COMBAT WITH SWORD AND SHIELD

Armored Sword and Shield Combat on Foot in the High Middle Ages

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The emperor has commanded the trumpets to be sounded and the French to dismount and arm themselves with hauberks and helmets and gilded swords. They have noble shields and lances both large and strong, and their pennons are of white and vermilion and blue.
The Song of Roland

INTRODUCTION

There has been tremendous interest over the last few decades in using medieval sources to understand, and even recreate, historical combat systems (see "fight books" below). One area that has received little attention, however, is the art of fighting on foot with sword and shield in armor, which is hardly surprising since there are no extant sources which detail this important art. What work has been done has, unfortunately, sought to interpret this art from very different systems, all of them relating to unarmored combat and using shields which were very different from those in use by medieval men at arms in the High Middle Ages. This writer believes that approach to be inherently flawed.

In this paper, we will take a different approach: We will attempt to understand armored sword and shield combat by examining medieval manuscript paintings and contemporary chronicles of the time. This approach will not—cannot—enable the development of a fully formed martial system on par with what modern students have been able to do with the works of later masters for the simple reason that these sources were never intended to be used for instruction and were not created to show the kind of accuracy and detail such a project would require. Instead, we will limit ourselves to understanding the broad outlines of how such combat was conducted with an eye towards understanding how it worked, even if we cannot recreate how to do it.

PART I: BACKGROUND

MEDIEVAL ARMOR

The armor of the Middle Ages can be roughly broken into three broad periods, *viz.*, The Age of Mail (c. 1000-1250 CE), The Transitional Period (c. 1280-1390 CE), and The Age of Plate (c. 1390-1500 CE); other breakdowns might be devised, but these describe the process well enough for our purposes. These somewhat artificial groupings notwithstanding, the entire era can be seen as a gradual transition from the partial mail of the early Middle Ages; to the full mail of the twelfth century with a few small pieces of plate added on the knees, etc.; to the mix of mail and plate of the Transition; to, finally, the full plate of the fifteenth century supplemented by small patches of mail to cover the vulnerable gaps between the plates.

Figure 1: Early mail harness, Psalter of St. Louis c. 1200.

Mail

Mail (often erroneously called "chain mail," see Blair 1959 pp. 20-23) is a defense constructed of interlocking iron rings fashioned into a "fabric" to cover the body and limbs. "European mail appears to have been composed invariably of circular rings arranged so that each one has four others linked through it. The rings themselves are always of one of two types: riveted (each made of a short length of wire with its two ends flattened, overlapped and joined by a rivet), or solid (made without any join)." (Id. pp.19- 20.)

A "hauberk" is a coat of mail (id. p. 23); by the twelfth century, hauberks had grown to fully encompass the wearer from thighs to neck and had full, close-fitting sleeves (id. p. 27). The head was covered by a coif of mail from the beginning of the period, even under the helmet when one was worn (id. p. 25). The legs were covered with mail chausses starting in about 1150 (id. p. 28). By the last quarter of the twelfth century it had become popular to extend the sleeves of the hauberk into mail mittens called "mufflers" (id. p. 29).

Padding

From the middle of the twelfth century, quilted garments called "aketons" began to be worn under the hauberk (id. p. 33) as shown in Figure 2. Aketons should not be confused with gambesons, which were "often described in early inventories as being made of silk or some other rich material, decorated with embroidery and coats-of-arms" (id.). Aketons were worn under the hauberk, while gambesons were worn over it (or sometimes just over aketons). Padded caps called "arming caps," sometimes reinforced with rings of padding, were often worn over or under the coif to pad the helmet (id. p. 34). Quilted thigh defenses called "gamoboissed cuisses" were worn first under, and then over, the mail chausses from the beginning of the thirteenth century (id. p. 35).

Figure 2: Aketons in the Maciejowski Bible Ms M. 638 c. 1240.

Plate

The first piece of plate added to the medieval man at arm's harness was the helmet. These started out as small caps of iron, and can be seen from the beginning of the period (id. p. 25); helmets which fully enclosed the head were seen from as early as 1230 CE (id. p. 30). Plates of iron were added to the shins, knees, and elbows starting in about 1250, and were quite common by the end of the thirteenth century (id. p. 37). This trend of adding plates continued through to the end of the period, but fully articulated arm harnesses of plate can be found by about 1340 (id. p. 45).

While body defenses of smaller plates or hoops were worn going back into antiquity, the first solid body armor of the Middle Ages was called the *cuirie* (root of the word "cuirass"). This term first appears in texts of the third quarter of the twelfth century and continues to be seen until the middle of the fourteenth, and refers to a leather body covering of hardened leather ("cuir bouilli") worn over the hauberk but under the gown or surcoat (id. p. 38). By the first decade of the fourteenth century cuirie were superseded by coats of plates consisting of iron plates of various sizes riveted to a fabric or leather shell and worn over the hauberk (id. p. 40). Because of the sloppiness of language in medieval records and the depiction of covering garments worn over the armor it is difficult to say when cuirasses of full plate first appeared, but they were certainly common by the late fourteenth century.

The Transitional Period is so named because it refers to the transition from armor made primarily of mail with some reinforcement by small plates to the introduction of full plate harnesses which completely enclosed the wearer with small bits of mail worn to cover the joints. During this period, a variety of methods for improving the protection armor provided were attempted, including reinforced leather, scale defenses of various sorts, and more. As a result of this

development in armor, one-handed weapons began to lose favor in foot combat as the fourteenth century progressed, although they were still used on horseback. As a result, shields were discarded to free up the left hand for the longer weapons and because the armor made shields less necessary. Thus, the sword and shield form fell into disuse in foot combat as the Transitional Period progressed.

