

The Morion: An Introduction to its Development, Form, & Function

By Jonathan Tavares

The helmet type known as a morion has become an iconic symbol of the Renaissance soldier. It is defined in its classic combed form by a distinct symmetry and balance between a crescent-shaped comb rising from a rounded bowl and a swept brim drawn up to points at the front and back (Figure 1). For many it evokes the swashbuckling Spanish conquistador, an image reinforced by Hollywood films such as *The Captain from Castile* (1947), and echoed in objects like the stream-lined hood ornament on the 1951



Figure 1. Comb-morion, Milanese or Brescian, ca. 1560-1570, The Metropolitan Museum of Art (37.186.6).



De Soto (Figure 2). Although the morion has become an essential prop in period dramas, neither its design—an ingenious interplay between form and function—nor its cultural resonance are fully understood or appreciated.

As a light and serviceable head piece, the morion was so successful that it can be considered the first international helmet form, adopted by sixteenth-century men-at-arms, merchants, and colonists from Sweden to Italy and from Portugal to Eastern Austria. Excavated remains of late sixteenth-early seventeenth century morions have been found within our own country at the English settlements around



Figure 2. Left: Lee J Cobb, Cesar Romero and Tyrone Power, *Captain From Castile*, 1947, Director Henry King; Right: Hood Ornament of a 1951 de Soto, Chrysler Corporation, designed by George A Lasko. [From: <http://paintingbyshub.com>]

Yorktown and Jamestown, Virginia (Figure 3).¹ Morions are found as far east as Japan, introduced by Portuguese merchants along with firearms in the sixteenth century (Figure 4).² The morion's popularity even bridged societies' class structures: they were produced in varying quality and decoration for the lowest infantryman to the King of France (Figure 5). In an attempt to explain this phenomenon, this study will examine the context of the morion's practical design and function beyond its timeless aesthetic appeal.

THE MORION'S DEVELOPMENT

First, it is important to understand the origins of both the form of this open-faced helmet and the term '*morion*' itself. It has been suggested by armor scholars that the morion derives from the late twelfth-century *Chapel-de-fer* (iron hat), as it was known in France, or in England known as the kettle or war hat, used by both mounted men-at-arms and infantry in various forms throughout Europe.³ The principal shape, as implied by the name kettle hat, is an open-faced brimmed helmet that resembles an overturned cooking pot when worn on the head. An illumination from a mid-thirteenth century Bible in The Morgan Library and Museum, New York, includes a number of examples of the helmet worn by men-at-arms, and offers a visual pun by showing one hanging on a cart from its chin straps beside a cooking pot (Figure 6). The detail of the illumination further suggests that these thirteenth-century kettle hats were commonly produced in segments—the brim, bowl and comb, all riveted together. In 2005, archeologists in Marsleben, Germany excavated the remains of a kettle hat produced with four segments riveted together in the same fashion as the one depicted in the Morgan Library Bible.⁴ Although the helmet was found in a fourteenth-century context within the excavation, it could conceivably date earlier; otherwise this example suggests that riveted construction remained common for over two centuries.

A rare fourteenth- to fifteenth-century example now in the Metropolitan Museum of Art is said to have been found in Lake Morat, Switzerland and may have been lost during a battle with the Duke of Burgundy in 1476 (Figure 7).⁵ This kettle hat has traces of tin-plating to protect against rust—a coating that may have aided in its survival in a waterlogged environment. The form of this helmet differs from its twelfth-century predecessors only in that it is produced in one piece rather than from parts riveted together.

Kettle hats dating from the middle of the fifteenth century, as the example in figure 8 (also from the Metropolitan Museum), already exhibit fully raised crescent-shaped combs from the center of a bulbous skull. This form very closely translates the courtly Burundian wide-brimmed hat into



Figure 3. Pointed morion excavated on Jamestown Island, Virginia, late 16th-early 17th century, possibly English or Italian export. [From: www.preservationvirginia.org]



Figure 4. *Namban Kabuto* or foreign-style helmet, Japanese, 17-18th century, The Metropolitan Museum of Art (04.4.13).



Figure 5. *Left:* Comb Morion produced in two parts, said to be from an arsenal in Austria possibly south German, ca. 1570-90, steel with black paint, Higgins Armory Museum (439); *Right:* Morion of the French King Charles IX, by the Paris goldsmith Pierre Redon, documented as paid to Redon's widow in 1572, partially enameled and gilt iron, Musée de Louvre (MR 426).



Figure 6. Detail from the Morgan Bible, French, ca. 1250, The Pierpont Morgan Library (Ms M. 638).



Figure 7. Kettle or War Hat, Western European, 15th century, The Metropolitan Museum of Art. (04.3.234).

steel, comparable through an illuminated image of a lost hat that was part of the 'Burgundian Booty' taken by the Swiss after the fall of Charles the Bold, Duke of Burgundy, in 1476-7 (Figure 8).

By the last quarter of the fifteenth century another derivation of the kettle hat evolved that can be considered the direct prototype of the developed morion. Used widely in the courts of Burgundy, Flanders and Iberia, this type is known in Spain as the *cabacete*, from the term *cabesa* or head (Figure 9). As demonstrated by an example in the Metropolitan's collection, the bowl of this helmet developed a medial ridge and the beginnings of a raised comb while the brim grew an elegant low sweeping arc, the purpose of which was to cover the sides of the head more closely, like a

steel bonnet. To protect the lower face and neck, a separate bevor or lower-face defense was often worn with the *cabacete*, secured by a strap at the back of the neck and often laced to the front of the chest. By the early sixteenth century, these bevors or '*barbote*', as they were known in Spain, were no longer used in preference for an open face.

There were two contemporary forms of the *cabacete*: one with a rounded comb and a pointed type—almost always with a thorn-like projection at the top (Figure 10). The use of one type over the other appears to have been a purely



Figure 8. *Left*: Illumination of a hat associated with Duke Charles the Bold of Burgundy taken as booty at Grandson, 1476, from: Johann Jacob Fugger, *Spiegel der Ebrn des löblichen Hauses Österreich*, 1555, Österreichische Nationalbibliothek; *Right*: Kettle Hat, Western European, ca. 1450-1500, The Metropolitan Museum of Art (04.3.236).



