

Galli Federica
Period Costume & Style, final essay
2022

Armor in the XIV century

Contents

- 1. Introduction**
- 2. Before the XIV century**
- 3. The armor**
 - a. Undergarments**
 - b. The lower body**
 - c. The upper body**
- 4. Tournament armor in Italy**

Introduction

As the highest form of personal protection during conflicts, armor has evolved through time quite frequently to adapt to the changes in the approach of human kind to warfare.

From ancient times to the introduction of firearms and then it's change into a more sleek and essential protection for the contemporary military, this vestment has not only held a practical importance, but also a social one.

The time that is kept into consideration, it's quite wide, and spans between the XIV and XV centuries, but here the objective is to give an overview on the peak on the evolution of armory.

The north of Italy and Germany held the most skilled armorer, developing their own unique style. In Italy, specifically the city of Milan and the surrounding area had been the center of this kind of production of the Peninsula since the I century b.C. thanks to canals and rivers for transport and proximity with mines.¹

¹ Vannini, Filippo 2019. *Storia ed evoluzione dell'armatura italiana tra il 1370 e il 1470*. Tesi di laurea in Storia Medievale II, University of Bologna, p 15

At the end of the XIII century, there was already a great production system in place, with more than 100 master armorers dedicated to this craft.²

The 14th century, while not inventing anything substantially new or groundbreaking, was, together with the following century, a time of refinement of the suit of armor.

This need of making armor more efficient was dictated by the constant warfare that characterized Europe during those years.

The longest conflict was of course the Hundred Years War between France and England that slowed down only during the epidemic of the Black Plague in the mid-1300s but that resumed in 1355³ with no reservation.

Numerous internal conflicts and civil wars also waged in the continent: there was the War of the Roses in Spain, and while Germany and Italy fought each other they also had internal struggles and battled with themselves.⁴

It also has to be kept into consideration the ideal of the knight and the duel, and the concept of tournament that continued through the XVI century⁵, aesthetically pleasing and not only functional and capable to oppose the recent development of firearms.

Gunpowder, as a matter of fact, reached Europe around the XIVth century and quickly followed by the birth of the first firearms.

Armor was able for a long time to coexist with this new kind of weapon. In the second half of the XV century firearms demand started rising vertiginously⁶ and as such some of the best armorers were able to even to build metal suits of armor capable of resisting projectiles. The industry that was already challenged by long ranged weapons in the past, like crossbows and longbows, with time it obviously became obsolete.

² Vignola, Marco. *Armature e armatori nella Milano Medievale: storia di famiglie, signa, magli e acciaio*, Edizioni dall'Orso, Alessandria, p. 43.

³ Vannini, Filippo 2019. *Storia ed evoluzione dell'armatura italiana tra il 1370 e il 1470*. Tesi di laurea in Storia Medievale II, University of Bologna, p 21

⁴ DeVries, Kelly; Smith, Roberts D. 2007. *Medieval weapons, an illustrated history of their impact*. Santa Barbara: ABC-CLIO. p 143

⁵ Martinelli, Maurizio. *L'immagine del guerriero attraverso Europa Africa ed Asia*. Firenze: Regione toscana.

⁶ Vannini, Filippo 2019. *Storia ed evoluzione dell'armatura italiana tra il 1370 e il 1470*. Tesi di laurea in Storia Medievale II, University of Bologna, p 77

Before the XIV century

Up to the XIII century body defenses usually consisted in chain mails, made of steel or iron. These defenses were realized to be worn in layers under which there was supposed to be a gambeson, a tunic, made of seven layers of linen⁷ or other fibers, usually plant based to avoid molding. This arrangement made so that wearing chainmail was more comfortable and improved resistance to slashing and penetration.

Until the XII century, helmets called *nasal*, of a truncated cone shape with a nose guard down the middle, were realized by beating a laminate or by assembling segments interconnected with metal strips.