Our Model

It should be obvious that the nature of the harness worn must have a very telling effect upon the techniques used in combat. For that reason, in this paper we will use as our base model the effigy of Sir Roger de Trumpington dating from 1289 located in the Church of St. Mary and St. Michael in Cambridgeshire, England, although we will discuss how other harnesses might change things, too. During the civil war between the barons and King Henry III, Sir Roger fought on the side of the king and was present at the famous battle of Evesham in 1265. In 1270, he accompanied Prince Edward, Henry III's heir, on the seventh Crusade. Eight years later the prince, now King Edward I, drew up a list of thirty-eight knights to take part in a tournament at Windsor Park, one of whom was Sir Roger. He died in 1289, and is the only known Crusader to be represented in a brass in England (Horowitz 2002 pp. 16-17). This harness is beautifully representative of the fully armored man at arms of the High Middle Ages at the height of the sword and shield period, and is thus perfect for our purposes.
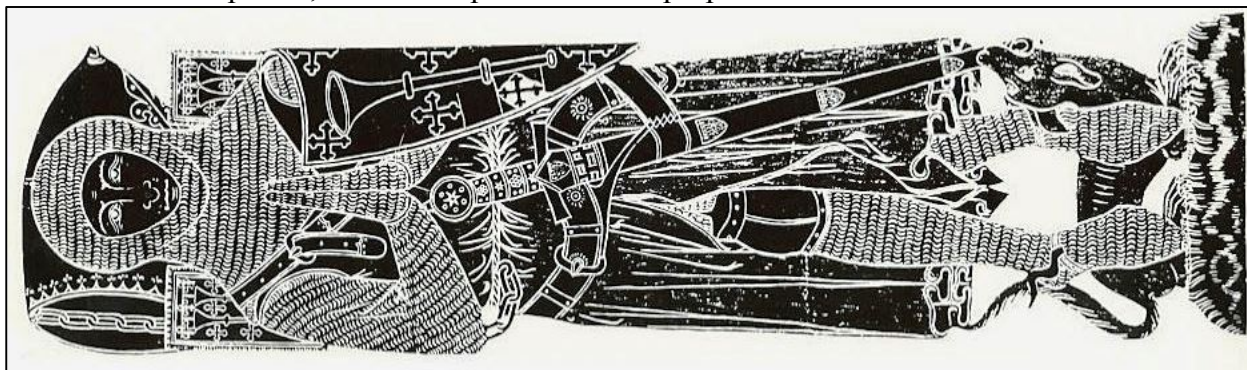

Figure 3: Sir Roger de Trumpington, c. 1289.

Sir Roger is wearing a great hauberk which extends from his neck almost to the knee, and which includes long, tight-fitting sleeves terminating in mail mufflers. The narrow line shown on the wrists indicates the leather strap used to tighten the mail at the wrists; these are necessary since that section of the sleeve has to be wider and provided with a slit so that the hand can be inserted into the muffler from the sleeve. While not represented on the effigy, we will presume that Sir Roger is wearing an aketon under his hauberk since they were fairly universal by this date. He is also wearing a gown or surcoat over his harness.
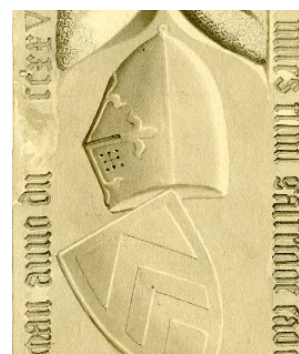

Figure 4: Sir William de Staunton c. 1320.

On his legs, Sir Roger has full-length mail chausses (leggings) which completely enclose the leg. The blank spot on the leg above the poleyn (knee armor of iron) probably indicates gamboissed cuisses (thigh armor), to which the poleyns are attached; otherwise, that spot would be shown as being covered in mail.

Sir Roger is wearing a mail coif which is separate from his hauberk. Judging by the artificial shape of his head in the effigy, he is probably wearing a padded arming cap to support the helm under the coif, and/or possibly a small metal cap. His head is resting on a helmet of a style sometimes called a "sugar loaf" (for its resemblance to the cones of sugar used in the past) which were popular in the last quarter of the thirteenth century (Blair 1959 p.47). The effigy of Sir William de Staunton in Figure 4 depicts a similar helmet.

The small rectangular shapes on either side of Sir Roger's shoulders are almost certainly what are termed "ailettes." At one time these were argued to be protective in nature, but Claude Blair makes it plain that interpretation is not supported by the records—they were simply decorative, and too flimsy to have had any defensive purpose (id. p. 46).

MEDIEVAL SWORDS

The designs of swords changed throughout the course of the Middle Ages, partly in response to fashion, but largely in response to the changing nature of the armor in common use at the time. Ewert Oakeshott created a typography of medieval swords (see Figure 5) which makes for easier discussions of type (Oakeshott 1960).
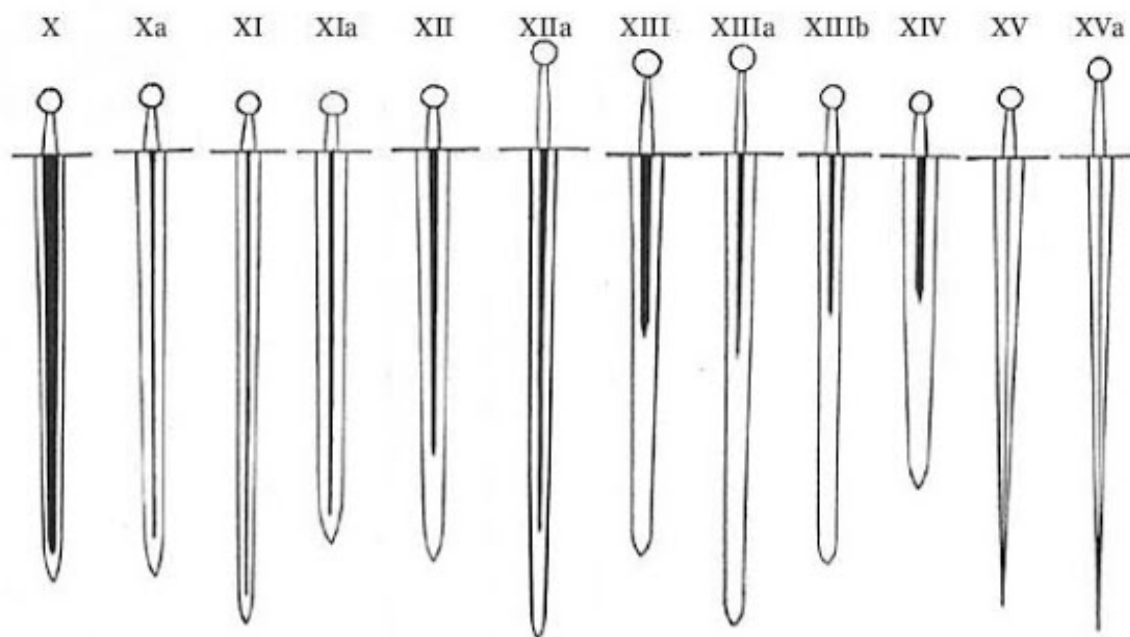

Figure 5: Oakeshott's Typology of the Medieval Sword (partial).

In general, one-handed swords of the early medieval period had wide blades with fairly round points. They were usually somewhat flat and thin in cross section, making for good cutting weapons. As armor became better and more comprehensive, swords generally became heavier, culminating in the so-called "Swords of War," such as is exemplified by Types XIIa, XIII, and XIIIa above, meant to be used in two hands. The thin cutting swords and the Swords of War existed together in the late thirteenth century (Oakeshott 1991).

The heavy chopping approach to dealing with armor for which the Swords of War were designed did not last long, and by the middle of the fourteenth century they were replaced by swords with

extremely acute points and thick, stiff blades of diamond cross section, such as Types XV and XVa, which were optimized for thrusting. These were intended to overcome the improved armor of the Transitional Period by stabbing into the small gaps between plates in the developing harness. Too, the extremely narrow points could overcome mail by piercing the individual links and driving somewhat into the target regardless of whether the link was broken (id. p. 133).