Figure 9. *Cabacete*, Spanish or North Italian, late 15th - early 16th century, The Metropolitan Museum of Art (29.150.9a).

personal choice. Both types continued to develop into the sixteenth century: the rounded form becoming the comb morion, and the other becoming the pointed morion also referred to as a cabasset (Figure 11). Neither seems to have been any more common than the other in any region, though, curiously, in England in the late sixteenth century, the pointed variety were known as ‘Spanish’ morions.⁶ Interestingly, the term ‘cabasset’, though used by many today to identify the pointed form, was a word rarely used in sixteenth-century England and likely derives from the Spanish term *cabacete*.⁷

The popularity of the fifteenth century *cabacete* was particularly evident in the Iberian Peninsula where a continued struggle for territorial control with the Moors (Nazarids) cultivated a lighter style of equipment and tactics amongst the Spanish man-at-arms of the *Reconquista*.⁸ As the *cabacete* became an influential helmet type throughout

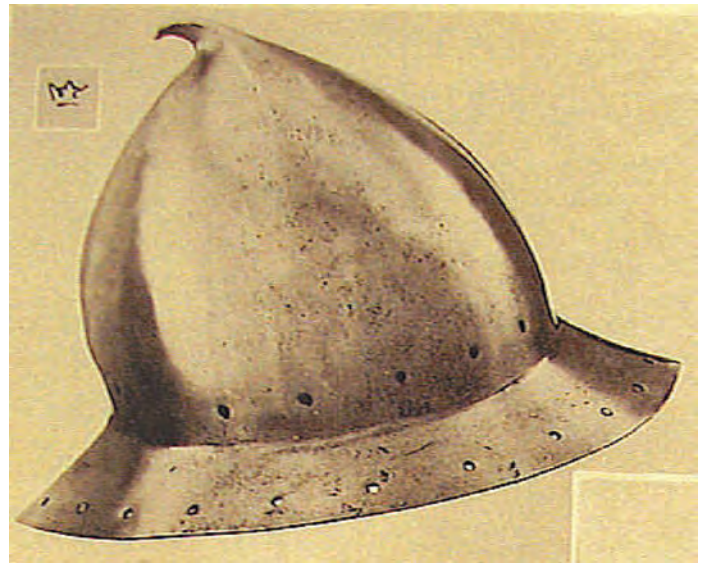


Figure 10. *Cabacete*, Spanish or North Italian, late 15th century, Royal Armouries, Leeds (IV. 500). [From: Arthur Richard Dufty and William Reid. *European Armour in the Tower of London*. London: Her Majesty’s Stationary Office, 1968, plate LXXIX.]

Europe in the late-fifteenth to early-sixteenth century, it was recognized as a distinctively Iberian (or by false association) Moorish-style helmet.⁹ From this association, the term ‘morion’, from an adjective to describe an object or person as Moorish or dark in color as in English—*morian* from *moor-ian*, developed to name the late form of *cabacete* shaped with a more parallel brim and skull with a rising comb or point.¹⁰ It remains doubtful, however, that the morion as a head piece has any direct relation to the Moors or to eastern-style helmets.

The earliest instances of the word ‘morion’ as used to describe a helmet are found around 1540-50; for example: *mourrion*—in a French manuscript,¹¹ *morione*—in an Italian inventory,¹² and *murrion* and *morion*—in an English inventory.¹³ The term ‘morion’ is not found in Spain until the inventory of arms and armor of Emperor Charles V (*Relacion de Valladolid*), produced in 1558, and suggests that it was a foreign term that came later to Spain.¹⁴ Supporting this assertion, ‘*morrion*’ is consistently used in this inventory to describe what we today classify as the burgonet type of helmet, referring to an open-faced helmet with hinged cheek-pieces and not a morion at all. For what can be identified in the inventory as a morion the word *celata* (in English—sallet) is used.

Nevertheless, the Spanish association with the morion helmet type seems deeply ingrained in the European mentality. For example, a German inventory of 1606 refers to the morion as a ‘*Spaniffler Schützen Haube*’ or Spanish shooting helmet, though the form had been in use in German-speaking lands for well over sixty years.¹⁵ So in a way the connection of the morion with Spain, one nurtured in the modern psyche by Hollywood, is in fact warranted even if Columbus and Cortez



Figure 11. *Left*: Pointed Morion, North Italian ca. 1570-80, The Metropolitan Museum of Art (29.158.20); *Right*: Combed Morion, North Italian ca. 1575-90, The Metropolitan Museum of Art (14.25.626).

could never have worn the fully developed comb morion of the late-sixteenth century with which they are so often portrayed.

The quintessential comb morion that we most identify culturally, though falsely, with the early conquistadors of the 1500-30s was not in fact fully evolved until about 1540 (Figure 12). A number of datable pieces and portraits aid in this typology. One of the earliest dated depictions of the fully developed comb morion is found in the portrait of an English Gentleman Pensioner, or royal retainer, thought to be a member of the Vaughn family, dated 1559 (Figure 13). The morion is seen just above the subject's right shoulder. Upon closer inspection the upturned front brim of the helmet even suggests an early use of a helmet bowl made in two-part construction, a feature usually associated with morions of later date.



Figure 12. Early Comb Morion, North Italian, ca. 1530-45, Churburg Castle in the southern Tyrol (S244). [From: Mario Scalini with Ian Eaves, *The Armoury of the Castle of Churburg*, Udine: Magnus, 1996, 353.]

In this method of construction, left and right halves of the bowl and brim are raised or shaped from separate plates of steel and joined with rivets or by crimping the edges of the two halves together, forming a seam front to back along the comb and points of the brim. Two-part construction was perhaps first devised as an economical solution to shorten the time and energy required in manufacturing the bowl from a single plate. It also allowed armorers to produce taller combs without the danger

of stretching the metal too thin and compromising its defensive qualities. In the painting of the Gentleman Pensioner, the upturned brim of the peak suggests the overlapping fold seen on morions constructed in this manner, particularly those of French manufacture as found on one rare example in the Metropolitan's collection (Figure 14). Solid and two-part construction was used in the production of comb and pointed morions throughout Europe in the second half of the sixteenth- to the seventeenth century and by itself should not be taken as a proper feature in dating morions.

The morion, in both its combed and pointed varieties, was the common helmet in munitions production. Research conducted on the Negroli family of armorers in Milan, best noted for their masterpieces in embossed parade armor produced by Filippo and Giovan Paolo Negroli, has shown that very large orders for morions were parceled out to various armor workshops within the city of Milan with its large arms industry. One account, on February 27, 1551, records an agreement made by Giovan Paolo Negroli acting as an arms merchant commissioning the armorer Francesco Rizzarelli to produce 200 morions for the next ten months at a rate of 20 per month.¹⁶ The contract stipulated the price per morion set at 9 Lire and 10 soldi,¹⁷ and the equivalent of 76.25 kilos of iron to be used for the entire order. Breaking this figure down, it has been suggested that seven pounds of iron were used in the manufacture one morion.¹⁸ The average weight for a common sixteenth-century morion is between three and a half to four pounds, if the calculations are correct there may have been a significant amount of waste in manufacture, which could include cutting and trimming the flat plates, raising the bowls, shaping and polishing. Giovan Paolo Negroli also stipulated in the contract that Rizzarelli was to use an example at another armorer's shop, that of Sebastiano Prina, as a model for his production and that Prina was to judge his work for quality. Orders like this were



Figure 13. Portrait of a gentleman pensioner, said to be a member of the Vaughn family, and a detail of the depicted Comb morion, English, oil on panel, dated 1559. [From: the Department of Arms & Armor image files, The Metropolitan Museum of Art]

common-place for the Milanese arms industry, and reflect the commercial importance of dispersing commissions for munitions and stockpiling them to fill large orders when needed.