These helmets let sight and hearing almost unimpaired but offered little protection against puncture attack or the most violent impacts against the neck and the face.

Between the X and the XI century armorers began to increase protection on the more vulnerable area of the head realizing a sort of mask. It was obtained through the use of different types of mail work.⁸

One was the *hauberk*, a protection for the head and the upper part of the body, realized with iron rings weaved together and that was directly attached to *muffole* (mittens) on the arms with mittens that could be taken off through an opening on the palm. It was the most common armor up until the middle of the XIII century.⁹

Another was the *chainmail hood*, that covered the head completely and left the face free and fell large on the shoulders. This kind of protection evolved from the *usbergo* and coexisted with it up until the XIV century when this version became more useful paired with a *bascinet*.

The *nasal* and head protections fused together at the end of the XIII century in a proper helmet that covered the whole head of the knight.

An example would be the *helmet of Bolzano*¹⁰ called like this due to the location where it was found, Bolzano a city in the north of Italy, in the region of Trentino.

⁷ Vannini, Filippo 2019. *Storia ed evoluzione dell'armatura italiana tra il 1370 e il 1470*. Tesi di laurea in Storia Medievale II, University of Bologna, p 9

⁸ *Ibidem* p. 10

⁹ Boccia, Lionello. G. 1982. *Dizionari terminologici, Armi difensive dal Medioevo all'età moderna*. Firenze: Ateneo di Brescia p 18

¹⁰ <http://castelsantangelo.beniculturali.it/index.php?it/177/elmo-da-cavaliere-detto-elmo-di-bolzano>

This helmet, dated in the last decade of the XIII century, has the shape of a truncated cone, also called a *staro*, that was the cilindric recipient to measure the quantity of grain. It's one of the best preserved up to date and it's composed of four plaques nailed together plus one more for the *calotta* (skull cap) which is not original. The plaques on the front are weld at an angle to make space for the nose and it has eleven holes under the fissure for the eyes in the shape of a cross. This probably suggest the helmet belonged to a knight the Teutonic Order in the late 1200. ¹¹ It's also the oldest item of defense found in Italy.

As shown in the Bolzano example, the helmet was worn over a metal *cervelliera* (skull cap), worn over a stuffed hood together with the under armour or directly over it.



They were worn primarily by infantrymen.

The knights to have the first attempt of rigid protection, a sort of cuirass, which was made with the skin of the back of an ox, tanned and hardened through boiling, and a first defense against points and darts.¹²

Already in 1237 the knights *Ezzeliniani della Marca Trevigiana*, used to wear a *coat of plates*, a bust protection made of long metal planes secured on a fabric or leather support.¹³

This are the beginnings of the plate armor applied above the panoply, but as described, it was no more than a covering for the breast not guarding armpits or the neck. During the Battle of Benevento, for example, German soldiers didn't fare well when, after the initial impenetrable appearance, the French knights, who still wore mail shirts, discovered that the neck and armpit areas were quite vulnerable¹⁴.

It was quite clear that there would be a need of flexibility and mobility, because despite the easy assembly of the pieces there was a lack of articulation. Of course it

¹¹ <http://castelsantangelo.beniculturali.it/index.php?it/177/elmo-da-cavaliere-detto-elmo-di-bolzano>

¹² Vannini, Filippo 2019. *Storia ed evoluzione dell'armatura italiana tra il 1370 e il 1470*. Tesi di laurea in Storia Medievale II, University of Bologna, p 11

¹³ *Ibidem* p 11

¹⁴ DeVries, Kelly; Smith, Roberts D. 2007. *Medieval weapons, an illustrated history of their impact*. Santa Barbara: ABC-CLIO. p 8

was also needed to not lose any kind of protection and resistance from the refining of the pieces.

There was then a change from the coat of plates to a cuirass at the beginning of the XIV century.