Figure 6: BL Additional 10294 Morte Artu c. 1316 fol. 84r

Sir Roger's effigy does not make his sword type absolutely clear since it is sheathed, however, from the outline and style of grip we will assume it to be of Type XII, which Oakeshott described thus: "Typical of the High Middle Ages, these swords begin to show a tapering of the blade with a shortened fuller, resulting in improved thrusting characteristics while maintaining good cutting capabilities… a taper along the full length, and narrow fuller terminating 2/3 down the blade." (Oakeshott 1991 p. 72.) Figure 6 shows combat with Type XII swords between men at arms wearing kits very much like Sir Roger's, including full mail, conical helms, ailettes, and heater-style shields (see below).

Figure 7: German Shield, late 13th Century, Marburg University Museum.

MEDIEVAL SHIELDS

Medieval shields came in a variety of shapes and sizes and were intended for a wide range of purposes, from large round shields, to long kite-shaped shields, to specialized shields for jousting or for cover for crossbowmen. For our purposes, we will limit our discussion to the roughly triangular sort of shield shown above on Sir Roger's effigy. This type is often called a "heater shield" today because of its similarity to the base of a clothes iron. Heater shields were popular from the thirteenth century until the end of the period. Figure 7 shows a fairly typical example from late thirteenth century Germany. It measures thirty-nine inches in height and twenty-seven inches in width, and is made from wood covered in very thin leather, then painted and gessoed.

Figure 8: Shield enarmes from BL Additional 10293 Lancelot du Lac c. 1316 fol. 197v.

We can see a range of sizes for heater shields in the art of the period; Figure 6 above shows two shields of different sizes in the same painting. Sir Roger's shield would appear to be approximately the length of the distance from his shoulders to his crotch, so the example in Figure 7 would not be too far off. Given those rough proportions, a

width approximating the user's shoulder width would not be unreasonable. These dimensions seem fairly common in the artwork of the period, although certainly not universal.

The iconography makes it plain that shield strapping varied considerably. Shields generally had two kinds of strapping: The *enarmes* used to hold the shield to the user's arm, and the *guige* strap by which to hang the shield around the user's neck. Figure 8 shows one common arrangement of the enarmes (although many other versions can be seen) on the figure on the left, and, very faintly, the red line of the guige straps on both figures. Obviously, the enarmes on Sir Roger's shield are not depicted on his effigy, however, the guige is the figured strap shown over his right shoulder.

Figure 9: BnF Fr. 120, Mort le Roi Artu fol. 590v.

The primary purpose of the guige is to allow the user to handle his reins while using a lance on horseback; it holds the shield up as he guides his mount. Regardless, we frequently see guiges in place during foot combat, as in Figures 8 and 9. It is instructive, however, to note how the guige straps are set in those paintings. In Figure 8, which depicts combatants in great hauberks, the guiges are very loose, permitting a great deal of movement for the shield. In Figure 9, however, the guiges are so tight that the user can barely move the shield. This suggests that in the earlier period the shield was used more actively, dropping down to protect the legs, for example, while in the later period, when the legs were covered in plate (as in Figure 9), this degree of motion was no longer necessary, and the shield's primary purpose was to protect the head, and especially the face.

Figure 10: Master Hans Talhoffer from Codex Württemberg fol.136v.

FIGHT BOOKS

Students of historical combat are fortunate in that a number of books about combat written by medieval masters of the art, which we call "fight books" today (from the German term *Fechtbuch*), have survived to give modern scholars a chance to glimpse what such combat was like (see Anglo 2000). Authors such as Hans Talhoffer from Germany (Cod.icon. 394a), Fiore de'i Liberi from Italy (MS Ludwig XV 13), and George Silver from England (Sloane MS No.376), among many others, gave us a good understanding of a wide range of fighting arts and forms from different cultures and times.

Figure 11: Halfswording from Fiore fol. 34v.

The earliest known medieval fight book is an anonymous German book called MS I.33 which dates from about 1320; the name comes from the manuscript's accession number at the Royal Armoury at Leeds (Forgeng 2003 p.

2). I.33 is fairly unusual in that it is limited exclusively to unarmored sword and buckler fighting, whereas most others cover several different kinds of combat.

The earliest extant fight book to address armored combat is *Fior di Battaglia* (*The Flower of Battle*) by Fiore de'i Liberi, written in Italy during the first decade of the fifteenth century. By that time, the plate armor worn by men at arms had become so extensive that no realistic strike could penetrate its protection, and the fight book techniques of the period reflect this reality.

Rather than the swinging sword blows common to previous periods, attacks in the Age of Plate were executed by gripping the blade of the sharp sword in the user's left hand and using that grip to guide thrusts into the gaps between the plates of armor (Ringeck ff. 95r-v), effectively turning the sword into a short spear. Thus, no extant fight book shows us anything about how to fight in the mail armor worn in the period prior to the fifteenth century, and in order to try to understand such combat we are forced to rely upon the non-fight book iconography and chronicles of the period.
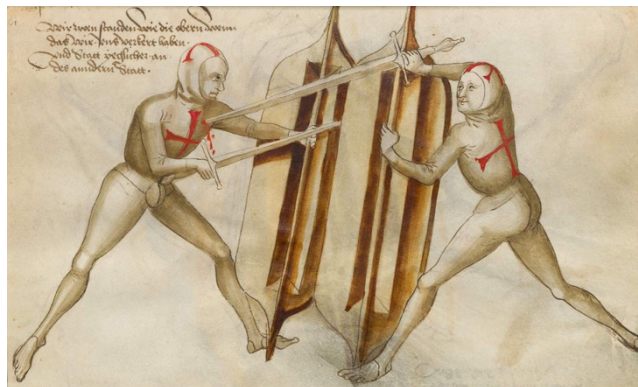

Figure 12: Long Shield Combat from the Württemberg Codex fol. 67r.

Some have tried to use the unarmored material of the fight books to reconstruct armored sword and shield combat (e.g., Hand and Wagner 2002 pp. 72-86). Figure 12 shows unarmored sword and shield combat from a fight book from 1467 by Master Hans Talhoffer which is most often used for that purpose. There are two factors, however, which absolutely render any such attempt meaningless and misleading: The first is the nature of the shields, and second is the lack of armor; either problem is inherently fatal to such an effort, and combined they can only lead to gross misunderstanding.

As Figure 12 makes clear, the Langenschilte ("long shields") of the fight books are vastly different from the medieval shields of armored combat.[*] They were far larger than even the kite shields from the beginning of our period, and presumably heavier, being, as they were, used to actually strike and thrust in various applications. Also, rather than having enarmes as all the other types from earlier did, they have only the single rod in the back for holding, which would necessitate a very different style of manipulation, even were they smaller.   In truth, they bear more resemblance to the large pavises used by crossbowmen for cover while reloading, although those were not used in single combat.

