THE SWISS WAY OF WAR:
A STUDY ON THE TRANSMISSION AND CONTINUITY OF CLASSICAL AND MILITARY IDEAS AND PRACTICE IN MEDIEVAL EUROPE

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

Katherine A. Becker, M.A.

The Ohio State University
2009

Dissertation Committee:

Professor John F. Guilmartin, Jr., Advisor
Professor Noel Geoffrey Parker, Advisor
Professor Nathan Rosenstein

Approved by

Advisor
History Graduate Program
ABSTRACT

The transmission of military ideas across time and the problems arising from tracing diffusion were examined. A major theme was investigating the similarities between Greco-Roman military formations and traditions (eighth century B.C. to 400 A.D.) and those of the medieval Swiss (1315-1544). Only six possibilities could explain the similarities.

Stimulus Diffusion was examined as an explanation. This theory suggested that military ideas spread, by word of mouth. It was determined that, in the Swiss case, stimulus diffusion was not a factor, since inherent in the definition of stimulus diffusion is the requirement of an originality (“ideational germ”) on the part of the diffusing society. The evidence suggested the opposite, that the use of pike formations in Italy, Scotland, Flanders, and elsewhere in Europe, had an earlier origin.

In order to determine what this earlier origin had been, Hanson’s theory of a “Continuous European Tradition,” with Greco-Roman roots, of fighting in organized columns was explored with the Swiss as a test case. Contact between the Helvetii and Alemanii, along with other Germanic tribes with ties to ancient “Switzerland,” and the ancient Greeks and Romans was established. However, it was determined that a “continuous tradition” of fighting in the classical Greco-Roman style was unlikely due to medieval Feudalism.

The possibility the Swiss may have created formations in the fifteenth to sixteenth centuries using Greco-Roman military treatises was viable. Similarities between the Swiss long-pike formations (1474-1550) and those described by Asklepiodotus (second century B.C.) were persuasive. Yet, since Swiss long-pike columns were developed in the fifteenth century, and Asklepiodotus appeared in Switzerland in the seventeenth century, alternative pathways had to be considered.

The notion that Swiss formations were the result of an egalitarian society was also considered. The ratification of oaths for perpetual support coupled with egalitarian laws, even as more oligarchic cantons joined the original Confederacy of the Forest Cantons, gave the Swiss militias an egalitarian and secular nature.

However, the best explanation was battlefield experience. At Laupen (1339) the Swiss, under the leadership of the knight, Erlach, changed their tactics. Heavy losses taken by Swiss halberdiers at Sempach (1386) led officials to push for a decrease in the number of halberds and increase in the number of pikes. A further reorganization of the Swiss formation resulted from a defeat at Arbedo in 1422. Here, dismounted knights created an infantry formation of lances, out-distancing the shorter Swiss halberds and short-pikes. As a result the Confederates reorganized their militias into long-pike
formations. By 1474 the standard length of the Swiss pike was eighteen feet long with a ten inch steel head (similar to Hellenistic sarissas).

In conclusion: 1) Archeological and literary evidence suggests early Switzerland arose out of, and carried on, Roman culture in some form. 2) Elites sometimes had knowledge of classical texts whose lessons occasionally filtered down to the battlefield. 3) Despite a rich popular military tradition with classical roots, and direct literary inheritance of classical military practice, Swiss formations evolved out of battlefield experience of the fourteenth to sixteenth centuries.
Dedicated to my father,
Lieutenant Colonel Robert W. Becker, USARMY, Ret.
and my mother,
Elsadene Becker
ACKNOWLEDGMENTS

I wish to thank my advisors Geoffrey Parker and John F. Guilmartin, Jr., for their intellectual support, encouragement, and enthusiasm, which made this dissertation possible, and for their patience in correcting both my stylistic and historical errors.

I am grateful to Nathan Rosenstein for stimulating discussions concerning classical societies and their roles in western warfare, and for reining in arguments that might have gone astray; and also to Joseph P. Heremans whose unique proximity to, and understanding of, Flemish and Swiss culture has provided a fresh and accurate perspective on important issues of language, culture, and the art of war in ancient and modern Flanders and Switzerland.

I owe great debts of gratitude to Professor Dr. Stig Förster at the Universität Berne, Switzerland for his enthusiasm and support for this project, and also to Major Philipp Müller, Schweizer Armee, for his invaluable assistance in solving issues surrounding complicated weapons innovations in the thirteenth to fifteenth centuries, and for sharing with me his own ideas concerning the impact those technological changes had on Western European society.

I also wish to thank Victor Davis Hanson for his constant support, encouragement and, especially, for those several slaps with “Patton’s glove” each time I claimed, “shell shock.”
This research was supported by grants from Die Eidgenössische Stipendienkommission für Ausländische Studierende and the U.S. Fulbright Commission; and the Mershon Center for International Studies at the Ohio State University.
VITA

April 27, 1969………………………………………Born-Selma, California, USA

1999…………………………………………………M.A. History, California State University, Fresno

1999 - 2004……………………………………..Graduate Teaching and Research Associate, The Ohio State University

2004 - 2006…………………………………….Student Lecturer, The Ohio State University

2006 – present………………………………… Lecturer, California State University, Fresno

PUBLICATIONS

Teaching Module Publication


FIELDS OF STUDY

Major Field: History
Minor Fields: Military History; Early Modern History; World History
TABLE OF CONTENTS

Abstract ........................................................................................................................................... ii
Dedication ......................................................................................................................................... iv
Acknowledgements ............................................................................................................................ v
Vita ...................................................................................................................................................... vii
List of Figures ...................................................................................................................................... x
List of Maps....................................................................................................................................... xii

Chapters

1. Introduction................................................................................................................................. 1

Part I: WHAT SWISS PIKE COLUMNS WERE NOT

2. The Product of Stimulus Diffusion from Courtrai and Bannockburn (1302-1315) ................................................................................................................................. 26

3. The Product of a Continuous Western Tradition (800 B.C.-1315 A.D.) ................................................................................................................................. 64

Part II: WHAT SWISS COLUMNS MIGHT HAVE BEEN

4. Formations drawn from the Swiss imagination, influenced by popular Greco-Roman Literature (1190-1315) ................................................................................................................................. 127

5. Formations Created Using Greco-Roman Military Treatises (1474-1550) ................................................................................................................................. 152

Part III: WHAT SWISS FORMATIONS WERE

6. The Product of a Democratic Society in the “Inner” cantons with Roots in the Germanic Gau (not in Greece): The Foundations of the Swiss Way of War (1240-1315) ................................................................................................................................. 188

7. The Product of Battlefield Experience/Autonomous Growth: Development of the
Swiss Formation (1315-1544) ................................................................. 234

8. Conclusion ......................................................................................... 276

Bibliography ......................................................................................... 289

Appendices

Appendix A  Lists of Classical Sources ........................................... 312
Appendix B  MS 97 ............................................................................... 357
Appendix C  Asklepiodotus, Tactics .................................................. 373
Appendix D  Lavater’s Military Manual ............................................. 390
Appendix E  Bundesbriefs of Freedom and Law ............................... 400
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Greek to Macedonian Phalanxes</td>
<td>24</td>
</tr>
<tr>
<td>2.1</td>
<td>The Courtrai Chest</td>
<td>57</td>
</tr>
<tr>
<td>2.2</td>
<td>The Goedendag</td>
<td>58</td>
</tr>
<tr>
<td>2.3</td>
<td>Extant Goedendags</td>
<td>59</td>
</tr>
<tr>
<td>2.4</td>
<td>Reconstruction of the Flemish goedendag</td>
<td>60</td>
</tr>
<tr>
<td>2.5</td>
<td>The Flemish line of battle at Courtrai from the Courtrai Chest</td>
<td>60</td>
</tr>
<tr>
<td>2.6</td>
<td>Reconstruction of the Battle of Bannockburn</td>
<td>61</td>
</tr>
<tr>
<td>2.7</td>
<td>Modern Reconstruction of weapons and formation at Bannockburn</td>
<td>62</td>
</tr>
<tr>
<td>2.8</td>
<td>Illustrated cover of Bendict Tschlachtan’s, Die Schlacht am Morgarten published in 1493</td>
<td>63</td>
</tr>
<tr>
<td>3.1</td>
<td>Greek Corinthian-style bronze helmet. 7th century BC</td>
<td>117</td>
</tr>
<tr>
<td>3.2</td>
<td>Hoplite armor</td>
<td>118</td>
</tr>
<tr>
<td>3.3</td>
<td>Hoplite attacking</td>
<td>119</td>
</tr>
<tr>
<td>3.4</td>
<td>Etruscan Arms and Armor</td>
<td>120</td>
</tr>
<tr>
<td>3.5</td>
<td>The Roman manipular disposition after deployment but prior to engagement</td>
<td>121</td>
</tr>
<tr>
<td>3.6</td>
<td>The Roman manipular disposition after velites’ engagement and Retreat</td>
<td>121</td>
</tr>
<tr>
<td>Section</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>3.7</td>
<td>The Battle of Poitiers 1</td>
<td>122</td>
</tr>
<tr>
<td>3.8</td>
<td>The Battle of Poitiers 2</td>
<td>123</td>
</tr>
<tr>
<td>5.1</td>
<td>The Battle of Pavia in the Ashmolean Museum</td>
<td>127</td>
</tr>
<tr>
<td>6.1</td>
<td>The Bundesbrief of 1291</td>
<td>232</td>
</tr>
<tr>
<td>7.1</td>
<td>The Swiss Halberd of the 13\textsuperscript{th}-14\textsuperscript{th} centuries</td>
<td>269</td>
</tr>
<tr>
<td>7.2</td>
<td>Arms and Armor: The Swiss Halberd System</td>
<td>270</td>
</tr>
<tr>
<td>7.3</td>
<td>The Battlefield at Morgarten</td>
<td>271</td>
</tr>
<tr>
<td>7.4</td>
<td>Contemporary sketch of the Battle at Sempach</td>
<td>272</td>
</tr>
<tr>
<td>7.5</td>
<td>The Swiss Long Pike</td>
<td>273</td>
</tr>
<tr>
<td>7.6</td>
<td>The Battle line at Ceresole</td>
<td>274</td>
</tr>
<tr>
<td>8.1</td>
<td>Fragment from the Stele of the Vultures erected by Eannatum of Lagash</td>
<td>287</td>
</tr>
<tr>
<td>8.2</td>
<td>Lieutenant James King’s sketch of King Shaka</td>
<td>288</td>
</tr>
</tbody>
</table>
# LIST OF MAPS