This contract does not discuss the costs of polishing and grinding the surfaces of the raised morions, though the procedure could be expensive and time consuming.¹⁹ Removing all the hammering marks and producing a smooth mirror-bright finish required the specialized skills of



Figure 14. Tall comb morion in two parts, probably French, ca. 1555-70, Metropolitan Museum of Art (14.25.634).

professional polishers. These men used large abrasive wheels, sometimes in water-driven mills, working carefully as not to make the outer surface too thin—particularly in grinding and polishing the comb on morions where the metal was stretched to its extreme by the armorer in the raising process. Some morions show that either polishers or the armorers themselves frequently did break through the metal as it is not uncommon to find riveted patches on the inside of a comb from its manufactory.²⁰ These polishing mills were often large affairs, serving any number of armor workshops, and they represented a great investment on the part of the armoring community at large.²¹ So important was

the use of these mills that the artist-printmaker Stradanus (Jan Van der Straet, 1523-1605) chose to celebrate the ‘armor polishers’ as one of a series of sixteen *Nova Reperta* or ‘new discoveries’ claimed to be unknown to the ancients (Figure 15). Although some artistic license is clearly taken by Stradanus, we can imagine that a busy polishing mill must have looked very similar. Above the large grinding wheels and below the shop window are heaps of morions either finished or awaiting polishing with apprentices scooping the pieces up into baskets and distributing others to the millmen grinding away with bowls of abrasive paste for dressing the wheels by their side. While this seems an odd choice to serve as a modern ‘discovery’ for Stradanus to celebrate, the use of water-driven polishing wheels such as these would have drastically reduced the time and effort in polishing armor by hand with files and strops and so is perhaps worth acclamation. Some morions bear evidence of this process. Deep stridations from the initial rough gridding, not altogether removed by subsequent buffing, can be seen on the comb and bowl of an example from the Higgins Armory Museum (Figure 16). Stradanus’ image presents a window into the labor distribution of the sixteenth-century arms industry, not surprisingly brimming with stacks of morions.

THE MORION: FORM AND FUNCTION

As an open-face helmet, the morion answered the need for a common serviceable head piece that could be adopted by diverse types of soldiers on the early modern battlefield.

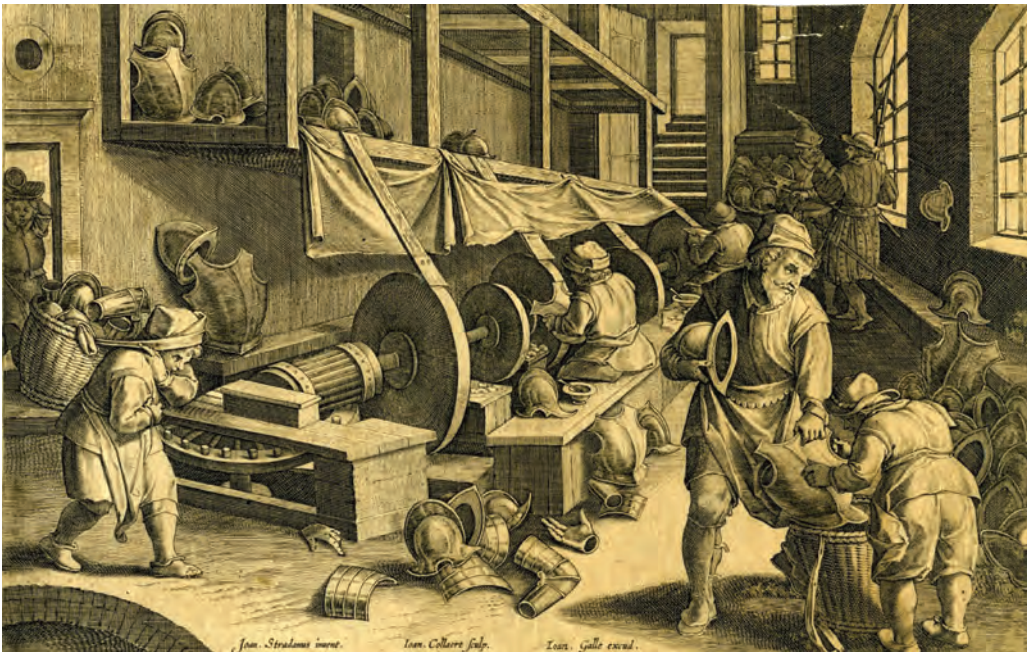


Figure 15. Stradanus (Jan Van der Straet), the armor polishers from the series *Nova Reperta* (new inventions and discoveries of modern times) Antwerp, ca. 1599-1603. [From: The Metropolitan Museum of Art, Department of Arms and Armor]

During the sixteenth century as firearms became the dominant weapon the ranks of light cavalry and infantry gradually increased. This meant that both tactics and equipment were significantly changing, and the developed morion was found to suit these changes.

One of the greatest design issues for helmets throughout the Middle-Ages and Renaissance was balancing the need for ventilation and vision while maintaining a defense of the wearer's face. An ideal balance was not always achieved—particularly in the sixteenth century with the increasing effectiveness of firearms. One example that attests to this point is a steel buff (face guard) on a close helmet that was once part of a field armor of Anne de Montmorency, Constable of France, preserved in the Musée de l'Armée in Paris (Figure 17). The buff has a large bullet hole from a shot that injured the Constable de Montmorency at the Battle of Dreux in 1562. Such injuries were often fatal and could only have been prevented with heavy reinforced plates that could be buckled, clasped, or screwed over the visor, drastically diminishing ventilation, vision, and the wearer's comfort.

Towards the last quarter of the sixteenth century it becomes evident that a facial defense was ineffectual, and so was rejected by the growing units of light

cavalry in preference for an open-face burgonet with hinged check pieces or a morion. For these cavalymen, the risk far outweighed the obscured view.

The equipment of the developed light cavalymen or mounted harquebuser (named for their firearm the harquebus or short musket) is seen on this page from Johann Jacob Von Wallhausen's treatise *The Art of War for the Cavalry*, (1617), (Figure 18). As displayed, the arming for the light cavalymen was pared down to the essentials, reducing the armor to a gorget (neck defense), pointed morion, and a breastplate. The typical cuirass itself (both breast- and backplate combined), is

even further reduced to just a breastplate with crossed leather straps. A unit outfitted in this way had multiple advantages, including the ability to rapidly dismount at any moment and move quickly around a battlefield, as well as reduce the initial costs for the arming of such troops. The sequence displayed on this page from Wallhausen particularly demonstrates the advantage of the open-faced morion, allowing the shooter to bring the harquebus up to the cheek and take aim, a cumbersome if not impossible act with a closed helmet or burgonet with buff.

For infantrymen, the open-face helmet had always been popular, and the morion had become the most economically efficient and effective head defense to equip the rank and file. Just as unobstructed vision was a necessity for



Figure 16. Comb morion, and detail of the comb and bowl showing stridations from grinding, marked Augsburg, Germany and an unidentified armorer's mark, ca. 1560-70, Higgins Armory Museum (159).