The second factor mentioned above is even more detrimental to any effort to use the fight books to understand armored sword and shield combat, however, rendering any question of the specific shields used moot: Armor changes everything. In armored combat, as shown above, swords

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[*] Note that we do not discuss sword and buckler. That is because bucklers were not used anything like shields—they were primarily used to protect the user's hand and for striking (see Knight 2013), and were only used in un- or lightly-armored combat.

cease to be fine cutting tools and become instead steel clubs. Clubs, unlike sharp weapons, require a certain degree of force to wound or kill—far more than is required to cut someone with a sharp sword against unprotected flesh. Therefore, a combatant could easily ignore quick, light strokes of a sword during a fight, relying upon his armor to resist them, even though such strikes might have been deadly out of armor. Moreover, the mechanics of striking with a club are different from those of cutting with a sword against bare flesh because of the greater force the former requires for effect. When using a sword, a motion of the wrist is enough to kill (as any examination of the military saber techniques of the eighteenth century will make plain), whereas to stun a man by striking into a steel helmet over padding and mail requires a far more significant action—one which requires better timing and a larger movement in order to land successfully. Thrusts have a similar problem: placing the point of a sword on an unarmored part of an opponent, one can kill with the very lightest of pushes. In order to thrust through mail, however, a heavy thrust is required, even with a sword having a very acute point.

Thus, any effort to use the techniques intended for unarmored sword and shield combat from the fight books is inherently flawed and can only lead to severe error. Unfortunately, our only hope of understanding armored sword and shield combat of the High Middle Ages lies in studying the non-fight book iconography and chronicles.

ATTACKING ARMOR

Mail and plate armor are both highly effective, but have different strengths and weaknesses. Mail is extremely protective against cuts or slices of any sort and against thrusts except those made with weapons having very acute points, such as Types XV and XVa. Mail is, however, poor protection against the percussive force of blows, especially those struck against bony surfaces such as the arms, hands, or head. Hard blows to such areas could result in broken bones and death, even when the mail itself was undamaged. Although mail is significantly heavier than most plate (with certain exceptions), it is also much more flexible and forgiving of fit. Plate, conversely, is superb protection against all kinds of attacks, spreading out the concussive force of blows over the entire piece of armor and rendering such blows largely ineffectual (but see below) while being far less flexible and less conducive to unhindered movement.

Figure 13: Herr Dietmar von Setzer, Manessa Codex, Cod. Pal. germ. 848 c. 1300, fol. 63r.

Manuscript iconography often appears to show sword attacks piercing armor, but it is obvious that this is nothing but artistic license as experiments have shown that it is almost impossible to cut or thrust through plate armor far enough to damage the wearer with the edge or point;[*] understanding this simple fact is essential to understanding the arguments in this paper. Writing

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[*] For examples of such experiments, see: <https://www.youtube.com/watch?v=ogxTTVSJ3Pg> and <https://www.youtube.com/watch?v=R-8IwE6t-Ps>

about the effectiveness of armor in the records of medieval combat, the late scholar Will McLean wrote:

> It is just barely possible for a sword to cut through a helmet under optimal conditions "...there was given a stroke of the sword on the crest of an armet that opened it to daylight." This was a single handed sword stroke. Cutting through a helmet, however, won't necessarily injure the wearer. The edge not only has to penetrate, but create a long enough cut to reach flesh beneath. This is immensely difficult. Modern examples of test cutting with Japanese swords demonstrate that a two handed grip, windup from a position behind the wielder's back, and a rigidly braced helmet are required to make a record breaking cut 13 cm long. Even an impressive cut like this may not be sufficient to let the blade reach flesh, depending on the shape of the helmet and the amount of space provided by the padding and suspension system within it. (McLean 2007.)

Why then show blows that seem to cut armor? Some have argued that when we see armor being cut in medieval artwork we are seeing heroes or biblical figures of extraordinary power armed with magical swords, but that is not always the case. Consider the very normal, quite ordinary Herr Dietmar von Setzer in Figure 13: He is shown cutting deeply into his opponent's head (albeit with a two-handed stroke) in a way that experimental evidence simply will not support, and yet he is no hero of myth. The probable answer to this conundrum is that medieval art was representational, not photorealistic. The painter had no way to differentiate between a telling blow and an ineffective one, and so it is likely medieval artists relied upon this technique for showing effective blows—something his viewers would know to be extremely unlikely in a literal sense, and they could thus see the artist's meaning clearly. No other explanation would seem to answer this problem.

What, then, do we mean by a "telling" blow? A weapon does not have to cut or penetrate the armor to be effective. Will Mclean discussed a deed of arms at Noseroy in 1519 which provides examples:

> During the fighting with two handed swords there were "many basinets and armets driven in." A deeply dented helmet can be driven into the wearer's skull, and even if the helmet isn't dented enough force can be transmitted through the padding to stun or worse. Fighting with a two handed sword the count de Bussy "gave such a stroke to (Jean) de Falletans, on the armet, that he kneeled in the sand." The prince d'Oranges "gave a stroke of the sword on the crest of the armet of Phillipe de Falletans so that he had to take three steps back from the barrier and was unable to fight any more that day. (McLean 2012.)

In a twelfth-century poem entitled *Bem plai lo gais temps d pascor* by Bertrand de Born, the poet says: "And when he enters the fray, let every man of rank think only of hacking heads and arms." Why did he mention those two targets specifically? Given the date of the poem, the combatants are almost certainly wearing mail with iron helmets. That being the case, arms and heads are the best targets for attack: the former could be broken by powerful sword bows, and blows to the head could stun the recipient, as in the case of Jean de Falletans, above.

Thus, we see that in armored combat swords were used more like iron bars for percussive effect than as the traditional cutting implements they are normally seen to be for unarmored combat,

and that the armor need not be penetrated in order for the strike to have effect. This is what is meant herein by a "telling" blow: One which severely damages the recipient through his armor, whether the armor itself is penetrated or not.

In addition to the head and arms, it seems likely that on a person wearing a harness of mail the clavicles would also be good targets, as would the knees— which explains Sir Roger's poleyns—and the hands. Someone wearing a transitional harness would be largely immune to most attacks, except those aimed at the gaps in his harness, with the head being the optimum target for striking blows. The hands, too, would be vulnerable, if mail mufflers were worn, but even gauntlets were not a guarantee: "Likewise, a non-penetrating blow to the gauntlet can deliver enough force to injure the hand within it. The small plates of gauntlet fingers don't spread the force of a blow over a very large area, and finger plates and scales don't seem to have had any padding beyond that provided by the leathers they were riveted to." (McLean, 2007.)

Figure 14: Piercing mail with a Type XVa sword.