<table>
<thead>
<tr>
<th>Map</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Switzerland as Part of Roman Empire</td>
<td>124</td>
</tr>
<tr>
<td>2</td>
<td>The Roman Limes: Helvetia and Rhaetia</td>
<td>125</td>
</tr>
<tr>
<td>3</td>
<td>Switzerland 1291-1797 AD</td>
<td>233</td>
</tr>
<tr>
<td>4</td>
<td>General Topography of the Earliest Swiss Battles:</td>
<td>275</td>
</tr>
<tr>
<td></td>
<td>Morgarten, Laupen and Sempach</td>
<td></td>
</tr>
</tbody>
</table>

xii
CHAPTER 1
INTRODUCTION

The battle array which the Confederates invariably employed was one whose prototype had been seen in the Macedonian phalanx. It was always in masses of enormous depth that they presented themselves on the battlefield. Their great national weapon in the days of their highest reputation was the pike, an ashen shaft eighteen feet long fitted with a head of steel which added another foot to its length. Before the line projected not only the pikes of the front rank but those of the second, third, and fourth, an impenetrable hedge of bristling points.1

In the Middle Ages, the disciplined legions of antiquity had been replaced by a warriorhood based entirely on the bravery and skill of the individual. The difference between a group of medieval spearmen and a phalanx, legion, or cohort is that it formed not tactical body, that is a formation in which a mass of warriors is joined into a force with a unified will. Only foot troops organized in this way can be designated as infantry. The test is combat against mounted men in the open field. A true infantry was not formed again until the period of the Swiss dominance when we once again have foot troops comparable to the phalanx and the legions.2

For over five hundred years the pike formations of the late-medieval Swiss Confederates have inspired the imaginations of military scholars. Hailed as the first infantry since the ancient world, the Swiss system has been compared to armies developed by ancient Macedonian aristocrats for foreign conquest, while also being saluted as the first citizen militias since the time of the classical Greeks and

Republican Romans. Scholars seem untroubled by the contradiction. Swiss tactics, with their bristling pikes, speed and maneuverability bore some resemblance to the Macedonian *sarissa* phalanxes crafted by the aristocrats Philip II and Alexander of ancient Macedon, but were conceived, in the Swiss case, by an egalitarian society. Few have wondered why two so different cultures produced such similar fighting units.

Instead discussions of the Confederate units focus mostly on the novel tactics they brought to the late-medieval European battlefield. The Swiss mobilized in organized units of pikemen and halberdiers, marching “with a bold tread” to the rhythm of drummers and fifers who followed just behind them. Swiss captains, unlike medieval knights who rode to battle, marched with their men. When they engaged in battle Swiss phalanxes kept a swift but steady pace as they marched towards their enemy. As masses of pikes and halberds came rolling over a hill or out of a forest and speeding towards their enemy their European counterparts were terrified. “Almost before the opponent had time to realize his position,” Delbrück tells us, “they were on him, with four rows of pike heads projecting in front, and the impetus of file after file surging up from the rear.”

Often the sheer impression of their pikes alone—a “thick forest of spears”—was enough to cause panic among enemy levies: even the most seasoned veteran could flee before the Confederates. Swiss units were so formidable, in fact, that it is often difficult to evaluate the real effectiveness of Confederate tactics since, often, their enemies fled before being fully engaged. At the battle of Grandson in 1476, for instance, 19,000 Swiss militiamen armed with only pikes and halberds put to flight a professional Burgundian army of 14,000 with 2,000-3,000 heavy cavalrymen, 7,000-8,000 archers, and an artillery

---

battery. Pushing forward into a barrage of cannonballs, the Swiss repulsed a simultaneous assault by the French mounted-men-at-arms to their rear. With the stampede of the French, panic spread among their ranks, who fled “long before the Confederate masses had come into contact with them.”

When put to the test, Swiss tactics by the mid-fifteenth century were formidable. Renowned for their speed, discipline, and élan, Confederate units scorned the horse, utilizing instead sheer muscle power in shock action offensives to drive heavy cavalry and dismounted men-at-arms off a variety of terrains. Discipline and drill gave them the maneuverability and speed to regroup under fire, to force threats to enemy rear and flank, to withdraw in formation, and to stand up to massed cavalry assaults. The battle at St. Jacob-en-Birs (1444) is exemplary of the Swiss skill, determination and élan. There a force of about 1,500 Swiss pikemen held off a French mercenary army nearly fifteen times their own size, repulsing constant cavalry charges for four hours and fought to the last man, taking with them nearly three French soldiers for every Swiss killed. Such battles taught the Swiss lessons which improved their units, and taught Europeans to fear them.

As Christopher Allmand tells us, the “Swiss tactical style favoured collective aggression, thanks to the high proportion of the population with military experience and the general absence of social differentiation.”

---


system applied not only to tactics, but also to command. Swiss units in the field, not politicians at home, decided their own fates. Not even commanding officers held much sway over their men: the Swiss decided when to enter and exit a battlefield, and chose their own tactics. Often to their own detriment, the men gave the orders and their officers obeyed them. But, this bottom-up command structure also strengthened the tactical initiative of individual units, reinforcing their ability to respond with speed and effectiveness to changing battlefield conditions.7

Just before the battle at Bicocca, for instance, 16,000 Swiss mercenaries deserted their French commander Lautrec because he failed bring the Italian commander Colonna to battle quickly. Four thousand cantonal contingents were loyal and remained. But six months after their countrymen left, these units went on strike. Demanding that they would be paid immediately, Lautrec was also given an ultimatum: either strike the enemy the next day or they, too, would march home. There were to be no more delays. The Swiss followed these demands with utter insubordination once the advance commenced. Lautrec had intended to move his engineers forward to fill up a line of trenches so that the artillery could be moved forward to launch a barrage in advance of the Swiss attack. But the Confederate mercenaries had no time for this. In perfect formation they stormed forward, in perfect formation they stopped at the ditch; in perfect formation line after line was speared by German and Spanish pikemen as they attempted to reappear out of the ditch. Still the obstinate Confederates would not retreat. Instead, the entire crowd shouted angrily for their commanders to take up the leading positions, to “come out and earn their money fairly for once….they shall all fight in the front rank

---

7 For more on the egalitarian nature of Swiss army see Oman, Art of War, 83-4.
today.”⁸ And they did. The Swiss commanders and captains stepped forward into the front ranks and the Swiss tried the assault again. After half an hour of failed attempts, with 3,000 of their comrades dead in the trench below, the remainder of the Swiss in perfect formation finally pedaled backward in retreat. They left behind twenty-two captains, all killed at the command of their soldiers.⁹

Closely tied to the egalitarian nature of the Confederate units, was the Swiss policy of “taking no prisoners.” Made up mostly of commoners—farmers and burghers—Swiss armies had little respect for aristocrats. Neither the knights’ skill nor elite social status intimidated the Confederates since, as Jakob Twinger wrote: “the Swiss considered themselves to be little junior nobles.”¹⁰ The medieval aristocratic notion of “ransom” was out of the question. No one returned the favor, so why should they spare an aristocrat? Titled, or not, any individual who made himself an enemy of the Swiss was to be eliminated. After the battle of Novara (1513) the Swiss put to death several hundred German prisoners.¹¹

As Clifford Rogers and others have recognized, the Swiss represent a turning point in late-medieval battle. Foot soldiers would no longer play a secondary role to horsemen. In 1302 Flemish pikemen crushed a cavalry corps of Burgundian mounted knights at the Battle of Courtrai, and at Bannockburn in 1314 the Scots utilized shock infantry to defeat the English. But the Swiss took infantry warfare to an entirely different level. Following

---


⁹ Ibid, 182.