Figure 17. Close helmet with a falling buff from an armor worn by Anne de Montmorency at the battle of Dreux in 1562, Musée de l'Armée (G.61). [From: Jean-Pierre Reverseau. *Musee De l'Armee Paris: Les armes et la vie*. Paris: Dargaud Editeur, 1982, 35.]

the mounted harquebusier, so too was it for the infantryman. This point is well illustrated in an etching of harquebusiers produced in 1570 fighting in the French wars of Religion (Figure 19). Here the men load and fire their pieces while taking shelter from a rock, their heads shielded by morions as they take aim.

In close encounters with infantrymen, mounted men are likely to aim their sword-cuts and thrusts at the closest part of the infantryman's body from their elevated level, which invariably would be the top of the head, face, neck, and shoulders, all of which are shielded by the morion. Accordingly, the formal design of the developed morion should be understood not only as an evolution of aesthetic choice with a balanced play of arching crescent shapes or points, but also an ingenious system of angled planes that poses multiple defensive qualities of glancing and arresting surfaces.

To outline these defensive qualities, it is helpful to consider them from the top down as demonstrated in this diagram (Figure 20). Looking at a comb

morion when worn in profile it is noticed that the comb is tallest at the center relative to the bowl, sloping down in a diminishing width to the front and back brim. If a sword cut was delivered from a mounted cavalryman perpendicular to the comb, as shown in this diagram with lines A to C, the comb would absorb the percussion of the blow while keeping the blade two or three inches, if not more, in distance away from the cranium. The impact of a blow would be further absorbed by the requisite lining which could be up to a half-inch thick, made of coarse linen canvas padded with wool, horsehair, or tow (Figure 21).²² In conjunction with this, the crescent shape of the comb could cause such a blow to slide backward or forward, transferring the energy down the ridge of the helmet. The brim peaks act as an arrest to prevent the blade from sliding further and thus prevent injury to the neck or face, as indicated in the diagram (Figure 20) by dotted lines along A- through- C.

The sweep of the front brim also protects against side cuts. On the second diagram (Figure 22), A and B represent sword cuts delivered by a mounted cavalryman aiming at the face, prevented by the brim from making contact. The swept brim also guards against sword cuts, represented by line C, intended to hit the back of the neck.²³ When defending against attacks at parallel height, the shape of the morion continues to



Figure 18. Detail of Figure 10 displaying the accoutrements and drills for mounted harquebusiers in Johann Jacobi Von Wallhausen's *L' Art Militaire a Cheval*. Translated into French by A. Zutphen, 1621. [From: the Library of the Metropolitan Museum of Art, Department of Arms and Armor]



Figure 19. Detail from an etched print depicting *La Prinse De La Ville De Montbrison* accruing in July 1562, by Jean Perrissin and Jacques Tororel *Quarante tableaux, ou histories diverses qui sont memorable touchant les guerres, massacres et troubles, advenues en France ces dernières Années* (Forty Pictures or Diverse Stories That Are Memorable Concerning the Wars, Massacres and Unrest Occurring in France over the Last Few Years) Lyon: 1570. [From: the Library of the Metropolitan Museum of Art, Department of Arms and Armor]

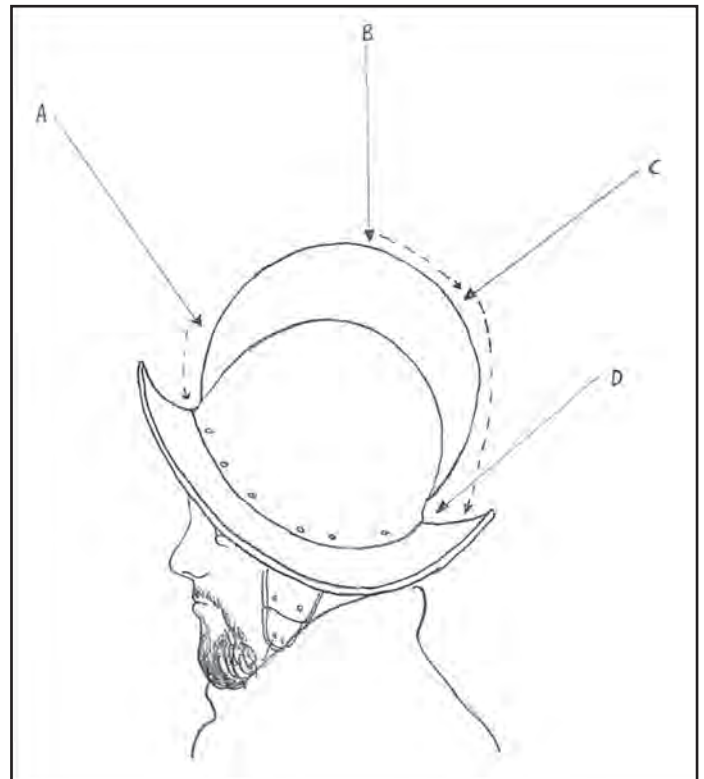


Figure 20.

ward off cuts. An attack aimed at the cheeks, represented by sword cut D can be shielded by the scaled metal cheek pieces, secured to the helmet by leather chin-straps working in conjunction with the low sweep of the brim.

The defensive concept behind these purposely exaggerated elements was rediscovered in the research of Dr. Bashford Dean, first Curator of arms and armor at The Metropolitan Museum of Art, who experimented with historically inspired prototypes for new helmets and body armor for the American soldier during and after World War I. Between the late-seventeenth century and World War I, helmets were not generally used in Europe and the principles of armor manufacture had to be rediscovered and adapted for modern industry.²⁴ As the potential for personal protection was recognized it seems only natural that the military would call upon historians like Dr. Dean to look at the past and actively seek design solutions for the future.

In his work: *Helmets and Body Armor in Modern Warfare*,



Figure 21. Interior view of a morion depicted in figure 26 showing its original padded lining. The lining consists of coarse canvas padded with tow or horse hair, stitched to a leather band riveted to the base of the helmet bowl (check-pieces missing). The Metropolitan Museum of Art (1989. 288).