Unfortunately this development of the early plate armor of the torso is often difficult to follow due to the presence of *surcoats*, a vestment for the bust and without sleeves and very tight worn over the armor and with araldic ornaments.¹⁵

The armor

At the beginning of the XIV century a knight would have far better protections than his predecessors, composed of a tight-fitting shirt, breeches and hose.

He would wear “mail chausses, gamboised cuisses with poleyns attached, greaves, and sabatons. Over his body he would have a hauberk or a haubergeon, probably with the arm defenses, vambraces, attached to the sleeves, and over this a coat of plates. He might have worn besagews and ailettes”¹⁶.

Up until the middle of the XVI century, we assist to different developments both in weapons and warfare, and while a mounted combatant still wielded a lance and a dagger he discarded the shield. The horse was also incredibly protected and by the end of the fifteenth century encased in plate armor too.

There was also an increase of infantry, which was composed by lower classes and urban militias.

One of the more significant changes would be the improvement of long ranged weapons like longbows and crossbow, but most of all the introduction of firearms, even if their use at the time was still quite limited.

Nobility was more than anyone else donning an armor and thanks to the development of the plate armor, we assist to the birth of the “knight in shining armor”.

The XIII century brought some innovation. The *catene d'arme*, chains applied to the plaques of the neck that were connected the sword and the dagger to avoid their

¹⁵ DeVries, Kelly; Smith, Roberts D. 2007. *Medieval weapons, an illustrated history of their impact*. Santa Barbara: ABC-CLIO. p 173

¹⁶ *Ibidem* p 174

fall in the melees. The helmet could also be connected to them that was used only in the charge and left hanging during times of rest.

The *moffole* started to change into the first experiment of *manopole* (gloves made of metal plates) of metal or bones, interconnected between them through leather.

Greaves became in and connected to the tegral plates, and enveloped anatomically to the leg, replacing the mail sock and connected to the thigh guard with floating articulation.¹⁷

Undergarments

It's impossible to talk about armor without keeping into consideration what was worn under it.

A gambeson was usually worn under the chain mail or the plate armor. It is a sort of a heavy jacket, padded and filled up.¹⁸

The costume of the time had also a similar attire, called a pourpoint, and that also suggest a tight relationship between the everyday wear and the military one.

A pourpoint was supposed to give a certain shape to the figure, giving volume to the chest and armors followed that kind of trend.

While armament started to change to plate armor in the XIII century, even if still far more rudimentary than in the following periods, linens, especially if filled up, are still very much widespread. As seen in some depictions of even the late XV century, especially if talking about archer or long-range soldiers, like its seen in the details of the St. Ursula Shrine of 1489, this intermediate layer constituted most of the protection.



¹⁷Vannini, Filippo 2019. *Storia ed evoluzione dell'armatura italiana tra il 1370 e il 1470*. Tesi di laurea in Storia Medievale II, University of Bologna, p 31

¹⁸Boccia, Lionello. G. 1982. *Dizionari terminologici, Armi difensive dal Medioevo all'età moderna*. Firenze: Ateneo di Brescia p 18

The basic of these specialized undergarments where the tights, made of wool that left the pelvis free and covered by long shirts and layers up to the middle of the thigh¹⁹.

They were tied to the upper parts through eyelets, sometimes reinforced in metal. Through laces made of linen or even leather they were connected usually to the pourpoint. These kind of undergarments offered a protection against impacts and cushioned hits taken on the plates.

The lower body

Starting from the lower part of the suit of armor, a man wearing armor used to wear shoes instead of soled socks, usually worn in courts and inside buildings.

The foot armor is made of blade joint, of various shape during the passing of time. It followed the shape of the shoes common in the civilian fashion. An example would be a *becchetto* with a long point or a *piè d'orso* (bare foot) large at the end like a paw of a beast.²⁰

Also called *sabaton* or *solleret*, this covering for the foot, is present in a lot of iconography and sculptures.