In addition to cutting attacks, thrusts were also widely used for armored combat in the iconography. Thrusts might not be able to penetrate plate (although could still have an effective percussive effect to the face plate similar to a blow), and might rarely break links of mail, but they could have an effect through mail regardless. Swords with extremely acute points and very stiff blades (e.g., Type XV or XVa) could penetrate through the links of mail, even if they did not break any of the links of mail. Figure 14 shows an experiment in which a Type XVa sword is thrust into the links of authentically sized reproduction mail, easily penetrating several inches altogether since the mail itself collapses in as fabric would. In addition, the face was always a prime target for thrusts, regardless of period, since visors were often left off in foot combat for better vision, as the art of the period frequently shows (e.g., Figure 11).

Conclusion
In armored sword and shield combat swords could be used to strike the clavicles, shoulders, arms (especially the elbows and forearms), hands, knees, and shins—any hard, bony targets over which the mail was stretched tightly. Not surprisingly, those areas were among the first to be covered in plate as armor developed. Head blows were also common, but required exceptionally heavy strikes. Thrusts to spots uncovered by armor, especially the face if the helmet or visor allowed it, would have been central to the art. All of these targets, except the unprotected ones (e.g., the face) required powerful, heavy blows in order to be effective, far more than the light, quick movements of unarmored techniques could provide. Having established these parameters we will now proceed to examine what the sources we have tell us about how those actions were performed.

PART II: TECHNIQUES

INTERPRETING THE ARTWORK

Unfortunately, manuscript paintings were not intended as training guides, so they leave out a lot of details we, as modern students, would like to understand. Indeed, it is highly probable the artists themselves (not being men at arms) were untrained in the arts of combat, and so were not qualified to depict precise details correctly. While this is balanced by the fact that their intended audience was generally familiar with combat, that audience may not have cared much about precision in art as long as the intended message was conveyed adequately.

In addition, there are certain artistic conventions of the period which can lead modern viewers astray. We have already discussed why artists depicted unrealistic things such as cutting through armor, but there are others. For example, medieval artists almost never drew swords edge on, instead always drawing the flat of the blade. When modern scholars began trying to interpret historical fight books, this led some of them to completely misunderstand the German longsword guard of Ochs (analogous to our Bull Guard, see below), thinking the blade's edges were to be oriented vertically rather than horizontally, as later study proved they should be. Similarly, shields were important for indicating who the wielder was through his armorial bearings. Because of that, artists often painted shields in extremely unrealistic positions in order to ensure that the full arms could be displayed, even going so far as to sometimes paint them on the back of the shield.

These factors necessitate a very careful approach to interpreting combat techniques from medieval art. Scholars should avoid attempts to seek deep subtleties of technique or form, being especially careful not to see things that they believe *should* be there because of what they know about other techniques in more formal fight books. In this paper, we will take a very high level approach to interpreting the art of armored sword and shield combat, being careful not to read more into the sources than we should. We must accept that there are no fight books dealing with this form of combat, and so we will never have as complete an understanding of this kind of combat as we can achieve with other forms. Ignoring that reality is both wishful thinking and bad scholarship.

SWORD AND SHIELD GUARDS

A guard consists of three things: The stance, the position of the body, and the position of the weapon (if any). In this case, the latter element is twofold, and we must describe the position of both the sword and the shield. Sadly, there are no extant sources which provide historical names for the guards of sword and shield, so here we will adapt names taken from the German martial tradition for other forms. It must be understood that no implications about any similarities of techniques are assumed, we are using the names for convenience only.

<u>Stance and Body Position</u>
There is little standardization regarding stance to be seen in the iconography, but some rough trends become apparent. The stances are generally shown as fairly tight (i.e., not long or wide) with the feet perhaps a shoulder's width apart front to back. Given the two-dimensional nature of the artwork, it is almost impossible to guess how wide the feet were held, so we will make a small assumption: In modern collegiate fencing, the feet are held on a very narrow line from

front to back, with no width at all, because grappling at the sword is not permitted in the sport. Older systems which do anticipate grappling (and the caveat about the danger of applying ideas from different arts applies here) generally show stances which are wider from side to side, so we will make that assumption in spite of the danger inherent in all such assumptions.

One other general trend we see in the artwork is that the users *generally* seem to have the left foot forward when in a static guard. This is by no means universally so, however.

The body position is too varied in the artwork for meaningful analysis. We generally do not see the leaning forward position favored in MS I.33, rather, most of the time the figures seem to be standing erect. Other than that, few generalities can be made.

Sword Position

An examination of hundreds of varied medieval manuscripts by the author has shown that there are four general guards of the sword shown. We will call them the Bull, Boar, Tower, and Trailing guards, after the Messer guards of Johannes Lecküchner (see Cgm 582) since they, too, are for one-handed swords and are held in roughly the same positions. This is a matter of lexicological convenience only, and no meaning should be attached.

Figure 15: BnF Fr. 2813 Grandes Chroniques de France, c. 1375, fol. 118r.

The Bull Guard is named for the forward-pointing horns of a bull. The sword is held high with the hand well back, and the point is aimed generally toward the enemy's face. The figure on the right in Figure 15 is in Bull Guard. Although this guard is optimized for thrusting, and is a very threatening guard to use for that reason, it is easily possible to throw extremely powerful overhand blows from this guard as well, as experiments have proven. It is also extremely valuable because it creates a hanging guard defense which will stop most overhand blows with a simple movement to the left or right, much as we see in later broadsword fencing (e.g., see Roworth 1824). The well-back position of the hand is good for protecting that extremely vulnerable target. This was probably the most versatile and useful guard.

Figure 16: BL Royal 14 E III Estoire del Saint Graal, La Queste del Saint Graal, c. 1300 fol. 156v.

The Boar Guard is named for the upward-pointing tusks of the boar. The hand is held well back and down with the point aimed at the enemy's body or face; this guard, too, is optimized for thrusting. The figure on the left in Figure 15 is in Boar Guard. Overhand cuts are somewhat more awkward from Boar Guard (without some preparatory movement which can telegraph the user's intentions), however rising cuts can be done easily.

The Tower Guard is named for a tall tower—something which comes from above, in other words. The sword is held above the head with the point back or up and pointed well to the rear. The figure on the right in Figure 16 is in Tower Guard. This guard is ideal for very fast, very hard overhand blows.

The name for Trailing Guard comes from the way the sword is held back to the rear. The sword is held well back to the right side with the hand held low. The figure on the left in Figure 16 is in Trailing Guard. This guard is good for horizontal or low forehand strikes or parries.

Shield Position
There are two primary guard positions for the shield: Open or closed. Figure 16 shows both positions, with the figure on the right demonstrating the open position and the figure on the left the closed position.

In the open position, the shield his held roughly perpendicular to the plane of the user's body, with the left arm held out to the side. In the closed position, the shield is held flat to the body with the left hand fairly close to the chest. Neither position has any inherent advantage over the other, rather, each simply covers specific lines of attack and they determine the best way to intercept incoming blows; see below for more on this.

Figure 17: BnF Nouvelle acquisition Fr. 5243 Guiron le Courtois c. 1375, fol. 15r.