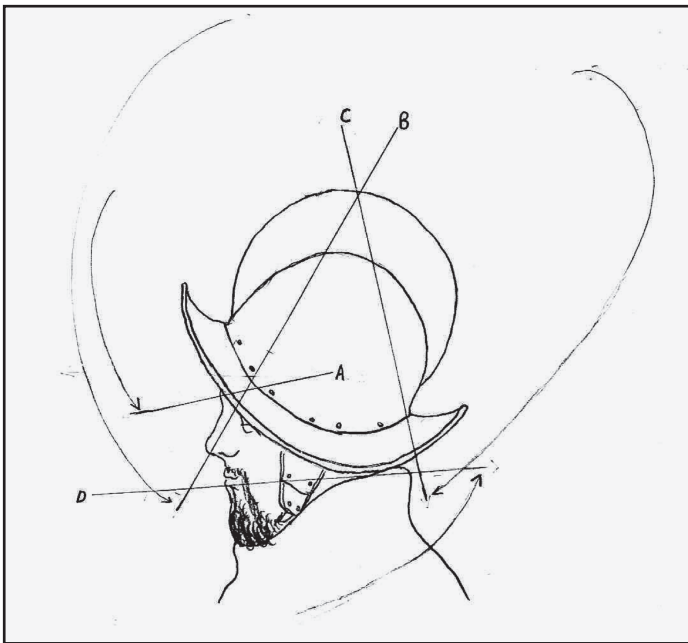


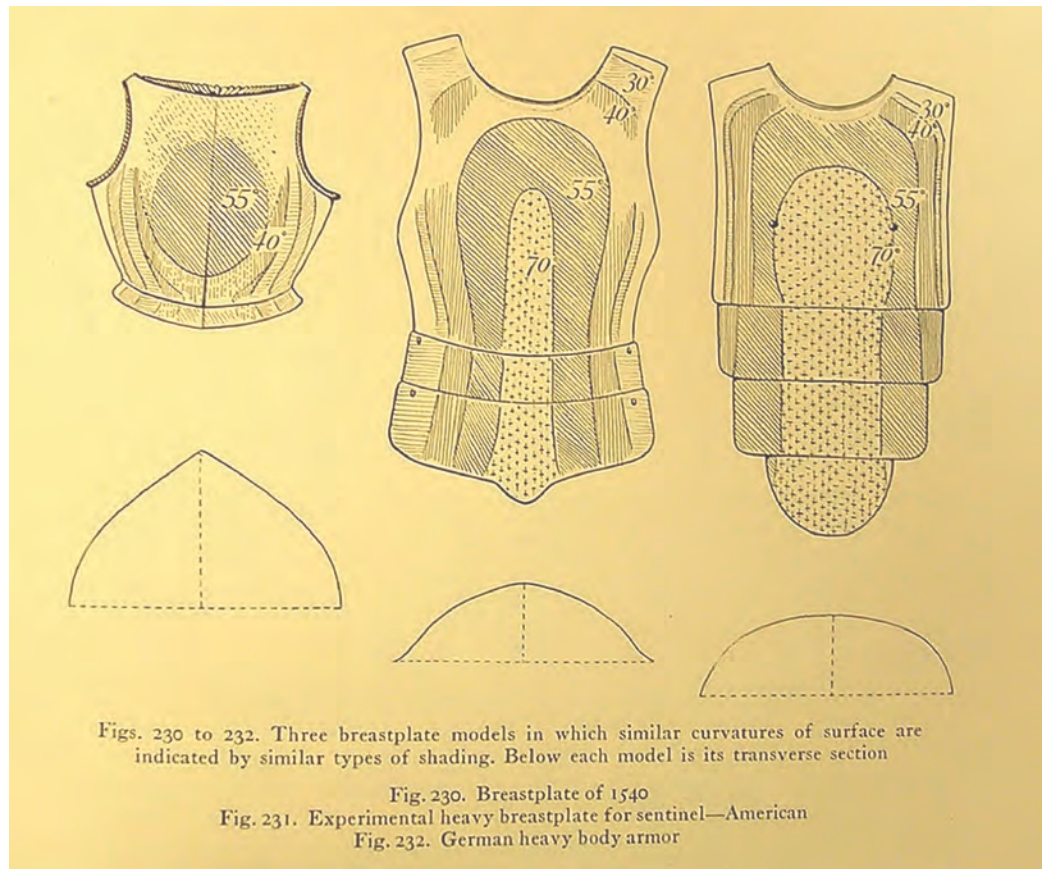
Figure 22.

Dean specifically emphasizes the ability of a mid-sixteenth century North German breastplate to deflect shots due to its projected belly produced with an angle of 55 degrees at the center medial-ridge, where shots were most likely to strike (Figure 23). Dean goes on to criticize both American and German designs of machine gunners' breastplates used in World War I for their flat profile at the front, which presented more surface area for bullets to strike.²⁵ The same design principles that apply to the pointed belly of the mid-sixteenth century breastplate also applied to the morion, which must have had the ability to not only deflect sword cuts and thrusts, but also to deflect bullets (dependant on range), particularly when the morion is faced head-on with the medial ridge toward the projectile.²⁶

In his study, Dean informs us that: "the angle at which a projectile impinges is unquestionably an important factor in the proof of armor."²⁷ He also relates that efforts were just then being made to produce a formula to calculate ideal angles and thicknesses for plate defenses.

From this analysis it was proposed: "... that a projectile which perforates a plate of definite thickness on normal impact (90 degrees to the surface) will fail to penetrate a plate 75 % of the same thickness if impinging at an angle, say, of 60 degrees . . .", implying that if an angle is produced in a plate sufficient enough to deflect a bullet, the thickness of that plate could be significantly reduced.

In fact, the relative thickness of armor to suppress impact was studied in a more recent test published in *Neurosurgery Magazine* in an article entitled: 'Head Protection in England before the First World War'. This study displays a graph showing the relationship between the energy required for an arrowhead to penetrate a modern mild steel plate in various thicknesses, showing that the "relationship is nonlinear and to a first approximation, is square, that is doubling thickness produces a four-fold increase in penetration energy required."²⁸ This suggests that the sixteenth-century armorer, although not working with modern mild steel, could achieve much in shot-proofing a morion by raising the form with a millimeter more steel at an ideal angle conducive to deflection. From Sir Roger Williams' *Brief Discourse of Warre*, published in 1590, we find that morions were associated with the shot-proofed armor of halberdiers (infantrymen armed with staff



Figs. 230 to 232. Three breastplate models in which similar curvatures of surface are indicated by similar types of shading. Below each model is its transverse section

Fig. 230. Breastplate of 1540

Fig. 231. Experimental heavy breastplate for sentinel—American

Fig. 232. German heavy body armor

Figure 23. Diagrams indicating the curvature of both antique and modern breast plates published by Dr. Bashford Dean in *Helmets And Body Armor In Modern Warfare*, New Haven: Yale University Press, 1920. [From: the Library of the Metropolitan Museum of Art, Department of Arms and Armor]

weapons) as he specifies they: “. . . ought to have corselets [breast and backplates] with light Millain murrains, the fore parts ought to be of the prooffe of the calivre [short musket].”²⁹ Though Williams is likely referring to the breastplate as shot-proof, there are a few morions with proof marks from an armorer testing the piece with gunshot, all of which are rare examples for siege use dating to the first half of the seventeenth century.³⁰

Dispite these defensive qualities, morions do have one major flaw: the face of the wearer remains exposed to direct sword thrusts, and projectiles. This issue was addressed by either repelling attacks with a weapon (a sword or musket), or a round shield held by the left arm as seen in an illustration by Adam Van Breen, produced in 1618, to demonstrate an exercise with sword and *rondas* (round shield) for use in infantry tactics (Figure 24).³¹ These shields were often shot-proof, making them sufficiently heavy to require a leather strap, called a guige, around the neck and back to help support the weight. When fired upon or engaging in close combat, the shield can be brought close to the brim of the morion to protect the face from thrusts and cuts, working in tandem with the morion to offer full protection. Appropriately, the morion was often produced as a pair with a round shield, decorated to match as a ‘garniture’ for infantry service, a fact attested by illustrations, inventories, period auction lots, and surviving matched sets. This is illustrated by a triumphal entry of the Duke of Anjou into Antwerp as painted by Hans Vredeman de Vries (1582), (Figure 25). Before the Duke’s processing entourage we find two infantry officers kneeling with their pages presenting their matched garnitures of morion and round shield—accoutrements befitting these officers’ station at the head of infantry units. Sir John Smythe in his *Instructions, Observations, and Orders Militarie*, . . . (1594), describes this same ceremony when outlining the equipment and duties of an infantry captain:

*Also a Captaine leading his band through any Citte or great towne ought to march in his corslet compleat, and to march before his band with his pique [pike] vppon his shoulder: Howbeit his page may weare his burgonet [open-faced helmet], and carry his target [round shield] either before him or by him. And so like wise the Lieutenant of the band . . .*³²

In the de Vries painting the foremost page bears a matching pointed morion and round shield, both gilt and clearly intended to display the officer’s superior rank as a captain of a civic or military guard who in the sixteenth century were often from the noble class and could afford such gallant accoutrements.

Aside from single commissioned decorated pieces, morions were also made in series as accessories for the livery



Figure 24. A page from an exercize with sword and *rondas* (round shield) from Adam Van Breen: *De Nassausche Wapen-Handelinge . . .* S-Grauenhage, 1618 Amsterdam, Bibliotheek Van het Rijksmuseum, (326F23). [Image from *Schutters In Holland: Kract en Zenuwen Van de Stad*]

of a nobleman’s retinue of personal body guards. These body guard units, common in the sixteenth and seventeenth centuries, were often lavishly and uniformly outfitted, not unlike the classical Roman Praetorian guard. While their intended purpose was to protect the prince, their number, costume, and arms conspicuously propagated the image of his wealth and power. Not surprisingly, amongst the number of surviving groups of morions belonging to guard units of this kind we find some of the most aesthetically pleasing examples. The most celebrated are those associated with the *Trabantenleibgarde* or the life guards to the dukes of Saxony, Germany, in the second half of the sixteenth century. These morions are recognizable for their distinctive use of narrow etched and gilt bands linking together a pattern of circles or roundels (Figure 26). The center roundels on the bowl are etched with classical figures, on one side Marcus Curtius, a soldier who sacrificed his life for Rome by leaping with his horse into an abyss. On the other side is depicted



Figure 25. Detail of a painting representing the triumphant entrée on Sint-Jansbrug of the Duke of Anjou. Signed by Hans Vredeman De Vries, 1582. Oil on panel, in Amsterdam Rijks Museum (SK-A-4867). [From: Heiner Borggreve, et al. *Hans Vredeman de Vries und die Renaissance im Norden*. Munich: Hirmer, 2002.]

Mucius Scaevola, who demonstrated the courage of a Roman soldier by putting his hand into a fire. Both were highly appropriate figures to decorate a corps of bodyguards' equipment, as they personify self-sacrifice and courage—virtues the Saxon duke would have deemed necessary in his loyal cohorts.³³

There are estimated to be six distinct forms of morions within the Saxon group, with slight variations in regards to the etching and overall shape of the helmet. Some are stamped with various makers' marks on the brim beside the control mark of the city of Nuremberg, one of the largest hubs in the renaissance arms trade. It is thought that the initial order of morions from the Duke August I was so large (possibly over a hundred) that the commission had to be shared by multiple Nuremberg workshops to fill the order, thus the variations.³⁴ Alternatively, it is possible that the variations represent subsequent orders to Nuremberg armorers to equip the unit over time as they expanded from the reign of Duke August I (r.1553-1586) to his son Christian I (r.1586-1591) and possibly Christian II (r.1591-1611). If this is so, the example in figure 26 is likely part of the earliest group as it is dated in the etched decoration 1568, and possibly served as the model for further commissions.

The bold black and gold coloring of the Saxon morions, though not common to all types in the group, was intended to match the black, gold, and green livery of the guards

which reflected the colors of the Saxon duke's coat-of-arms.³⁵ Hand-colored woodcuts from a 1571 tournament book provide a vibrant image of a liveried retinue escorting a noble lord as he enters the tournament grounds, all dressed with matching trunk hose, doublets, and morions complete with feather panaches (Figure 27). In such a fashion, the Saxon *Trabantenleibgarde* consisted of two companies, one mounted on black horses and one on foot, each contingent numbering about a hundred men.³⁶ With such a large force of uniformly dressed men, the Saxon duke must have presented an awe-inspiring spectacle when accompanied by this cavalcade. A woodcut illustration from Jost Amman's *Wappen Und Stammbuch* (1589), illustrates how a mounted corps of

such guards appeared (Figure 28). The woodcut, identifying the subject as a *spießjunge* or 'spear boy', is accompanied by a satirical verse and occasions a rare view into the life of such bodyguards. In four verses the text elaborates on the *spießjungen's* duties, translated:



Figure 26. Comb Morion, marked with the Nuremberg control mark, and Maker's mark of the master "MR", dated 1568, produced for the elector of Saxony August I's *Trabantenleibgarde* (body guard unit), The Metropolitan Museum of Art (1989.288).



Figure 27. Hand colored woodcut depicting the retinue of a nobleman, Heinrich Wirrich, *Ordenliche Beschreybung des Christlichen Hochlöblichen und Fürstlichen beylags . . .*, (Tournament Book) Vienna, 1571. [Ann S.K. Brown Library, Brown University]

I look after horses, and serve at table; I am freshly full of mischief.

I brag up my squire [young lord] so often my mouth and nose are bleeding.

It does not do me any harm; I do not care, because I receive good food and clothing for it.

Sometimes horse-riding becomes to me unpleasant, but I still have it better than a peasant.³⁷

Amongst his complaints about dealing with horses, the youth seems more than grateful for his livery, accoutrements his master must have paid very dearly for in order to set an imposing image at court.

The use of matched decorated morions was not restricted to guard units of the nobility, as the example below will demonstrate; municipal guards were also issued highly decorated pieces. In the city of Cologne, Germany, the guilds and *Gaffeln* (larger professional structures), were charged with assembling and outfitting groups of city watchmen from amongst their members.³⁸ In a spirit of civic pride and a competitive display of status, the cooper's or barrel maker's guild (*Fassbinderzunft*) commissioned local armorers around 1570-80 to produce a group of morions for their representative watchmen.³⁹ These morions are etched with the guilds emblem—a barrel stave hatchet between dividers supported by rampant goats (Figure 29).⁴⁰ Amusingly, the cooper's guild emblem is arranged in a strikingly similar pattern of bands and roundels as found on the Saxon guard unit's morions, perhaps a conscious attempt on the part of the guild to emulate the nobility to heighten their prestige within the community.⁴¹ This group of morions is distinguished by the high quality of its etched decoration and rivals examples made for any princely guard, a fitting

demonstration of the growing prosperity and commerce of the guilds in free cities like Cologne in the late-sixteenth century.