¹¹ Oman, Art of War, 89.
Morgarten in 1315 where Swiss insurgents trapped and massacred an imperial cavalry-dominated Habsburg army, the Confederates next scored a series of pulverizing defeats against the Habsburgs armed forces on the open battlefield. As Rogers points out:

At Laupen (1339), where Swiss halberdiers and pikemen resoundingly defeated the cavalry and infantry of the Burgundian nobility, was something different. ‘For the first time almost since the days of the Romans,’’ as Oman rightly points out, ‘infantry, entirely unsupported by horsemen, ranged on a fair field in the plains, withstood an army completely in all arms and superior in numbers.’ Something new was afoot in European warfare.12

Footsoldiers had always been utilized in medieval warfare, and the Scots and Flemish provided strong reminders to knightly-led armies that motivated infantry could be lethal. However, the successes of the Flemish and Scots were short-lived. The Flemish pikemen had been trained to serve as a defensive supporting arm to cavalry and missile troops, and lacked the speed and mobility found in the later Swiss phalanx. At the Battle of Rosebeke in 1382 the Flemish corps lost to the French mounted knights.13

The Swiss, however, were able to replicate their successes. The excellent coordination of their close combat weapons gave to the Swiss foot troops a strength and steadfastness on the battlefield that had been lacking in all European militias of pikemen in prior centuries: the deadly halberd and pike combined with discipline and the Swiss fervor to protect the central Alpine valleys from invasion, was a lethal fusion that assured the Swiss successive crushing defeats over first the Habsburgs and later the

---


13 Delbrück, Medieval, 431-446.
Burgundians. Replicating their successes time and again, the Swiss caught the attention of the great European powers, and won for themselves the reputation, if not always accurate, of being invincible. These Alpine valley farmers, because of the superiority of their massed columns, had the ability, unlike communes elsewhere, to demand—at pike-point—their independence first from their Habsburg overseers, and finally from the Holy Roman Empire, becoming a free and sovereign state by 1648.

How and why did Swiss tactics give the Confederates such overwhelming success? How were their formations manipulated with the speed and agility comparable only to those of the ancients? Why was it the Swiss and not the Flemish or Scots who mastered the pike phalanx, using it as a vehicle on the road to political independence? A number of interpretations have been posed to explain the special nature of Swiss warfare.

MACHIAVELLI:

In *Art of War* (1521), the contemporary military and political strategist Machiavelli suggested that the Swiss modeled their formations on those of the ancient Greeks. He writes:

The Swiss regiments at present are also based upon the model of the ancient phalanxes and follow their method both in closing up their battle order and in relieving their ranks; when they engage, they are placed on each others’ flanks not in a parallel line. [Unlike the Roman legions, the Swiss] have no method of

---


receiving the first rank, should it be thrown back into the second, in order to relieve each other, they place one regiment in the front and another a little behind it on the right, so that if the first is hard pressed, the second may advance to its assistance; a third is placed behind both these and also on the right, at the distance of an harquebus shot. They have adapted this disposition so that if the other two should be driven back, the third can relieve them, and all of them have sufficient room either to retreat or advance without falling foul of one another….the fact that the method the Swiss observed is not as good as that taken by the ancient Romans appears very plainly from the success of the Roman legions who always go the better of the Greek phalanxes whenever they happened to engage.¹⁶

By “the Greeks” Machiavelli means the Macedonian “Greeks” and clarifies this in the following passages:

Now in order to form an army upon the model of both [the Greeks and Romans] I would make the Greek phalanx my pattern in some respects, and the Roman legion my pattern in others; therefore, as I told you before, I would have 2,000 pikemen in my regiment, armed like the Macedonian phalanx….the first five ranks of every battalion should consist of pikemen and the rest of shieldbearers….so that the rest might be able not only to sustain the shock of the enemy’s cavalry in front and to penetrate into their infantry, but also to open it to the right and left so that the shieldbearers may come to complete victory….The Swiss, like the ancients form their regiments of 6,000 or 8,000 infantry drawn up in close order….The close order observed by the Swiss is necessary to push back the enemy’s infantry, to stand up to cavalry, and to make it harder for the enemy to break in on them….we find that only the ancients’ pikes and close order—still in use among the Swiss—have done such wonderful service….¹⁷

Machiavelli later explains that the Macedonian and Swiss phalanxes were very similar, except that while only the first five ranks of Swiss pikes could hold off enemy cavalry, the Macedonians had the advantage of a sixth row of pikes, since sarissas were twenty feet long, while Swiss long pikes extended only eighteen feet.¹⁸

¹⁶ Machiavelli, Art of War, 86.

¹⁷ Ibid, 86-7, 98-9. Machiavelli apparently means that the first five ranks could all reach the enemy with their pikes.

But, Machiavelli seems to have a specific group of “Macedonians” in mind when he compares “the Greeks” with the Swiss. Describing the limitations of Swiss and “Greek” formations as compared with the legion, he cites a battle between Aemilius Paullus and Perseus, king of Macedonia.\(^{19}\) The reference, of course, is to the battle of Pydna (168 B.C.) between a late Hellenistic Macedonian phalanx and Roman legion. According to John Warry, this was not the original flexible and mobile phalanx of Philip II and Alexander the Great. It was the more rigid phalanx of the late-Hellenistic period with heavier weapons and armor, which had trouble wheeling about even to protect itself, as is evident at the battle of Cynoscephalae. In comparison Alexander’s speedy phalangists at Gaugamela aided by cavalry and light-armed troops, could turn quickly to rescue their baggage train from a Persian breakthrough.\(^{20}\)

Given what we know of the alacrity and flexibility of the Swiss pike phalanx it is odd that Machiavelli, who was well-versed in classical battle literature, would choose to compare the Swiss to the later Hellenistic formations, instead of to Philip and Alexander’s phalangists. Was there a reason for Machiavelli’s choice, or was he simply wrong?

**Delbrück and Oman**

Two of the most influential writers on Swiss medieval warfare are the early twentieth century contemporaries Sir Charles Chadwick Oman, an Englishman, and the

---

\(^{19}\) Ibid, 101.

German Hans Delbrück. Both authors, like Machiavelli, recognized the similarities between the Greek and Swiss formations, but approached it differently. Oman suggested that the nearest prototype to the Confederate battle array of the fifteenth century was the Macedonian phalanx, but provided no explanation for how or why the Swiss system might have resembled the ancient formation or learned from classical precedents. However, unlike Machiavelli, he likely would have been skeptical that the Swiss literally based their pike formations on those of the Macedonians. In fact, he argues that during the sixteenth-seventeenth centuries when strategists, like William Louis of Nassau, were reviewing Greek and Roman literature to modify tactics based on classical theories, the Swiss paid no attention to these changes. The Swiss system went into decline, precisely because the Confederates did not take note of Renaissance learning, but “[held] fast to the tactics of their ancestors.”

But is Oman correct and what ancestors does he mean?

Delbrück provides an answer to the latter question when he argues that the Swiss Forest Canton culture derived from the Gau system of the ancient Germans. The egalitarian nature of the Swiss way of war, Delbrück believed, derived in part from its foundation in a democratic society, although it was Germanic, not Greek, in origin. Modern historians who emphasize that the isolated Forest cantons were the product of the “old Germanic military democracies” support this idea. Yet, neither Delbrück, nor the


modern historians systematically explain what elements of the ancient Germanic society the Swiss adopted or how those elements molded the Swiss way of war.

In terms of strategy and tactics, though, Delbrück found the Swiss military system more comparable to the classical Greek than to Macedonian, Hellenistic, or ancient German systems. This is evident in his 1887 book, *Die Perserkriege und die Burgunderkriege*, which compared the Greek response to the Persians c. 490 B.C. with the Swiss response to the Burgundians in the late-fifteenth century. But Delbrück also wrote a book comparing the strategy of the Athenian General Pericles with that of Friedrich the Great, and often used classical paradigms to describe later European battles, and this was not limited to the Swiss. So the value of Delbrück’s *Perserkrieg and Burgunderkrieg* as a means to understanding the underpinnings of the Swiss system as it relates in any real way to the ancient world must be questioned.

**Victor Davis Hanson**

A modern military historian Victor Davis Hanson also provided an explanation for why the Swiss system might resemble that of the Greeks. Although he does not mention the Swiss in *The Western Way of War*, Hanson implicitly argues that the classical (c. fifth century B.C.) Greeks would have been precursors to the Swiss style of war, since the Swiss themselves were exemplary of a “western tradition” fostered by classical Greek hoplites. The “western way of war,” Hanson argued, originally was a military tradition of frontal assault, shock battle that could be accomplished in a day, allowing its yeoman warriors to go back home to their farms as quickly as possible. The Greeks, of course,

---


did not invent the phalanx: the first densely packed infantry with shields and spears seems to have appeared first in Sumeria. However, it was the Greeks who refined fighting in mass into true shock warfare; they created the neat lines and files of the phalanx and created sophisticated weaponry and armor to meet the demands of colliding head-on with like columns. An important component of the Greeks’ technological and tactical innovations was the hoplon or aspis, a round wooden shield, approximately three feet in diameter, backed with leather and covered by half an inch of bronze: it is from this important piece of armor—or the entire ensemble of heavy arms (hopla)—that the warriors of the phalanx derive their name--hoplites.