The choices described above depend upon holding the shield with the left hand in the upper corner ("dexter chief," in heraldic parlance, which will drive our term for it here), which is not always the case. In Figure 17 we see a shield held by a hand strap near the center bottom of the shield, and while not as common as the dexter-chief grip, it is not unusual, either. The bottom grip (as we shall call it) is probably used in order to keep control over the shield while holding the reins of the user's horse. The bottom grip can also be seen with some other shield shapes, such as oval shields.

A final way of holding the shield is to just let it hang from the guige, as Herr Ditmar is doing in Figure 13 above so he can hold his sword with both hands.

Figure 18: BnF Fr. 343 Queste del Saint Graal c. 1380, fol. 47v.

Conclusion
Any of the sword positions can be used with any of the shield positions, so in order to describe a guard it is necessary to mention both parts. Thus, the figure on the right in Figure 16 is in "Open Tower Guard" and the figure on the left is in "Closed Trailing Guard." Likewise, we could speak of "Bottom Boar Guard," or "Bottom Bull Guard," etc.

14

ATTACKS

Sword attacks can be made with the long edge, the short edge, the point, or the pommel. The long edge of a sword is the edge in line with the middle knuckles of the hand, while the short edge is the other edge. The name of the short edge is derived from the fact that short-edge cuts have inherently less reach because of the way the hand must turn over to execute them. Most formal systems teach pummeling techniques, however, these attacks are extremely rare in the iconography. In this section, we will consider four attacks with the long edge, two with the short edge, two thrusts, and one pommel strike.

How to Strike

Attacks which require heavy percussive effect are inherently different from those which seek only to cut into soft targets. In order to distinguish between the two, we will refer to heavy, percussive attacks intended to damage the target through armor as "strikes," and lighter, quicker attacks intended to cut with the edge on soft targets as "cuts."

The German fight books (see above) of the fifteenth century give specific instructions about how to cut with swords in unarmored combat. These instructions call for "following the blow" with cuts which are short and direct, rather than large, wide, and heavy, emphasizing leading with the point in order to threaten the enemy with a cut before he can reach any part of the person cutting.[*] This approach does not generate much percussive force, however, and is therefore not ideal for strikes against armor. Moreover, the need to threaten one's opponent with an attack before he can reach any part of the attacker is not as important since the attacker's shield and armor will protect him from most casual counter-cuts.

The way to generate the most force in a strike is to do so the way a baseball player swings his bat or a lumberjack swings his axe: In each case, he steps first, then turns his hips powerfully to add the force of his entire body, and then whips his arm(s) around and forward. While no medieval source explicitly discusses this way of striking, it makes perfect sense that this should be how blows are struck with a sword against armored targets. We know that great force is required;

Figure 19: MS Liberia Marciana c. 1350-1400.

Figure 20: Unknown French late Fifteenth-century MS.

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[*] For a detailed explanation and demonstration of following the blow and leading with the point see Knight 2009 pp. 16-18.

quite apart from modern experiments, in Dom Duarte I's book *Bem Cavalgar*, the king discusses how the rider should use his horse's forward momentum to add enough force the blows of his sword to affect his opponents through armor, saying that "if the horse was not at a gallop and I used only the force of my arm, the stroke was much weaker" (Petro 2005 p. 113). Combatants on foot would not have the advantage of a horse's movement, so this is the best and most likely way strikes with the one-handed sword could have been performed in armored combat. Not every strike may have included a step, of course, as long as the hips could be turned into the strike to whip the sword into the target, but stepping would be extremely helpful.

Long Edge Strikes
The long edge can be used for a forehand strike, a vertical strike, or a backhand strike. It can also be used for a two-handed strike such as we see above in Figure 13 (which could, technically, be delivered at any of those angles, too).

A forehand strike is delivered from the user's right side on any angle from almost vertical to horizontal. Truthfully, we could eliminate the vertical strike altogether and simply call the straight downward strike a special version of the forehand. Figure 18 shows a forehand strike to the head, and Figure 19 shows a vertical strike.

A backhand strike is just the opposite: It is performed from the left on any angle from nearly vertical to horizontal. Figure 20 shows the preparation for a backhand strike.

The two-handed strike, such as we can see in Figure 13 above, requires the attacker to either drop his shield or else let it hang by the guige, as Herr Dietmar is doing, or else his shield would not remain where it is shown to be.

Short Edge Strikes
We can identify two short-edge strikes in the literature: the plunging strike and the leg wrap. The name for the plunging cut comes from the German "Sturzhau" as seen in several fight books (e.g., see Talhoffer fol. 2v and Ringeck fol. 52r), which depict and describe it as a cut from above done with the short edge. Figures 21 and 22 show plunging strikes. It is often difficult to distinguish between a plunging strike and a thrust from above in the iconography, but in the two cases shown here the position of the point past the back of the victim's helmet makes it plain that
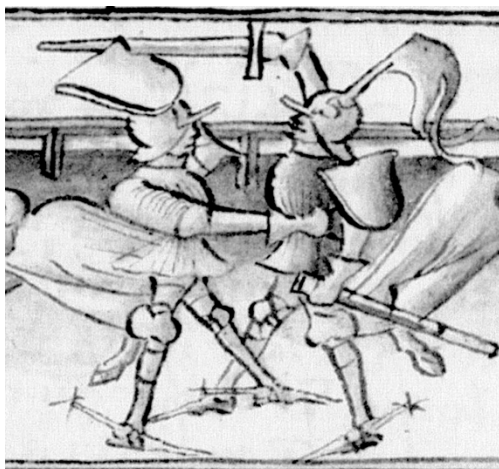

Figure 21: BnF Fr. 12572 Jean d'Avennez 15th C., fol. 42v.   *Figure 22: BnF Fr. 120 Lancelot du Lac-Queste del Saint Graal c. 1400, fol. 512v.*

a strike, not a thrust, is being performed in both cases, especially since in Figure 21 the sword is shown actually cutting into the receiver's shield. The plunging cut has the advantage of being difficult to block since it is intended to go up and over the shield (although it is not impossible to displace, as Figure 21 shows).

The second short-edge strike is what we shall term a leg wrap. This is a strike which wraps behind the enemy's left leg to strike with the short edge. There do not appear to be any depictions of this technique in the iconography, however, it is described in two sources. In 1547, a duel was fought between Guy Chabot, Baron de Jarnac, and François de Vivonne, sieur La Châtaigneraie. Most of the details of the duel do not concern us here, except to say that the duel was fought with swords in partial armor. During the fight, de Jarnac cut his opponent on the back of the thigh with his short edge, slicing so deeply that the victim later died from loss of blood. One account says that de Jarnac feinted high, and when his opponent raised his shield in response, de Jarnac snapped his sword down and into the back of de Vivonne's thigh, "severing muscle, tendon, and veins down to the bone." This cut has been known ever since as the "Coup de Jarnac" (Hutton 2002 p. 51).

Figure 23: BnF Fr. 2813 Grandes Chroniques de France c. 1375 fol. 118r.