The tradition of guards donning morions lives on in the current ceremonial attire of the Swiss guards in the Vatican. Though still a functional unit, protecting the Popes since the early-sixteenth century,⁴² the Vatican guards when outfitted in their traditional uniforms suggest an image of a unit that has gone unchanged since its inception (Figure 30). On the contrary, when looking back at the visual record of their livery from the Renaissance to the present much

has changed. In the early-seventeenth century the guards wore the traditional infantry corselet (breastplate, backplate, collar, and arm defenses with a simple flat-brimmed



Figure 28. *Speißjungen* or 'Spear boys' from Jost Ammon's *Wappen & Stammbuch*, 1589, Nuremberg, Germany, printed woodcut. [From: the Library of the Metropolitan Museum of Art, Department of Arms and Armor]



Figure 29. Comb-morion etched with the emblem of the Cologne Copperer's Guild or *Fassbinderzunft*, ca. 1570-80, Cologne, Germany, The Metropolitan Museum of Art (28.195.1).



Figure 30. Photograph of two newly sworn Swiss guards from *The Times Nation & World*, front page, Section B, May 7, 2006.

morion), together with voluminous trunk hose as was customary in the tradition of Swiss and German *Landsknechte* or mercenaries.⁴³ In the early-nineteenth century, the guards maintained the colorful trunk hose and wore cuirasses with a collar and pauldrons (shoulder defenses), but for a head piece a more contemporary dragoon's helmet was used.⁴⁴

By 1915, the morion was once more adopted to fit out the Swiss guards, but now in a new modern design befitting

its purely ceremonial function. This new helmet was made of light material—aluminum—weighing a mere twenty three ounces, and included ventilation holes along the comb obscured by feathers, features intended for better comfort for the wearer.⁴⁵ If the malleability of the aluminum did not compromise the defensive qualities of this morion the perforated comb certainly did. It is clear that the morion had become a vestigial helmet meant only to function as a recognizable link to the traditions of the sixteenth century. This helmet is so far removed from its original practical use that it no longer fulfills its protective purpose. An image from the press of newly inducted Swiss guards in 2006 even shows the aluminum morion worn backwards with the cheek pieces forcing the tilted swept brim over the forehead as opposed to slouched back in order to shield the nape of the neck (Figure 30). The only explanation for this is that the helmet's function has been either misunderstood or forgotten. Despite these changes to the Swiss Guard's costume over the centuries, what remains intact is the image of Renaissance ceremony, literally reborn to invoke an air of tradition and reverence for the past.

The form of the morion will forever be synonymous with the sixteenth-century soldier; its pronounced pointed brim and tall comb have captivated imaginations for centuries. Many a nineteenth-century artist's studio or collector's study is portrayed with one of these head pieces looming in a dim corner. For collectors and history enthusiasts, the aesthetic of this helmet has never lost its appeal, but what has been lost over time is an understanding of the more practical function for this ubiquitous helmet's design. In armor-making, form often does equal function, and in the case of the morion we find an elegant expression of the armorers' empirical formula. The success of the morion as an international helmet for over a century is inextricably linked to its superior defensive qualities as well as its aesthetic charm, and it is only after we realize these design sensibilities that we can gain a deeper appreciation for this iconic helmet.

END NOTES

1. For the use of the morion in America see: Harold L. Peterson. *Arms and Armor in Colonial America 1526-1783*, (New York: Bramhall House, 1956.), 103-154.

2. Use spread to Japan through early trade with the Portuguese first in 1543, then Dutch merchants. Morions, mostly of late 16th-century North Italian manufacture, were incorporated into what has been called *Namban Kabuto* or foreign helmets with added brow plates and lamellar neck guards. Influenced by this form, the Japanese armorers quickly produced imitations as in the example in figure 3 from the Metropolitan Museum of Art, ca. 17th century (04.4.13),

for further reference see: Robinson, H. Russell Robinson. *Oriental Armour*. (London: Jenkins, 1967), 196-197.

3. Previous scholars who have devoted some attention to the morion and its origin include: Guy Frances Laking, 'Morions and Cabassets' in *A Record of European Armour and Arms*. Vol. IV (London: Bell and Sons. Ltd, 1921), 193-217; and Claude Blair. *European Armour, circa 1066 to circa 1700*. (London: B. T. Batsford LTD, 1958.) 138,198-199.

4. This writer is grateful to Dirk Breiding for pointing out this recently discovered rare survival. See: Dirk Breiding, 'Harnisch und Waffen des Hoch- und Spätmittelalters' in: *Ritter, Burgen und Intrigen Aufruhr 1225! Das Mittelalter an Rhein und Ruhr*, (Mainz: Verlag Philipp von Zabern, 2010), 132.

5. This reputed provenance is recorded when the helmet was acquired as part of the Duc de Dino collection by the Department of Arms & Armor, The Metropolitan Museum of Art. See Stuart W. Pyhrr. *European Helmets, 1450-1650: Treasures from the Reserve Collection*. (New York: The Metropolitan Museum of Art, 2000), 6.

6. Blair, 138; Peterson, 113.

7. The term 'cabasset crested' is used to describe a lot in a surviving English auction catalogue of 1586, which appears to be one of the few recorded uses of the term at the time and oddly seems to suggest that it in fact has a comb, i.e. is 'crested' other lots in the auction use the term morion. See: Francis Henry Cripps-Day. *Fragmenta Armamentaria, Volume II, Miscellanea, Part II A Sale Of Armour By Lottery in 1586*. (printed by Butler & Tanner Ltd. For the Editor Cripps-Day, unpublished, 1938.)

8. A lighter style of armor worn in Iberia in the fourteenth and fifteenth centuries seems to have favored open faced helmets and coats of plates or brigandines worn in conjunction with mail and elements of plate armor. See: James Gow Mann. *Notes on the Armour Worn in Spain From the Tenth to the Fifteenth Century*. (Oxford: Printed by John Johnson for the Society of Antiquaries of London, 1933).

9. This origin of the term 'morion' is first posited by James Planché, *Cyclopaedia of Costume or Dictionary of Dress*. (New York: J.W. Bouton, 1877), 371.

10. See: *Oxford English Dictionary*, S.V. "morion" According to the entry this use of the word as an adjective first occurs in a 1504 account of the Lord High Treasurer in Scotland: ". . . To the moryen tawbrona, V French Crowns." 11. Possibly the earliest use of the term to describe a head piece from a ca. 1540-45 French manuscript: Jacques Chantareau. *Miroir des armes militaires et instruction des gens de pied*. cited by Victor Gay. *Glossaire Archéologique Du Moyen Age Et La Renaissance*. (Paris: Librairie De La Société Bibliographique, 1887), vol I, S. V. 'Cabasset'.

12. From an inventory produced in Mantua to record the holdings of the Gonzaga armories taken on March 9,

1543, by a Master Marco Antonio de Osma, chief armorer of the Ducal Armories. Published and translated into English with the original sixteenth-century Italian text in: James G. Mann. *The Lost Armoury Of The Gonzagas, Part II The Libro Aquila*. (London: The Royal Archaeological Institute Of Great Britain and Ireland, 1945), 49.