Hoplites, Hanson argues, were a military elite made up of a broad class of landed yeoman farmers, who fought, by the fifth century, in a way that enhanced their own agrarian egalitarianism and allowed for frequent wars without extensive fatalities and capital losses. Two enemy armies lined up, rectangle against rectangle, on a flat battlefield, the eyes of both sides fixed on the respective opposing forces. When the Spartans were present, the eerily sweet sound of flutes permeated the air--giving the signal that the charge was on. Infantry moved in time to the rhythm of the pipes. The push of the back ranks sent forward a pulsating force and shock, which rippled through the entire column, driving it forward as the first three ranks lowered nine-foot spears.

---

26 On Sumerian phalanxes, see Richard Humble, *Warfare in the Ancient World* (London: Cassell, 1980), 18-19, who suggests that the earliest known close-packed shield wall with spears leveled for the charge was masterminded by Eannatum of Lagesh c. 2460-2305 B.C.

27 F.E. Adcock, *The Greek and Macedonian Art of War* (Berkeley: University of California Press, 1957), 3; Hanson, *The Western Way of War*, 27. The word hoplon was used by Greek authors in both the singular and plural to signify armor and weapons as well as the shield. This derivation suggests the links between a hoplite’s shield, armor, and weapons and the formation in which the Greek warrior fought--the phalanx. On the derivation of “hoplites” from the hopla (arms and armor as a whole), see also J.F. Lazenby & David Whitehead, “The myth of the Hoplites’ Hoplon,” *The Classical Quarterly* 46, no. 1 (1996): 27-33. See too, John Keegan, *A History of Warfare* (New York: Vintage Books, 1993), 248, who reveals that phalanx is literally translated “a roller.” Keegan also suggests here that the word phalanx and its cognate, the Greek word for “finger,” were perhaps first linked, since the fingers project like parallel spears from the hand.
fitted with iron points, and the entire formation rushed unflinchingly forward to meet an opposing sea of metal. The outcome was bloodcurdling:

Columns eyed each other formally across the flat plains, bronze glittering in the summer sun. The initial collision was horrific, as each side stumbled blindly ahead into the enemy mass attempting to create some momentum that might shatter the opposing formation into fragments. Hearing was nonexistent. Dust, the crowded conditions of the battlefield, and crested helmets made sight nearly impossible. Descriptions of gaping wounds to the unprotected neck and groin, involuntary defecation and urination, mistaken identity and panic all abounded. After not more than one hour the pushing ceased as one side collapsed and exited the field, allowing the exhausted victors to return the stripped dead. . . . For nearly two and a half centuries, no army in the Mediterranean could withstand the charge of a hoplite phalanx.

But this traditionally agrarian style of war did have its weaknesses. Created for formal battle on a flat plain between two like armies composed of citizen levies, phalanx warfare could not transpire on rough terrain, in mountain passes, and on long marches without the aid of cavalry, light-armed troops, and archers—the very contingents which eventually spelled the end of the monopoly of a middling citizen militia. The incorporation of mercenaries among the ranks of the infantry, the use of light-armed troops, the draining costs of the Peloponnesian War, and the later Macedonian challenge of professional pikemen from the north all worked together eventually to erode the protocols of hoplite warfare. However, what is important about it, is that the general principles of hoplite warfare continued to influence Western military thought into modern times. Western armies Hanson writes: “[have always] had the desire to deliver fatal blows and then steadfastly to endure, without retreat, any counter-response” with the goal of absolute

28 Hanson, Western Way of War, 152-59. The “push” of the engaged phalanx, or “othimos,” described by Hanson is a controversial issue. For an alternative view of the “othimos”—or lack of one—see A.K. Goldsworthy, “The Othismos, Myths and Heresies. The nature of Hoplite Battle,” in War In History, 4 (January 1997): 1-26.

destruction of the enemy’s armed forces in the field. Stark, direct assault, of frontal attacks against the main forces of the enemy in hopes of a decisive military victory is the hallmark of western warfare. Its antithesis—“non-Western” warfare—makes use of “guerillas and loosely organized irregular forces, the neo-terrorists who for centuries have been despised by Western governments and identified with the ill-equipped, landless poor” whose success is the result of ambush and evasion of direct assault: “they seek not to engage in but rather to avoid infantry battle.”

This “Western heritage” Hanson argues springs from precedents set by the non-professional, middle-class, agrarian Greek hoplites who drilled and armed themselves to settle conflicts in ritualized battles. Rather than negotiating settlements to resolve conflicts as, for instance, the contemporaneous Chinese strategist Sun Tzu (544-496 B.C.) advised, hoplites would march onto the battlefield in ordered squares—their members carefully armored and deliberately drilled—to clash in a decisive battle. Hanson explains:

Success or defeat depended only on the fighter’s ability to stand upright in bronze armor for the next hour, or so, resisting the temptation to fall back or even to shy away from the lance head at his face or groin….men knew precisely how they would die in battle—driven through by spear or sword, crushed by shield and foot, right in the midst of family or friend.

Notification of intent, mutual acknowledgment of the upcoming collision of forces and obedience to the decision of the battlefield dead were the “rules” of this style of warfare.

Hanson’s description of hoplite warfare seems similar to the way the Swiss fought. Could his interpretation explain why the Swiss fought as they did? Certainly, characteristic of Swiss battle were well-ordered and drilled Confederate squares who marched out to engage their enemies in direct assaults that would decide battles in a day.

30 Hanson, Western Way of War, 9-10.
31 Ibid, 11. Emphasis Hanson’s.
Also typical of Swiss military rationale was the idea that an enemy’s armed forces should be completely destroyed. For the Swiss this meant a “take no prisoners” approach which was uncharacteristic of medieval rules of battle that spared and ransomed captured aristocrats. Confederates certainly had the goal of absolute destruction of their enemies’ armed forces in the field.

Likewise, Confederates were drilled to resist the temptation to shy away from arrows, cavalry assaults and enemy pikes: this is interesting since an ability to hold one’s ground was uncharacteristic of medieval footsoldiers who often fled at the first sign of a rout. Certainly at St. Jacob the Swiss, like the Spartans at Thermopylae, knew exactly how they would die—driven through by lance or sword in the midst of family, friends, and fellow citizens. There can be no doubt that if Hanson’s theory of a “western way of war” is correct, that the late-medieval Swiss are a prime example of what the western way of fighting entails.

However, the Hanson interpretation raises a number of issues left unresolved in *The Western Way of War*. For instance, Hanson makes a good point that great western military strategists of the modern age advocated a direct approach to battle, and there can be no doubt that modern military thinkers looked to the classical strategists for inspiration. But what about medieval strategists: did they, too, look back to the classics for martial insights? Did their tactics resemble those of the Greeks? Were classical military treatises even available to them and if so, could they, or did they read them? Further, if the “West” had a certain approach to warfare that sprang from the

---

32 Ibid, 9. Clausewitz, for instance, called for “hammer blows” to achieve absolute destruction of the enemy, while Napoleon and Jomini believed that great results were achieved by concentrating “above all on cutting up and defeating the enemy army, being certain that states or provinces fall of themselves when they no longer have organized forces to defend them.”
practices of classical Greek hoplites, then should it not be possible to trace that tradition across time either through a literary or folk tradition? Would not Romans, Franks, Normans, English, and Swiss all have marched out in well-drilled pike formations on the open battlefield?

In *Carnage and Culture* Hanson attempted to answer some of these sticky questions, filling gaps in his theory by showing that, after the Greeks, Romans, Franks and Spaniards did, in fact, continue the Greek tradition throughout the middle ages. Choosing his battles well, he launches a brilliant argument suggesting that at battles such as Poitiers (732 A.D.), Frankish knights probably rode out to battle and then fought on foot in formations resembling a Greek phalanx. Here Hanson juxtaposes the “western way” of fighting on foot in phalanxes, with the “non-Western” Saracen use of horsemen. Poitiers, he argues, was a continuation of a military principle established at Marathon: highly organized “western infantries” are always supreme over disorganized “non-Western” horsemen.33 His complex arguments woven in beautiful prose nearly convinces us that Hanson must be right. But is he?

*Carnage and Culture* makes us forget that for nearly one thousand years after the fall of the Western Roman Empire in the fifth century A.D. to the beginning of the Infantry Revolution in the fourteenth century western warfare evolved away from the “western model” proposed in the *Western Way of War*. Gradually, aristocratic elite horsemen, who sometimes dismounted and sometimes did not, essentially monopolized the art of war: it was upper-class aristocrats, who decided battles in the medieval West, not “middle-class infantrymen.” Virtually every scholar of late-medieval warfare agrees

---

33 Victor Davis Hanson, *Carnage and Culture: Landmark Battles in the Rise of Western Power* (New York: Doubleday, 2001), 135-149.
that something happened at the end of the late-middle ages to change the nature of war in the West from one led by aristocratic horsemen, to one dependant on commoners.\textsuperscript{34} Hanson blatantly ignores this scholarship, and assumes a latent continuity that reappears at particular epochs.