Similarly, in Achille Morozzo's *Opera Nova* of 1534, he refers several times to the use of a *roverso segato per le gambe* ("a reverse saw cut to the leg," e.g., Morozzo 1534 chapter 70), which he says is something used to get around leg armor "…or with a *roverso* as with a sword in armor" (id. chapter 164).

Experiments have shown that an ideal way to perform a leg wrap is to strike diagonally downward with a forehand blow, then whip the short edge around using a snapping motion as the hand is pronated in order to move the short edge against the back of the enemy's leg just above the knee. It should be noted, however, that although leg wraps would be useful against an opponent in the kind of plate leg armor which is somewhat open on the back of the thigh, it would be relatively ineffective against someone armored in mail. Percussive blows to mail-covered targets work best where there is bone that can be broken directly under the mail. The thickness of flesh and muscle beneath mail chausses such as Sir Roger is wearing would prevent wraps from being very effective. Such strikes could be painful and bruising, but probably not immediately disabling.

Thrusts
Thrusts can be broken into two basic groups, those from above and those from below. The figures in Figure 23 demonstrate the preparation for both kinds of thrusts; the figure on the left seems to have executed a thrust from below, which has been displaced, as the figure on the right seems about to thrust down from the Bull Guard into his opponent's face.

Pommel Strikes

Strikes with the pommel can be used for percussive effect. Sigmund Ringeck devoted an entire section of his fight book to the use of the pommel of the sword in fully armored combat (albeit with fifteenth-century longswords), showing its use against the head and, especially, the extremities. Pictures of such techniques are relatively rare in the iconography, however, Figure 24 shows a man on his knees being pummeled to the head, with blood shown to indicate the telling effect.

Figure 24: BnF Nouvelle acquisition Fr. 5243 Guiron le Courtois c. 1370, fol. 16r.

DEFENSES

There are three principle ways in which to defend oneself against a sword attack: Voiding, displacing with the sword, or displacing with the shield. Of course, that supposes one wishes to actively defend against the strike rather than trusting to one's armor to counter the attack, as would be likely if the attack appeared weak. Voiding is just what it sounds like: avoiding an attack by moving the target out of the way (e.g., by ducking the head, or slipping the body backwards with a step).

Sword Displacements

There is a certain segment of the historical European martial arts community which mistakenly believes that it is wrong to displace cuts with the edge of the sword for fear of damaging the edge.[*] In fact, this is entirely incorrect, as both the evidence and simple common sense should make plain. Imagine a wooden board, wider than it is thick, as a sword blade is. Now imagine striking that board with a hammer, first on the edge, then on the flat. It should take no imagination whatsoever to realize that the board will break much more easily when struck on the flat than on the edge, and so it is with swords. An edge may chip, but that does not render it useless, as being broken would, especially if one displaces with the strong of the blade (i.e., the part closest to the cross) and attacks with the part of the blade near the point, as all the masters tell us to do (e.g., Ringeck fol. 19r), so that the part used for cutting is less likely to be chipped.

Moreover, some historical masters were explicit about using the edge to displace. In his First Proposition about parrying, Master Erhardus Henning wrote: "All cuts must be parried with the edge, reason, because when one parries with the flat, the parry can lightly be cut aside, and then one can receive a blow." (Van Noort 2014 p. 16). The wrist is weaker from side to side than it is from front to back, so a parry with the flat makes it easy for the cut to overcome the strength of the wrist, allowing the attacking blow to drive through.
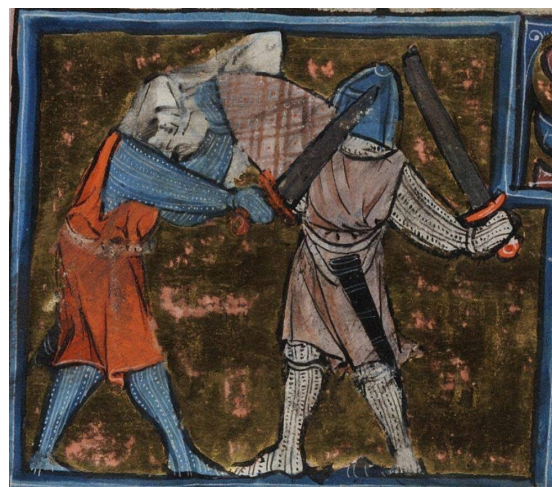

Figure 25: Beinecke MS 229 fol. 341v, 13th Century.

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[*] For example, see: www.thearma.org/HEMA.htm#.XAvrTRNKhUM.

Finally, we know that the edges were used for displacements because the writing of the time tells us so. In *The Unconquered Knight: A Chronicle of the Deeds of Don Pero Niño* from about 1450, Gutierre Dias de Gamez wrote: "When Pero Niño went back, his good shield was tattered and all in pieces; his sword had its gilded hilt almost broken and wrenched away and the blade was toothed like a saw ..." (Evans 2000 p. 21) and later, "His sword was like a saw, toothed in great notches..." (id. p. 79). Striking armor would not "tooth" a sword like a saw blade, that can only come from forceful edge-on-edge contacts—from edge displacements.

Thus, it should be clear that not only was using the sword edge to displace common and sensible, it was considered correct to do by the experts.

Shield Displacements
How the shield can be used to displace depends upon its starting position. Above, we discussed the open, closed, and bottom shield guards, each of which has specific defenses.

Figure 26: BL Additional 10293 Lancelot du Lac, 1316, fol. 213r.

Figure 27: BL Additional 10294 Morte Artu, 1316, 84r.

When using the bottom grip there are relatively few actions available for displacement. The easiest and most likely displacement is effected by lifting the hand up and out so that the point of the shield is aimed upward and the flat of the shield to the user's left. This displacement can be seen in Figure 25 above. From that position, the point can be lowered to defend lower targets.

When using the open or closed guard a displacement can be made by simply moving to the other guard, so closing an opened guard, or opening a closed guard. Figure 26 shows a displacement made by opening the guard from a closed guard. Likewise, the shield can be lifted

Figure 28: BnF Latin 10525 Psautier de Saint Louis, 1279, fol. 43v.

19

from either the open or closed guard to protect the head. Figure 27 shows a rising displacement from a closed guard, while Figure 28 shows a rising displacement from the open guard.

From either the open or closed guard the legs can be bent to bring the point of the shield lower to defend against leg attacks, however, there seem to be no depictions of that in the iconography. Obviously, the extent to which the shield itself can be lowered depends upon the guige, and how tight it is. As noted above, there seems to be a correlation between the shortness of the guige and the period, to the point where the shield cannot be lowered at all when plate legs are worn; in that case, the leg wrap would be distinctly useful if an opponent's armor permitted it (i.e., if cuisses are worn which are not closed).