Following the leg, the *greaves*, already mentioned, cover the part under the knee. It's made of two plaques zipped together outside the leg. The back plaque extends up to the heels where there is the connection for the spur. For a horse rider sometimes there are plaques for articulation on the shin.²¹

Thigh protection is certainly already made of metal, even if it probably coexisted with a leather version, later on reinforced with studs, which became obsolete.²²

At the end of the XIV century it was made with two plaques zipped together but it was preferred the earlier version made with just one.

¹⁹ Vannini, Filippo 2019. *Storia ed evoluzione dell'armatura italiana tra il 1370 e il 1470*. Tesi di laurea in Storia Medievale II, University of Bologna, p 27

²⁰ Boccia, Lionello. G. 1982. *Dizionari terminologici, Armi difensive dal Medioevo all'età moderna*. Firenze: Ateneo di Brescia p 38

²¹ Ibidem

²² Ibidem

The objective was to create defensive pieces as enveloping as possible. But this practice and it didn't hold beyond the 1380, at least in Italy and was then abandoned by the rest of Europe.²³

This solution was too constrictive both on foot and for riding, but it would be kept for tournaments on foot and procession during the next century.

The upper body

From the XIV century it becomes common to use mail gorget, thanks to the existence of the hauberk and mail hoods. This protection made with a thin layer of padding and layers of fabric attached to a leather piece. It's then closed on the back with hooks and clasps.

Over this protection and the under armor, the *lamiere* was worn, that as mentioned before consisted in a series of plaques attached to a textile or leather support.

The most similar find to the miniatures is the *Brigantine of Kussnacht*, that takes its name from the city near the excavation point. It's composed from a series of metal plaques aligned that still has lines of decorated rivets.

There is a strong overlapping downwards to consent flexibility, the protection of the chest is composed by three smaller plaques.

By the 1370 the breastplate was extended downwards with a skirt of hoops, faulds to cover the whole torso. The evolution of the backplate should be quite similar to the breastplate but it's quite difficult to follow.²⁴



²³Vannini, Filippo 2019. *Storia ed evoluzione dell'armatura italiana tra il 1370 e il 1470*. Tesi di laurea in Storia Medievale II, University of Bologna, p 31

²⁴ DeVries, Kelly; Smith, Roberts D. 2007. *Medieval weapons, an illustrated history of their impact*. Santa Barbare: ABC-CLIO. p 175

Bracers are complete defenses for the arms, made of metal plaques. The parts that constructed it were the *arm canons*, *couter* and *cannone anti-arms canon* which protect the arm from the elbow to the wrist.

Their shape is varied across Europe, they could be tubular or gutter shaped plates for upper and lower arms canon, with or without a couter, but they were the most common form.²⁵

Until the 1375²⁶ gauntlets were made of small plate and in the next decade they were hourglass shaped form in which a single plate covered the back and side of the hand. It was often decorated with gadlings, small decoration attached to the knuckle plate.

Strapped over the sleeves of the hauberk, besagews were more disc shaped plates that were sometimes fastened with laces to the shoulders and elbows. Aillettes sometimes were attached. They were small rectangular shapes that maybe had no defensive purpose, and were ornamental or heraldic decorations.

Sometimes the shoulder had a *rotellina*, a small metallic disc, tied with small needles to the hauberk and it was used to protect the shoulder, it was used in the early XIV century.

From about the XIV century, the cervellière mentioned before, while not disappearing but becoming more molded to the head, was also substituted by the bascine, a helmet common through half of the next century. There were three main types one small and globulare which covered the side and the rear of the head, with a visor; one with a deep conical shape arched over the face and extending down almost to the shoulder at the sides and back, fitted with a visor and a tall conical helmet with a straight horizontal lower edge cut off at the level of the ears.

Helmets and great helmets were substituted by the bascinets and barbutes lighter and more comfortable, but became the preferred protection in tournaments, evolving specifically for that kind of environment.

The bascinet was fitted with a visor, called *klappviser*²⁷ that was rounded and pivoted at the side of the skull but that was later attached to the top center of the face.