Further, he dispenses with the importance of the medieval siege, where westerners hardly marched out to battle, but hid themselves behind castle walls.\textsuperscript{35} Just as often they hid from “non-Western” undisciplined hordes on horseback that successfully defeated European forces as they raped, plundered and pillaged their way across the West. He passes over the fact that “non-Western” Saracens rode out to battle with Charles Martel every bit as openly, confidently, and with just as much intent to slay the infidel army, as “the Hammer’s” own men. In addition, he fails to mention that there is no more evidence that the Franks fought on foot, than that the Saracens fought on horseback. Finally, after emphasizing the importance of infantry to the “Western Way of War” theory, his chapter on the Battle of Lepanto (1571) gives western naval warfare a decisive role in the Western Way of War. Readers are left wondering how a “naval way of war”—in the


\textsuperscript{35} Hanson ignores, as well, the famous Periclean strategy employed by the Athenians who hid behind their city walls during the Peloponnesian War in the fifth century B.C.—right in the middle of the period in which the “hoplite” system, it is believed, was most fully advanced. See Donald Kagan, “Athenian strategy in the Peloponnesian War,” in \textit{The Making of Strategy: Rulers, States, and War}, ed. Williamson Murray, et al. (Cambridge, U.K.: Cambridge University Press, 1994), 33. Kagan makes clear that the Athenian strategy was not to meet their opponent quickly in a day of decisive battle. Instead, “the Athenians were to reject battle on land, abandon their fields….and retreat behind their walls….Meanwhile their navy would launch a series of commando raids on the coast of the Peloponnesus. This strategy would continue until the frustrated enemy agreed to make peace.” Clearly, if there is a Western tradition, it includes more than just farmers marching out to direct confrontations that could be settled in a day. On the other hand, the Periclean policy was controversial among Athenians precisely because it was not the norm!
ancient Greek world made up mostly of rowers who were social inferiors to the hoplites—fits with his assumptions about the “middling hoplite farmer’s way of war,” and how this is reflected in the Battle at Lepanto.36

These issues arise since Hanson attempted to superimpose his theories about classical Greek military institutions on the medieval Christian West without carefully accounting for the nature of drastic changes in medieval society and battle after the “fall of Rome.” Still, there does seem to be a Western military tradition of some kind—whatever that is—which is reflective of classical Greek tenants as described in the Western Way of War. So, the issue of Western continuity is important in a way that indigenous fighting in Latin America and in Africa, for example, is not.

In the case of the Swiss, Hanson’s interpretation is especially interesting in that the Swiss way of War and that of the ancient Greeks is astonishingly similar. Likewise, Swiss social and political developments bear an uncanny resemblance to those of classical Greece: Confederate militiamen, like hoplites, were at first mostly non-professionals (although some certainly had experience as mercenaries in foreign wars, but this was true also of hoplites); they emphasized infantry, in fact, excluded cavalry, and they fought with pikes in formations similar to a Greek phalanx.37 Like hoplites, those who fought in the original Swiss phalanxes also farmed, many on their own privately

36 Hanson, Carnage and Cultures, 233-275. Admittedly, in Carnage and Culture Hanson also discusses modern air power at Midway and Vietnam as it relates to western warfare in general. His point was to show that the Western military tradition transcends infantry battle. Naval and air branches, too, were part of a larger Western cultural, political and economic legacy that worked together to create a dominant West beginning in the Early Modern period.

37 As we shall see in Chapter 7, from 1474 to 1600 the Swiss developed pike formations that, in form, more closely resembled the sarissa phalanxes of Philip and Alexander of Macedon (fourth century B.C.) in which two-handed long-spears were utilized. Swiss cantonal units in function, however, were more similar to the city-state hoplite militias of classical Greece, which used shorter spears, held in the right hand and wielded over-hand. At no point in the development of the Swiss military system were horses ever emphasized.
owned land, and all voted in democratic cantonal assemblies. They stood side-by-side with family, friends and neighbors under cantonal banners and fought for the preservation and glory of their individual cantons.

But was the Swiss way of war reflective of some western tradition that did, in fact, extend from the hoplite Greeks to the Swiss, or are the similarities better explained by a culture in the Forest Cantons that was by accident or only roughly similar to that of the Greeks? Or is Machiavelli right that the Swiss directly modeled their formations on those of the ancient Greeks? If so, how and why? Does Delbrück have it right that Swiss warfare is reflective of an ancient Germanic way of war that was somehow preserved by the isolated Forest Cantons, and if so, how did the Swiss learn to mobilize their formations with such skill? In short, what defines the Swiss Way of War, what explains its exclusive use of foot soldiers, its frontal assaults, its take no prisoners approach, its drill, discipline and speed?

THE ALTERNATIVE PATHWAYS

Whatever the answers, the resemblances between the Renaissance Swiss and Hellenistic Greek military formations are too extraordinary to be coincidental, so there must be some rational explanation for their similarities. Indeed, only six possibilities can explain the resemblance. In Part One, the most controversial of the possibilities will be examined. Chapter Two considers a process recognized by scholars such as Chatley and Wheeler, but first named “Stimulus Diffusion” by the American anthropologist A.L. Kroeber, as a possible path to Morgarten. This concept explains the means by which ideas are transmitted across time and space through a “simple hint or faint suggestion
of an idea.” 38 That hint of an idea is accepted by the receiving culture, which uses its own knowledge and resources to reinvent the original idea. Kroeber explained that this possibility “occurs in situations where a system or pattern as such meets with no resistance to its spread, but there are difficulties with regard to the transmission of the concrete content of the system. In this case, it is the idea of the complex or system which is accepted, but it remains for the receiving culture to develop a new content.” 39 In other words, stimulus diffusion, different from a continuous tradition of ideas or direct contact with ancient literature, is the reinvention of an idea new to the receiving culture, although it is not new in human culture.

Chapter Three explores the issue of continuity as it relates to the Swiss. If there was any continuity in “Swiss” tactics between the ancient and medieval worlds it would have been the “city,” or “outer” cantons that retained some knowledge of ancient warfare. 40 We will consider the possibility that Swiss tactics had roots in ancient Greek or Roman traditions, which continued well into the Middle Ages, and were sustained and refined by the Confederates as cities, such as Bern and Zürich, joined their ranks.

In Part Two the holdings of medieval archives in and around Switzerland will be presented to determine what role, if any, classical texts may have played in influencing Swiss martial practice. Here Chapter Four discusses the extent to which military literature was present in Europe throughout the Middle Ages, who would have read it,


40 Swiss historians use the term “ausser” (“outer”) cantons to designate those cantons which lie outside the “inner” (or central Alpine valley) cantons of Uri, Schwyz and Unterwalden. The importance of the central cantons will be discussed in Chapter 6.
and what impressions it would have made on its readers. Chapter Five considers the possibility that early Confederate tactics might have been directly influenced by Hellenistic Greek military literature during the early Renaissance in the late-fifteenth century. The major themes here are the extent to which the Swiss knew about ancient Greek treatises; where and by whom they were collected and how their contents compare to the pike formations developed by the Confederates.

Several appendices are included for Part Two. Appendix A provides a listing of classical sources in medieval Switzerland and surrounding areas to AD 1500. Among the classical military treatises other classical works are also inventoried. I have included this varied, though, admittedly incomplete, list for two reasons. First, while most classicists are aware that European archives held a great number of classical treatises, this is not general knowledge in all fields. The perception for many is that all classical knowledge died sometime during the “Dark Ages” and never reappeared until the time of the Italian Renaissance. It, therefore, seemed appropriate to firmly establish the extent to which classical sources were extant in Switzerland, Germany, France, Italy, and throughout Europe during the period under discussion. The issues, of course, are who could and did read classical sources in medieval Europe and how were they interpreted. We will, of course, deal with these issues in Part Two. But Appendix A, at a glance, also stresses that the learned during the Middle Ages thought classical sources important enough to preserve, copy and redistribute—and that, in itself, is a form of Continuity from the ancient to medieval worlds.

Appendix B is a copy of MS 97, a collection of classical Greek military treatises, including Asklepiodotus, Tactica, collected between the fifteenth to sixteenth centuries.
A.D. and deposited at the Bern Burgerbibliothek in the seventeenth century. Its significance is discussed in Chapter Five. Appendix C is the full text of Asklepiodotus, *Tactica* to be used in comparison with the Swiss long-pike tactics that emerge in the fifteenth century. Appendix D is a copy of Lavater’s seventeenth century military manual, which is also discussed in Chapter Five, and which is compared with Asklepiodotus and other Greco-Roman tactical works.

Part Three discusses the culture and military practice of the original Forest Cantons and military changes associated with alliance with the Swiss city cantons. Chapter Six considers the possibility that the foundations of the Confederate militias lay not in the ancient world, but in the special nature of the Swiss society that created them. The democratic nature of Forest cantonal culture—social, political and economic factors—will be examined as influences on Swiss military developments. An exploration of the primitive historical roots of the peoples of Schwyz, Uri, and Unterwalden, will show that both their cultural and military past was firmly rooted in pastoral and egalitarian traditions, and that the Swiss way of war, although it resembles egalitarian warfare of the past, developed independently. Appendix E provides the full texts of contemporary documents that lay the foundations of the Confederate constitution. Finally, Chapter Seven describes how battlefield experience accounts for tactical developments that led to the lengthening of the Swiss pikes to create formations that so closely resemble the Macedonian sarissa phalanxes. A review of developments between 1315-1444 will show how losses, or near losses, at battles such as Sempach and Arbedo seemed to challenge the status quo among Swiss military thinkers.
SO WHAT?