Another possibility to consider is that the legs were never defended with the shield, but only by slipping them back (a form of voiding). In unarmored longsword fight books the German masters pointed out that a cut to the head always outreaches one to the legs because of the way we are built, and so advocated countering leg cuts by slipping the leg while simultaneously attacking the enemy's head; this technique is called the *Uberlaufen* ("overrunning," see Ringeck fol. 39v). While it is very unwise to extrapolate the technique of one system to that of another, especially with distinctly different weapon forms, in this case, we see that technique in many other systems, too, such as Broadsword, Backsword, and Military Sabre (see Roworth 1824), and the defense would be the same whether armor is worn or not. These facts, combined with the absence of iconographic evidence for defending the legs suggests that slipping the leg may have been done, but it must be understood that this is merely an informed guess.

Conclusion
Sword strikes were parried with swords, with shields, or by voiding. When displacing with the sword, one cuts directly into the attack. The shield can be opened, closed, or raised from any position, but the legs were probably defended by slipping, especially when the guige was used.

One difference between sword and shield combat and forms which use only one weapon is that it is possible to both attack and defend at the same time, even when the attack and counter are on very different lines. Single-time longsword techniques of the German school can be used to attack and defend simultaneously, but such actions usually require a counter in the same line as the attack (e.g., the *Zwerchhau*, see Ringeck ff. 27r-v). As with rapier and dagger combat, however, when using sword and shield it is possible, just as one example, to defend against a high head cut with one's shield while simultaneously striking the knee while the attacker's attention is focused high.

GRAPPLING

Armor is so effective at preventing damage from weapons that grappling is usually an attractive choice, at least in in single combat, because once a man is controlled it is much easier to finish him off. Even in the fifteenth century, when weapons were so much more effective (as was the armor, of course), every fight book included grappling material in the armored combat sections. One author went so far as to say "Now you are to learn that to a large extent, armored combat comes down to dagger fighting and wrestling." (Von Danzig fol. 71v.)

While we do not have detailed instructions for grappling while using a sword and shield, the iconography suggests several categories of grappling, some of which must be considered speculative.

First, and the most speculative, is the use of the shield against an opponent's shield to either move his shield so as to expose a target, or to pin it in place in order to prevent him from using it. We will refer to the former as "hooking," and the latter as "pinning." While no source mentions these actions specifically, Figure 29 may show hooking, with the figure on the right hooking the other's shield open to strike through (regardless of the intent of the painting, that is certainly what hooking would look like). Likewise, Figure 30 may show pinning, with the figure on the left using the edge of his shield to pin his opponent's shield in the closed position.

Figure 29: Bib. Ste. Genevieve MS.1126 Roman de la Rose c. 1350, fol. 148r.

Figure 30: Bib. Ste. Genevieve MS.1126 Roman de la Rose c. 1350.

Other kinds of grappling are more certain. These include grappling the enemy's weapons (i.e., his sword or shield), or grappling the man. Grappling the man usually involves grappling an enemy's sword arm to limit its movement. Figure 31 depicts grabbing an opponent's sword, and Figure 32 depicts grabbing an enemy's sword arm to render him vulnerable.

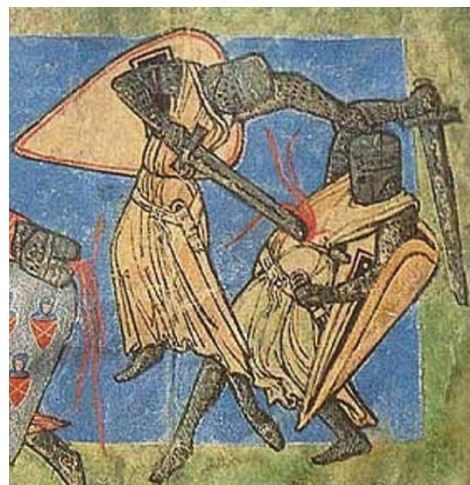*Figure 31: BnF Fr. 99 Mark & Armant 14th C., fol. 345v.*

Figure 32: Museum August Kestner Jungfrauenspiegel c. 1140.

CONCLUSION

What conclusions can we draw from this analysis? The most obvious is that while it is possible to extrapolate a fair bit about what armored sword and shield combat on foot must have been like in the High Middle Ages at a very high level, we cannot hope to extract a detailed martial system from what has come down to us, and it is disingenuous to pretend we can. We must accept that, no matter how important or desirable we may think it is to practice "authentic" sword and shield in a living history or martial sport context, it cannot be done. We could make things up, and make claims about it being "based upon" historical sources, but, in fact, without an explicitly instructional source of the sort left in the later fight books (q.v.) we can never verify any of the really important details or nuances which would be necessary to study this as a legitimate historical martial art, as we can with, for example, the longsword of Johannes Liechtenauer.

It is tempting to look at the art of the period in the hopes of seeing some subtle clue which opens a vista of martial intent for us, but such "discoveries" lie principally within the mind of the viewer. For example, when looking at Figure 18 above, one might be tempted to think that the figure on the right is holding his sword well over on the left side of his helmet as some sort of protection against a cut or as a guard. That assumption is specious, however, and the awkward position probably has to do with an artistic convention requiring the artist to show the entire sword, in much the same way we discussed above with reference to medieval artists never showing a blade edge on. The art of the period was never intended to portray a martial system, and so any such subtle nuances that seem to reflect the techniques of the period are probably coincidental, except at the very highest level. Thus, we can assume forehand and backhanded cuts, and even various shield deflections, and trust the artwork to show us those things (if not precisely how to execute them), but we cannot know the system behind those gross physical actions—how they were actually done by the cognoscenti of the time—in enough detail to be meaningful.

Not that trying to *understand* subtle actions (as opposed to categorically asserting them) is entirely wrong; after all, we have indulged in this to a certain extant in this paper. For example, the paintings cited for the shield hooking and pinning techniques above may really have nothing to do with such techniques, with the appearance that they do being mere artistic coincidence. The important thing is to recognize the uncertain nature of such efforts, and to be very clear that the paintings have been cited in an attempt to suggest a technique the author has extrapolated, but that they cannot be considered true documentation.

Looking at manuscript paintings we can see a limited, but still broad range of techniques: We see four general types of guards, modified by at least three different shield positions; four long-edge strikes; two short-edge strikes; two kinds of thrusts; and pommel strikes. We can recognize three general methods of defending against those attacks, including shield displacements, sword displacements, and voiding. Lastly, we also see some kinds of grappling, including a suggestion—no more—of offensive shield use to pin or hook.

Combining information from records of combat in medieval chronicles with modern experiments tells us a great deal about how such techniques must have worked, at a high level, at least, especially the differences between attacks to armored targets and attacks to unarmored targets of

the sort described in the historical fight books. This analysis informs our understanding of how the techniques mentioned above were probably used in general.

Unfortunately, we have no way of distinguishing between simple techniques, such as defending against a cut to the head by opening the shield while responding with a forehand cut to the head, and more complex techniques of the sort taught in the fight books. That level of complexity simply cannot be shown in simple paintings which were never intended to be meant as instruction in the first place. This limitation must be understood.

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