13. From the inventory of King Henry VIII of England's property at Greenwich under Armorer Erasimus Kirkener, 1547. See: David Starkey. Ed. *The Inventory of King Henry VIII: The Transcript*. (London: The Society of Antiquaries, 1998), 161.1547.

14. See Francis Henry Cripps-Day. *Fragmenta Armamentaria, Vol. II: Miscellanea Part V: An Inventory of The Armour of Charles V*. reprinted, (Cambridge: Ken Trotman Ltd., 2004), 37.

15. From the 1606 inventory of the Saxon Armory at Dresden as cited in parts by: Erich Haenel. *Kostbare Waffen Aus Der Dresdner Rüstkamer*. (Leipzig: Verlag Karl W. Hiersemann, 1923), 62.

16. Stuart Pyhrr, Jose-A. Godoy and Silvio Leydi, *Heroic Armor of the Italian Renaissance: Filippo Negroli and His Contemporaries*, (New York: Harry N. Abrams for The Metropolitan Museum of Art, 1998), 70. Citing a manuscript from the Archivio di Stato, Milan, (Notarile 9178)

17. To compare the value of this sum, 250-280 Lire represented the yearly income of a skilled craftsmen in mid-sixteenth-century Milan, thus the price of one plain morion was about a week and a half worth of pay. For more concerning 16th-century currency and its value see Ibid, 63.

18. Ibid.

19. For a brief discussion about the importance of polishing mills see: Matthias Pfaffenbichler, *Medieval Craftsmen Armourers*, (London: British Museum Press, 1992), 34, 65.

20. It is also common to find brazed repairs or fills in cracks at the side of the bowl or comb which can be either original 16th-century repairs or later 19th-20th century restorations.

21. For an example of the sub-contractual relationship between armorers and polishers in the armor making center of Cologne see: Pierre Terjanian, 'The Armourers of Cologne: Organization and Export Markets of a Foremost European Armour-making Center' *Journal of the Armour Research Society*, Vol. 1 (2005), 34.

22. During the course of this study, several examples of morions were examined that retain, if not original, then old helmet linings, Such examples are included in the collection of The Metropolitan Museum of Art (1989.288) , (28.195.1), and the Higgins Armory Museum (431.1).

23. Despite these clear advantages of a swept or arced brim, many pointed morions have narrow-flat brims seemingly designed with the intent to fashionably mimic the

common civilian hat rather than offer superior protection to the neck and face.

24. The exception to this are the leather and steel helmets issued to some cavalry troops or dragoons in the 18th and 19th centuries as well as German *Pickelhauben*, but on the whole helmets were not manufactured and distributed on the same wide scale to the common infantryman as they were in the 17th century until the early 20th century with an increased use of trench warfare.

25. Bashford Dean. *Helmets And Body Armor In Modern Warfare*. (New Haven: Yale University Press, 1920).

26. In some cases, pointed morions are raised with ridges on the sides as well, as in the Higgins Armory Museum (619).

27. Ibid, 303.

28. T. Philip D. Blackburn, et al. 'Head Protection in England Before the First World War.' in *Neurosurgery*, (Volume 47 Number 6, December 2000), 1279.

29. As cited by John Hewitt, *Ancient Armour and Weapons in Europe: From the Iron Period of the Northern Nations to the End of the Seventeenth Century . . . Supplement comprising the 15th, 16th, and 17th centuries*. (London: John Henry and James Parker, 1860), 599.

30. An example of this is in the Livrustkammaren, Stockholm, Sweden, made in 1623 for use in the trenches during the Thirty Year War by King Gustavus Adolphus. It weighs 15.3 kg.

31. Adam Van Breen. *De Nassausche Wapen-Handelinge . . .* (S-Grauehage, 1618)

32. John Smythe. *Instructions, Observations, and Orders Militarie, requisite for all Chieftaines, Captains, and higher and lower men of charge, and Officers, to understand, knowe, and observe*. (London: Richard Jones, 1594), 21.

33. Helmut Nickel, Stuart W Pyhrr, and Leonid Tarassuk. *The Art of Chivalry: European Arms and Armor from the Metropolitan Museum of Art*. (New York: American Federation of Arts, 1982), 63-66.

34. C.O. Von Kienbush, ed. *The Kretzschmar Von Kienbush Collection of Armor and Arms*. (Princeton: Princeton University Library, 1963), 76.

35. Nickel et al., 63.

36. Nickel et al., 1982, 63.

37. The original in a south German dialect reads: *Ich wart der Rosß/ und dien zu Tisch/ Zu aller Schaldbeyt bin ich frisch. Mein Jundern thue ich auffblasen/ Das mir offt blut Maul und Nasen. Es schadt mir nichts/ ich pfeiss im dran/ Gut Kost und Kleid darvon ich han. Zuweil mir wirt das reyten fauwr/ Doch hab ichs besser dann ein Bauwr*. This writer is most grateful to Dirk Breiding, Assistant Curator of Arms and Armor at the Metropolitan Museum of Art, for providing this translation.

38. In Cologne twenty-two *Gaffeln* were organized from groups of different handicrafts and individual citizens, these groups were associated with some guilds but not necessarily all practicing tradesmen. If you were a member of a handicraft or guild such as the coopers' guild you were also a member of a distinct *Gaffel* grouped with others. For a discussion on the guild or 'handicraft' structure in Cologne as it pertains to the armorers and mail makers see: Terjanian, 29.

39. The dating of this group of Cologne morions is based on its similarity in the foliage pattern and general character of the etching to a waist-coat cuirass etched with the date 1571, and the name of the city of Cologne; in the collection of The Philadelphia Museum of Art (1977.167.25).

40. See: Pyhrr, 33.

41. Another group of morions with this roundel pattern ascribed to a body guard of the Landgrave of Hessen-Darmstadt is believed to be manufactured in Cologne, and are perhaps after the Saxon model. The side roundels are etched with either a rampant lion or flur-de-lis, derived from the Landgrave Von Hessen's coat of arms and/or the civic arms of Darmstadt. An example is in the collection of The Metropolitan Museum of Art (28.159.1). See: Pyhrr, 33.

42. The Swiss guards began with Pope Julius II (r. 1503-13).

43. The belief that the artist Michelangelo designed the Swiss Guard uniform is incorrect, see: Colonel Repond, *Le costume De La Garde Suisse Pontificale Et La Renaissance Italienne*. (Rome: Imprimerie Polyglotte Vaticane, 1917.)

44. This livery of a Swiss guard is illustrated in an etching dated 1821 by 'Ferrari' in the Metropolitan Museum's Watson Library.

45. For comparison: 650 grams or 1.4 lbs. is about a third of the weight of a typical period comb morion. The Swiss guards adopted this newly designed aluminum morion in August of 1914 according to: Colonel Repond, *Le costume De La Garde Suisse Pontificale Et La Renaissance Italienne*. (Rome: Imprimerie Polyglotte Vaticane, 1917.) 81.

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