An investigation of this process is valuable for three reasons:

- First, it seeks to define Swiss warfare on its own terms, to understand and define the Swiss Way of War.
- Second, a discussion of Swiss developments sheds light on how an already crumbling feudal system, in which aristocrats and their highly skilled knights had long exerted political influence through martial superiority over common subjects, finally collapsed. Common soldiers who earlier could rarely defeat their overlords on the battlefield—and in the rare instances when they did could never replicate their success—finally struck the martial blow that ended feudalism is significant: Swiss halberds and pikes led the way.
- Third, it addresses major problems concerning the controversial issue of a continuous link between classical and medieval European military practices and the problems encountered by historians who attempt to trace ideas across time.
- Finally, the investigation of alternative pathways for the transmission of ideas demonstrates the importance of studying issues of continuity and diffusion with an open mind, and suggests important conclusions about the transmission of classical knowledge – and not just military knowledge – from Antiquity to the late Middle Ages.
Tactics in Greek Warfare

The Greek Phalanx
1 This diagram shows how the Greek Phalanx fought at Marathon in 490 BC. The phalanx attacks en masse in a solid line. It is composed of men in close order (3-4 foot frontage per man) and may be four or more ranks deep.

Introduction of Cavalry and Light Troops
2 The addition of horsemen and light troops to an attacking force granted an army a measure of tactical flexibility. The cavalry are available to protect the vulnerable flanks of the phalanx while the peltasts employ their small shields to screen the hoplites from enemy arrows, stones and javelins. Such tactics can be observed at the battles of Solygia, Delium and Coronea in the late 5th and 4th centuries BC.

Theban Tactics
3 The battles of Leuctra (371 BC) and Mantinea (362 BC) exemplify the tactical advances of the Theban fighting formation under the leadership of Epaminondas. In an oblique attack, one wing of the phalanx is “weighted” and used to deliver the main punch while the other wing is refused and the enemy line pinned down by light troops and cavalry.

Macedonian Variations
4 Examination of the major battles of Philip and Alexander reveals further developments. The phalanx has been deepened (16-20 ranks) but not as spectacularly as the Theban model. The killer blow is, however, delivered by a furious cavalry charge which swings on to the enemy’s rear while the phalanx engages frontally. The phalanx may advance in line (as at Issus) or obliquely (Chaeronea, Gaugamela).

Developments of the Successors
5 The various conflicts of the Diadochian Wars illustrate further tactical elaboration. All the previous elements are employed: the echeloned attack, heavy cavalry delivering the main blow, light cavalry protecting the heavy, and light troops screening and skirmishing. A new factor, however, is introduced in the form of elephants. They are used to discourage enemy cavalry and to disrupt the enemy line. The phalanx is deployed mainly as a pinning force. Whereas it was the vital element at Marathon, by the time of Ipsus and Raphia it is but one of many interdependent components.

Figure 1.1: Tactics in Greek Warfare. See Warry, Warfare, 96.
PART I:

WHAT SWISS FORMATIONS WERE NOT
CHAPTER 2
THE PRODUCT OF STIMULUS DIFFUSION FROM COURTRAI AND BANNOCKBURN (1302-1315)

This case study suggests that diffusion cannot be understood outside the context of adaptation. Diffusion tends to be indirect, complex, and incremental, according to region and period, because new traits must be more efficient or desirable than existing alternatives if they are to be accepted. Whether one is more impressed by basic stability over time, or by the invention or acquisition of some new details, is a matter of one’s point of view. In the long-term, continuity and change are non-exclusive and complementary as are adaptation and diffusion. Both aspects of the second dichotomy are essential to understanding the processes of cultural change.41

The early middle ages were a time of both continuity and change. Although some (especially medieval) scholars argue in favor of a certain amount of continuity from the classical world through the time of Charlemagne, most agree that Charlemagne’s policies, and those of his sons, planted the seeds for a radically different kind of government from those of antiquity. Feudalism, a political system with an accompanying feudal world view, would blossom around 1,000 A.D. bulldozing most ties to a classical political past. Classical political thought was largely rational, and often embraced the idea of leadership based on merit; western medieval thought was frequently irrational. For instance, leadership was regularly regarded as a sign of God’s approval. Feudalism also lacked many fundamental egalitarian elements found in classical thought. Instead, it

41 Karl W. Butzer; Juan F. Mateu; Elizabeth K. Butzer; Pavel Kraus, “Irrigation Agrosystems in Eastern Spain: Roman or Islamic Origins?,” *Annals of the Association of American Geographers* 75, no. 4 (December 1985): 504.
segregated society into distinct social classes, the privileged versus the non-privileged. Kings ruled and peasants bowed because “God willed it”. For three hundred years after the deaths of Charlemagne’s grandsons the new politico-social system spread steadily throughout Europe.

As the gap between social classes became increasingly broader in feudal society, feudal military institutions, likewise, divided armies. A stark socio-political gap alienated the elite knights, whose shock cavalry tactics decided battles, from the peasant levies whose only task was to create some disorder in enemy ranks. Elites thought of commoners as simple “cannon fodder.”

For Delbrück and Oman, as well as for many modern military historians, the turning point in this trend was the battle at Courtrai in 1302, where a unit of European burghers decisively defeated a body of French elite knights. Just twelve years after Courtrai, in 1314, Scottish commoners repeated the Flemish success, vanquishing mounted English men-at-arms at Bannockburn. At Morgarten, the following year (1315) Swiss peasants defeated an army of Habsburg knights. Admittedly, at all three battles, the knights were defeated because they were unable to play to their strengths: they had not been confronted on the open battlefield. But what is significant about these three battles is that commoners of various economic levels, fighting on foot en masse, overturned the three hundred year dominance of elite knights on the European battlefield. Accounts of this phenomenon variously have been called the “rise of Burgher Forces and Militia Levies”; “rise of the Footsoldiers”; and most recently “the Infantry Revolution”.

---

42 This reflects the consensus view. See, for instance, Theodor Fuchs, *Europäischen Kriegswesens*, 125-144. For variations on this theme see also, for the Marxist view, Förster, *Militärgeschichte*, 25-37; and Hans Delbrück, *History of the Art*, vols. 2 & 3. Delbrück argues for an earlier demise of the “citizen” army, which began to fade and be replaced by proto-feudal knights at the end of the Roman Empire. The knights of the “ponderous charge of mailed cavalry across the unenclosed fields and hillsides of England and Normandy,” were also the heroes of Oman’s High Medieval battlefield. See Oman, *A History of the Art*, 2.403.

Whatever you call it, the consensus is that, beginning in 1300, foot-soldiers fueled by democratic or republican ideals became “freedom fighters” against aristocratic oppression, and learned how to defeat their foes. While this era is hailed as the first among several military revolutions that led to modern battle, no one has considered how this “revolution” occurred. So, here, a possible explanation for how European footsoldiers regained their martial skill will be explored.

Later chapters will consider what the Swiss may have observed both in literature and on the battlefield which could have influenced later strategies and tactics: here, we focus on what the Swiss at Morgarten may have been told as a stimulus to their stand against the Austrian knights in 1315. This first Confederate success against knights at Morgarten seems to be part of a sequence of great infantry victories that began with Courtrai. So, we must ask how this process and spread of knowledge developed.

A theory advanced in 1940 by the anthropologist A. L. Kroeber presents a possible explanation in the concept of stimulus (or idea) diffusion. This form of cultural exchange takes place in situations where a system, pattern, invention from outside one culture diffuses to another culture that accepts it, reinvents it, and makes it the latter’s own. The exchange involves a historical connection and dependence, but also and originality on the part of the receiving culture, because “the pattern is executed in new materials by different methods: a new pattern growth initiated by precedent in a foreign culture…which might slumber in the form of ‘ideational germs’ perhaps for centuries, till awakened to life by changes of internal environment, possibly brought about by the sprouting of other germs, or the conscious imitation of imported products.”

In our case, this would mean the process whereby “ideational germs” in the form of military ideas are tried in one place, then spread by word of mouth to another, giving the

---

receiving communities the encouragement that it is possible for common footsoldiers to
pack themselves together in tight formation with simple weapons and with massed force
and cohesion, to defeat elite, highly trained, professional horsemen in battle. Our
example of the occurrence of this phenomenon in the late-Middle Ages begins with the
Wars of the Italian Communes where footsoldiers hold off elite knights at Legnano, after
which the idea spreads first to the Flemish, then to the Scots, and likely to the earliest
Swiss Confederates.