²⁵ Ibidem p 173

²⁶ Ibidem p 173

²⁷ DeVries, Kelly; Smith, Roberts D. 2007. *Medieval weapons, an illustrated history of their impact*. Santa Barbara: ABC-CLIO. p 176

This kind of helmet became really common from about the 1380 and was sometimes called “pig-faced bascinet”.



Tournament armor in Italy

In Italy defensive armor developed quite differently from the rest of Europe. All around the continent armor for meleés and tournaments developed differently from the warfare ones. They are studied for the occasion of tournament and joust, and are not very much flexible, but are more protective.

In Italy, instead, it seemed to take place the idea of using armor usable both in war and in tournaments.

The usage of metal plaques created problems with the weight and flexibility and to protection. The first issue was solved in Italy working on changing the thickness, making it variable on the plate. For example it was thinner on the places less subjectible to heavy impacts or direct hits, like the back and just under the belly (the thickness was about 1,8 to 2,2 mm) and thicker in places that were subjected to the opposite (even 5 mm on the frontal plaques).²⁸

²⁸ Vannini, Filippo 2014. *Il torneare del XV secolo*. Tesi di laurea in Storia Medievale, University of Bologna p 19

Regarding flexibility the matter it was discovered through reconstruction that the pieces were tailored anatomically and reduced the movement only around the 20%.²⁹

Resistance was also improved thanks to quenching and spherical form. Both guaranteed more protection with less weight and a more efficient defense against hits.

We could discern different phases in the evolution of this kind of attire. The first was a transition period, which was the direct consequence of the technological and cultural evolution at the start of the XIV century, where the white armor, made of steel, that improved its defense despite the weight and didn't lose much of its mobility.



After the first half of the century we assist to the shield becoming smaller and an evolution of the protection for the head and the body like mentioned before in the description of the armor.

The helmet was still quite imposing and with distinctive shape just for tournament with reinforcement in the front and thinning on the back where less hits reached the participants.

The shapes were roundish, and like in the civil fashion they put masculine characteristics on display, like the large shoulders and chest, a thin waist and defined legs.

In the following period, where the armor for war and tournament are one and the same, we assist to steel becoming the more important material for this kind of protection that made the man a statue invulnerable to any kind of offense.

Conclusion

While writing this essay i tried to make a general overview of the suit of armor in the XIV century with a peak in the XV.

What it's fascinating is that while it reached the peak of it's creativity, this was also the beginning of the end for the suit of metal armor.

It would be interesting to analyze to go more in depth with the analysis of the period and to have more time to add details.

²⁹ Ibidem p 20

Also to maybe study the parallelism with its slowly abandonment in the following century thanks to the improvement of firearms.

References

- Vannini, Filippo 2019. *Storia ed evoluzione dell'armatura italiana tra il 1370 e il 1470*. Tesi di laurea in Storia Medievale II, University of Bologna
- DeVries, Kelly; Smith, Roberts D. 2007. *Medieval weapons, an illustrated history of their impact*. Santa Barbare: ABC-CLIO.
- Bertelli, Paolo 2017. Le armature dei Gonzaga nella ritrattistica tardomedievale e rinascimentale. *Postumia*. 28/1-3, pp.265-287.
- Martinelli, Maurizio. *L'immagine del guerriero attraverso Europa Africa ed Asia*. Firenze: Regione toscana.
- Boccia, Lionello. G. 1982. *Dizionari terminologici, Armi difensive dal Medioevo all'età moderna*. Firenze: Ateneo di Brescia
- Vannini, Filippo 2014. *Il torneare del XV secolo*. Tesi di laurea in Storia Medievale, University of Bologna
- Oman, Charles, 2018. *A history of the art of war in the middle ages*. New York: Routledge
- Vignola, Marco. *Armature e armorari nella Milano Medievale: storia di famiglie, signa, magli e acciaio*, Edizioni dall'Orso, Alessandria