, including (but not requiring) those with various Unexpected Behaviours. By framing the reconstruction in this way, we are fully justified in reducing the technical repertoire of practitioners to those elements which are clearly described, but at the same time we can still construct open exercises and confrontations that allow for more

---

[28] For instance, during his presentation at a conference in at the Deutsches Klingenmuseum in Solingen in 2017, Rainer Welle put forth an argument that even if we had a movie which recorded wrestling practice in the Middle Ages, we would not be able to reconstruct it because of the impossibility of recording execution nuances on film.

athletic performance and search for more refined and more effective execution under stress.

In response to potential criticism, I would like to add that I am not avoiding the issue of establishing correspondence between the real and imagined world of fight books. As already suggested, to a certain extent the process of reconstruction can give us, if not answers, then at least significant hints in this regard. If we end up with techniques impossible to execute, despite our repeated attempts and best effort, if we still find holes in the interpretation, and the cross-source experimentation fails to yield useful results, then perhaps the discrepancy between the two worlds is real, and the teachings are more a wishful thinking rather than actual working advice. If we experience the contrary – many independent reconstructions arriving at the same conclusion – this suggests that the correspondence between the imagined and real is more plausible.

What is left unresolved is the extent to which the performance in the modern world can approximate what could have happened in the past. This gap will most likely never be fully bridged, but if we are able to make a successful, rigorous, and repeatable reconstruction, then we are at least proving that the author's ideas are possible to translate from the imagined world into the real one, even if modern.

I hope to have demonstrated, that this new approach can successfully solve some of the problems, which the reconstruction of Historical European Martial Arts currently struggles with, enhance an existing methodology and make it more focused and rigorous. Thanks to it we can deepen our analysis and practice and have a common language to better describe our experiments and their results, which is always a good thing.

VI. BIBLIOGRAPHY

VI.1. Primary Sources
Augsburg, Universitätsbibliothek Augsburg, Cod.I.6.2º.3

Los Angeles, J. Paul Getty Museum, MS Ludwig XV 13

New York, Morgan Library & Museum, MS M.383

Nuremberg, Germanisches Nationalmuseum, Hs 3227a

Rome, Biblioteca dell'Accademia Nazionale dei Lincei e Corsiniana, Cod.44.A.8

Saviolo, Vincentio, *His Practise, in Two Bookes* (London: John Wolff, 1595)

VI.2. Secondary literature
Anglo, Sydney, *The Martial Arts of Renaissance Europe* (New Haven and London: Yale University Press, 2000)

Burkart, Eric, 'Limits of Understanding in the Study of Lost Martial Arts: Epistemological Reflections on the Mediality of Historical Records of Technique and the Status of Modern (Re-)Constructions', *Acta Periodica Duellatorum*, 4/2 (2016), 5–30 <https://doi.org/10.36950/apd-2016-010>

Hils, Hans-Peter, 'Gladiatoria: Über Drei Fechthandschriften Aus Der Ersten Hälfte Des 15. Jahrhunderts', *Codices Manuscripti*, 13 (1987), 1–54

Jaquet, Daniel, 'Experimenting Historical European Martial Arts, a Scientific Method?', in *Late Medieval and Early Modern Fight Books: Transmission and Tradition of Martial Arts in Europe (14th-17th Centuries)*, ed. by Daniel Jaquest, Karin Verelst, and Timothy Dawson (Leiden: Brill, 2016), pp. 216–43 <https://doi.org/10.1163/9789004324725_010>

Jaquet, Daniel, Alice Bonnefoy-Mazure, Stéphane Armand, Caecilia Charbonnier, Jean-Luc Ziltener, and Bengt Kayser, 'Range of Motion and Energy Cost of Locomotion of the Late Medieval Armoured Fighter: Confronting the Medieval Technical Literature with Modern Movement Analysis', *Historical Methods: A Journal of Quantitative and Interdisciplinary History*, 49 (2016), 1–18 <https://doi.org/10.1080/01615440.2015.1112753>

Spatz, Ben, *What a Body Can Do: Technique as Knowledge, Practice as Research* (London: Routledge, 2015)

Stuhler, Oscar, 'What's in a Category? A New Approach to Discourse Role Analysis', *Measure Mohr Culture*, 88 (2021), <https://doi.org/10.1016/j.poetic.2021.101568>

Talaga, Maciej, 'Crowdsourcing w Służbie Archeologii Wiedzy? Perspektywy Integracji Pracy Naukowców i Amatorów Na Przykładzie Rekonstrukcji Historycznych Sztuki Walki', in *Rejestry Kultury*, ed. by Ksenia Olkusz (Wrocław: Ośrodek Badawczy Facta Ficta, 2019), pp. 141–61

Talaga, Maciej, 'Getting Medieval on the Body. Preliminary Results of an Autoethnographic Study on Late-Medieval Fitness', *The Past Has a Future! 2ⁿ Scientific Conference of the Faculty of Archaeology*, 2021, pp. 48–9 <https://www.archeologia.uw.edu.pl/wp-content/uploads/2021/03/2-konferencja-WAUW-program-new02.pdf> [accessed 7 February 2022]

Talaga, Maciej, Krzysztof Janus, and Jakub Wrzalik, 'Archaeology of Motion. Experiencing the Past through Embodiment', *Historyka : Studia Metodologiczne*, 51 (2021), 157–81 <https://doi.org/10.24425/hsm.2021.138369>

Talaga, Maciej, and Szymon Talaga, 'Do You Even Zornhaw? A Set-Theoretic Approach to HEMA Reconstruction', *Acta Periodica Duellatorum*, 6 (2018), 151–81

Verelst, Karin, Timothy Dawson, and Daniel Jaquet, 'Introduction' in *Late Medieval and Early Modern Fight Books: Transmission and Tradition of Martial Arts in Europe (14th-17th Centuries)*, ed. by Daniel Jaquest, Karin Verelst, and Timothy Dawson (Leiden: Brill, 2016), pp. 7–27 <https://doi.org/10.1163/9789004324725_003>

Walczak, Bartłomiej, 'Bringing Lost Teachings Back To Life – a Proposed Method for Interpretation of Medieval and Renaissance Fencint Manuals', *Ido Movement for Culture*, 11/2 (2011), 47–54

Welle, Rainer, '...*Und Wisse Das Alle Höbischeit Kompt von Deme Ringen': Der Ringkampf Als Adelige Kunst Im 15. Und 16. Jahrhundert : Eine Sozialhistorische Und Bewegungsbiographische Interpretation Aufgrund Der Handschriftlichen Und Gedruckten Ringlehren Des Spätmittelalters* (Pfaffenweiler: Centaurus-Verlagsgesellschaft, 1993)