Subsumed in the definition of stimulus diffusion is the inherent possibility that the
system being diffused may not be transmitted in a systematic or its complete form.45
Drawing on Kroeber, Needham provides an example in the art of deep well drilling of
how the “germ” of an idea can be spread by word of mouth to influence the practices of
peoples living centuries later and in far away lands. He writes:

The art of drilling deep wells or bore-holes, such as are used today for exploiting
fields of petroleum, is specifically Chinese, for we have much evidence for it
going back to the Han period (c. first century) in Szechuan. Furthermore, the
method used for so long was essentially the same as that employed in California
and Pennsylvania before the application of steam power…No trace of the
radiation of the technique into other cultures appears for a millennium, after
which there are one or two references in Arab writers, followed shortly by the
successful boring of the first artesian wells in Europe in the twelfth century. It
has not yet been established that the method by which these were drilled was the
same as the ancient Chinese method, but since we know of no other before
modern times, it almost certainly was. Yet the early twelfth century, before the
Mongol conquest, was a most unpropitious time for the passage of any idea from
China to Europe. It would have to have come through Arab sailors on a sea route,
probably through Moorish Spain, and Arab sailors would not have been likely
visitors to Szechuan. It seems reasonable to think, therefore, of the transference
purely of an idea, indeed rather of an encouragement—‘Certain men have, for
many generations, in Cinasthan, gained wealth from the earth by means of drilled
holes, which, with patience, and suitable tools, may be made.’ The rest would

follow, but in this case the technical answer may have been almost exactly identical. Such was more generally not the case.46

Likewise, the Swiss might have fought in formation with halberds at Morgarten because they had heard that similar pike formations had been successful against aristocrats in their own time at Courtrai and perhaps Bannockburn. The idea of an infantry formation capable of success against mounted cavalry would have been entirely welcome to rebel peasant farmers. In the Swiss case, the formation would have been modified with halberds, the Alpine herdsman’s favorite weapon. The core idea here is that information can travel or diffuse by word of mouth over time and can cover great distances, although this is not a precondition for its existence: information too can travel quickly and over relatively shorter distances, as it might have during the early-fourteenth century at the period of the “Infantry Revolution.”47

The wars of the Italian Communes

The “kernel” which likely stimulated the Flemish formation at Courtrai was the militia pike formations implemented during Frederick I Barbarossa’s wars with the Italian Communes. As part of his plan to enforce imperial rights in Italy, Frederick, elected Holy Roman Emperor in 1155, appointed German officials in all Lombard towns. The Lombard League formed to resist Barbarossa’s attempt to bring Lombardy under his control. So, before the battles at Courtrai and Bannockburn, citizen soldiers in Italy


attempted to establish their own earlier claims to autonomy. With sworn oaths, members pledged to help one another, and to terrorize common enemies. The ensuing struggle of the communal armies against foreign aristocratic aggressors provided the “kernel” for the later battles at Courtrai, Bannockburn and Morgarten.

Certainly from the earliest stages of Italian communal development, military ideas were proliferated between the Italians and the Flemish. We know, for instance, that Flemish soldiers came into contact with Italian communal militia levies since they served as mercenaries in Barbarossa’s armies as early as 1166. The *Chronica regia Coloniensis*, mentions five hundred hired mercenaries, whom the *Annales of Magdeburg* call “Flemings and Brabançons.” The “Plundering mercenaries”—a designation later often assigned to the Swiss mercenaries—were so ruthless that in 1171 Frederick Barbarossa and Louis VII met to discuss the problem. These unruly Flemish mercenaries, who could show utter contempt for both aristocratic and papal authority, witnessed the newly developing citizen militias of Italy—and their tactics.

In 1176 at Legnano the Lombard confederates successfully employed a pike formation against Frederick Barbarossa’s knights. The battle opened in supposedly “typical late-Medieval style” with the Lombard horse on the front line supported by an infantry reserve facing off against Barbarossa’s shock cavalry. Charging against the confederate forces, Frederick’s horsemen broke four corps of Lombard cavalry then

---


49 This was also a practice of hoplite city-states in the classical Greek poleis period (750-350). Consider, for instance, the Delian League—a coalition allying city-states across Greece. Its purpose was to avenge the Persian invasions of 490 and 480 B.C.E. by freeing Greek colonies in Asia Minor, invading and looting within the Persian Empire, and securing the borders of Greece against the threat of further attacks. For a detailed explanation of the League and the swearing in of the allies see Donald Kagan, *The Outbreak of the Peloponnesian War* (Ithaca & London: Cornell University Press, 1969), 2,10, 31, 37, 40-5, 57, 61, 78, 95, 98-102, 119, 274, esp. 32-33 and 40-1 where Kagan describes the oath taken by the members of the Delian league to have the same friends and enemies; and “the permanence of the alliance was symbolized by the dropping of iron weights into the sea: the alliance was to last until the weights rose up again,” The consensus is that this implied a permanent alliance.
pressed the attack against the massed infantry in reserve. But the cohesive Milanese infantry held firm against the knights “with shields set close and pikes held firm.”\textsuperscript{50} The Milanese communal infantry continued to hold off the cavalry assaults for some time. However, according to the consensus view, we cannot be certain whether the Milanese were capable of deciding the battle. After all, it was a unit of Lombard horsemen, who had earlier scattered, but regrouped, that came to the aide of their infantry.\textsuperscript{51} Mostly composed of the knights of Milan and a unit of cavalrmen from Brescia, the confederate horse attacked the imperial knights in the flank. Wounded in the assault, Barbarossa’s own horse threw him into the pikes. Meanwhile his knights, exhausted from their repeated charges against the steady pikemen, finally broke and fled. Frederick was lucky to escape with his life to Pavia, and there signed a peace freeing most of the Italian peninsula.\textsuperscript{52}

So, thanks to the Milanese citizen militia who held firm, the Lombard knights were able to regroup and launch the decisive blow. But it was Lombard cavalry that finally “saved the footsoldiers from defeat.”\textsuperscript{53}

Even for consensus scholars the success of the pikes in holding off shock cavalry, nevertheless, set several important precedents. First, a communal army utilizing citizen soldiers had nearly defeated an army of highly trained imperial knights. This was a huge step, since footsoldiers, according to Oman and Delbrück were more likely to run than to stand and fight in this period; and even when they did stand and fight, “foot troops in the Middle Ages…[even] when they were on the victorious side always played only a

\textsuperscript{50} The Chronicle of Romald of Salerno, in Delbrück, Medieval, 215 recounts that: “Imperator videns Lombardorum equites aufgisse, pedestrem multitudinem facile superari creditit. Illi opposites clypeis et porrectis hastis coeperunt illius furori resistere, et ad venientes viriliter repellere.”

\textsuperscript{51} See for instance, Delbrück, Medieval, 343.

\textsuperscript{52} Oman, A History of the Art, 1.448-9.

secondary role, even at Legnano, or they were defeated by knights fighting in conjunction with marksmen.\(^{54}\) Nevertheless, working with elite knights who supported their cause, the communal militias won the ability to demand political autonomy.

Second, a Confederation of communes, each of which brought a specific sort of expertise to the allied army—Veronese and Brescian footsoldiers as city guards; Milanese pikemen; Lombard and Brescian cavalry and Milanese knights—fused, creating an unbreakable battlefield élan, founded on the common goal of independence: they were not fighting out of feudal duty, but for themselves. Third, common footsoldiers proved that they were useful for something more than just fighting off other infantry; they could hold off knights. Likely, these were the “ideational kernels” that spread to Flanders, Scotland and Switzerland.

If Verbruggen, Oman, and the others had explained how the militiamen of Flanders, Scotland, and Morgarten came to fight as they did, their argument might run something like this: It should be no surprise that Flemish militiamen some one-hundred and twenty years after Legnano would attempt their own massed formation against mounted French aristocrats. They likely had heard stories of the veteran Flemish mercenaries who had witnessed Legnano. Likewise, a similar account of Legnano almost certainly reached Switzerland, since Duke Berthold of Zahringen was among Barbarossa’s commanders there. A large chunk of modern Switzerland was, after all, his domain, and he passed it down to his descendants. The Zahringens founded, for instance, Fribourg and Bern, and ruled in Zürich until the family line died out at the beginning of the fourteenth century. So, Legnano was no doubt discussed among Berthold’s military men in Switzerland and passed down as a warning to future warriors that unified, cohesive pikemen could wreak havoc on the most well-trained knights. While Italian communal footsoldiers never replicated their successes against elite feudal cavalry,

\(^{54}\) Delbrück, *Medieval*, 431.
without the assistance of other knights, their example could have stimulated imitation. The first to emulate them were the Flemish.

**Courtrai**

In 1302 a general insurrection in western Flanders\(^{55}\) resulted in a battle before the castle at Courtrai whose outcome shocked the Western world: on July 11\(^{th}\) a band of militia foot soldiers routed an army of skilled French horsemen in just three hours. Their success was mostly due their commanders, two popular counts, Guy of Namur and William of Jülich who served as the battle commanders. But the final victory was achieved by and large through the efforts of an infantry levy of burghers, who were joined by the two commanding counts and their knights in the Flemish phalanx.\(^{56}\) The contemporary masters of the battlefield, the French knights and their foot-troops of professional mercenaries—Genoese crossbowmen and Spanish javelin throwers—met a gritty burgher levy only 8,000 strong reinforced by just ten knights and five hundred helpers.\(^{57}\) Yet the city militiamen dared to defy the French feudal levy of 3,000 heavily armored knights and 5,000-6,000 footsoldiers, despising their formidable reputation.\(^{58}\) The contemporary Italian chronicler Villani, who was in Flanders in 1302 and may have witnessed the battle, wrote shortly afterwards of the triumphant militias: “So proud and

---

\(^{55}\) Flanders is a province in northwest Belgium.


\(^{57}\) Ibid, 162. For a through discussion of troop numbers for both armies, see 152-194.

\(^{58}\) Ibid, 193-4. See also xxiii; n. 4. Verbruggen tells us here that the story of Courtrai was recounted in Italy, Tyrol, Austria near the Swiss border Germany and England. It was even made into a folk song in England, which evolved into several editions: Rossel Hope Robbins, *Historical Poems of the XIVth and XVth Centuries* (New York: Columbia University Press, 1959), 9-13; *Political Songs of England, From the Reign of John to that of Edward II*, ed. Thomas Wright (London: Printed for the Camden Society by J.B. Nichols and Son, 1839), 187-95; *Chants historiques de la Flandre*, 400-1650, ed. Louis de Baeccker (Lille: E. Vanackere, 1855), 161-72; and *Monumenta Germaniae Historica*, Scriptores, vol. 28 (Hanover, Hahn, 1988), 496-9. The numbers at Courtrai are somewhat controversial. For a discussion on how the numbers have been estimated see Verbruggen, *Golden Spurs*, 152-193; Hans Delbrück, *Medieval*, 435-6.
bold the Flemings have become through their victory at Courtrai, that one Fleming with his goedendag would dare invite a battle against two French knights on horse: a “new and wonderful” event!  

What was this “new and wonderful” event? In short, it was supposedly the first moment in centuries of European battle that footsoldier without the aide of cavalry had decisively defeated mounted knights. The Flemish militia formed a solid front of 1,000 yards, with at least 8,000 men armed with pikes and goedendags packed together in a deep column.  

The Annales Gandenses relates that at Courtrai, “the formation...was like a phalanx and was no doubt at least 600 meters long perhaps even longer...and the main body was armed with spears and goedendags, a type of club, and only a part wore defensive armor.” The Flemish, as the Swiss would in 1315, formed:

a very long and thick battle line, [which] joined together and closed up with their spears brought together. The men of Bruges made only one unit of their armed men by putting in front their crossbowmen and then alternately in the rear the rest of their men with spears and iron-tipped staffs drawn up in thick closed order.

The account of Guillaume Guiart, a crossbowman who was wounded by a goedendag—meaning “good morning”—provides a clear picture of exactly how the Flemish utilized this weapon. The crossbowman writes: “To strike without moving, by stabbing with the point his enemy in the belly, and the iron point that penetrated was sharp.” He adds, “The shafts are made long to strike with both hands.” Thus, we can

---


60 Oman, A History of the Art, 2.114.

61 Annales Gandenses/Annals of Ghent, trans. Hilda Johnstone (London and New York: T. Nelson, 1951), 27-33. See Figure 2.1. One wonders whether either any of the Flemish commanders, or the Annales chronicler—or both—read military texts.
conclude the *goedendag*’s sharp points could smash holes in armor, making it a frightening weapon to the knight.\footnote{Guillaume Guiart, *Branche des royaux lignages*, in *Chronique métrique de Guillaume Guiart* ed. Guillaume Guignant and J. A. C. Buches (Paris: Verdière, 1828), 232-240. See Figures 2.2-2.5.}

Thanks to Sir Charles Oman we have a contemporary visual source that accurately depicts the battle from start to finish. In 1909 Oman re-discovered what is now known as the Oxford (or Courtrai) Chest. See Figure 2.1. Over the years a number of historians have verified its authenticity. But in 1952 Verbruggen definitively confirmed that the previous research was accurate, and showed that the Chest was an authentic source for the Flemish version of events. Its carvings depict a number of details of the battle including, among others, the defensive position of what Verbruggen describes as “the Flemish phalanx.” It also depicts in great detail the equipment and weapons used in the battle.\footnote{See Verbruggen, *Spurs*, 195.} Its Illustration Eleven shows a soldier of the Bruges communal army with a thick club. See Figure 2.2. In the head of the club a stout steel pin is placed and fastened by an iron ring. This has been identified as the goedendag of the French sources and the *staf* of the *Annales Gandenses*.\footnote{Ibid, 199.}

Illustration Five is most significant. Here the Flemish battle array is authentically represented, just as described by Guillaume Guiart. See Figure 2.5. Packed ranks of Flemish townsmen stopped the French charge with their grounded pikes and lances. At the front, behind the protective barrier formed by the pikes, stand the crossbowmen who often shot from the front ranks of the pikes. Guy de Namur, portrayed among the pikemen with a large pike in his hand, has been identified by the coat of arms on his shoulder plate. Willem von Jülich appears in the second row with a goedendag in his hand. The citizen militia is portrayed here in depth with some soldiers carrying goedendags positioned next to or just behind others with pikes. The goedendag had a rod
that could be hefted in both hands for better striking power, but a shorter rod or handle than the pikes, which were stuck in the ground. At the far left a knight is being attacked by three militiamen. One of them is thrusting his sword into the breast of the horse; another is attacking with his pike.65

What the Courtrai Chest and the literary sources suggest is that the Flemish foot troops, with a strength and steadfastness on the battlefield that had been lacking in the European infantry militias of spearmen in prior centuries, smashed and impaled their way to victory. The success of their formation, however, was also contingent on the choice of a tactically advantageous spot: a plain surrounded on all sides by natural boundaries, in this case, comprised of watercourses and depressions. The Flemish fortified these obstacles by erecting trenches and pitfalls. Their inner cohesion was especially novel as middle-class burgers, and a few knights fought side-by-side: faced with a common danger they risked their lives together for a common cause. Under the unit command of their own captains, corps from various guilds and contingents of religious brotherhoods exhibited unit pride, standing together to support and encourage each other in defense of a common turf. Their conduct contrasted starkly with that of the heavily-armed French knights, mercenary bands, Spanish lightly armed troops and Genoese crossbowmen, none of which exhibited either real commitment to their allied units or to their commander.66

The French Count of Artois opened the battle with his Genoese crossbowmen and Spanish javelin-throwers. The missiles were effective at first, but the Flemish counts quickly ordered their formation to back-peddle out of the range of the archers. In response, the Count of Artois pulled back his crossbowmen and ordered the knights to charge across the Grœningen stream. At this point, Delbrück relates, “something new and completely unprecedented occurred”: just as the knight were crossing the stream, caught up in the swampy banks and pot-holes, the Flemish took the offensive. Swiftly moving in tight formation they attacked the horsemen, vulnerable in the attempt to cross, hacking and impaling. Knights were thrown from their impaled horses, and before they could stand were smashed on the heads with the Flemish goedendags.

The final disgrace for the knights was the Flemish decision to break the protocols of chivalry and to take no prisoners on pain of death. Reportedly, the count of Artois tried to surrender to a warrior monk, but the Flemish overhearing him beg for mercy in French, shouted, “We do not understand you,” and hacked him to death.

It was not a good day for French chivalry. According to a chronicler in the nearest French town:

From the towers of the church of Notre Dame of Tournai, of the abbey of St. Martin and of the city, they could be seen fleeing along the roads, through hedges and fields, in such numbers that no one who had not seen it would believe it…In the outskirts of the city and in the villages there were so many starving knights and foot-soldiers that it was a frightful sight. Those who managed to find food outside bartered their equipment for it. All that night and the next day those who came into the city were so terrified that many of them could not even eat.

grandes chroniques de France, ed. J. Viard, Société d'histoire de France (Paris, 1934), IX:203-09;

67 Delbrück, Medieval, 434.
68 Ibid, 435.
69 Verbruggen, Golden Spurs, 49.
So, the “Battle of the Golden Spurs,” the modern label for the battle at Courtrai on 11 July 1302\(^70\) is a humiliating designation poking fun at our idealistic notion of chivalrous, well-trained and glorious knights “in sparkling armor,” since it recalls the triumphant stripping of gilded knightly spurs from 500-700 muddied French bodies which lay cold, bloody, and broken in a mud-filled swamp.

The surviving French knights obviously remembered the humiliation—or accounts of it—because when the Flemish delivered a surprise attack on them at Mons-en-Pévèle in 1304, the entire contingent of French knights fled in terror past both the royal retinue and other battalions into the woods. Few returned. After centuries of snubbing the “common” footsoldiers, who could not be trusted to “stand” in battle, it was now the knights’ turn to run.

**Bannockburn**

For most scholars the battle at Bannockburn always follows Courtrai as the second example in Europe of the “Infantry Revolution.” They have good reason to believe something “new and wonderful” happened at Bannockburn as it had at Courtrai, since the Bannockburn chroniclers repeat the theme. One chronicler has the English king shout out to the knights standing behind him, “What? Will those Scots fight?” His advisor, and Bruce’s enemy, replies “Of truth, Sir, now I see the most marvelous sight by far that I ever beheld—Scotsmen undertaking to fight against the might of England and to give battle in the hard open field.”\(^71\)

---

\(^70\) The battle was named the “Battle of the Golden Spurs” in modern times due to the 500-700 gilded spurs collected from the bodies of the slain knights by the victorious Flemish footsoldiers. See Kelly DeVries, *Infantry Warfare*, 10.

\(^71\) Peter Reese, *Bannockburn* (Edinburgh: Canongate Books, Ltd., 2000), 155. Reese provides an excellent modern summary of the long controversial size of armies at Bannock, and provides his own interpretation based on the sources: English: Cavalry 2,000-2400; infantry, including bowmen 16,000-
fought the Flemings at Courtrai, mailed cavalry against foot pikemen, and to the surprise of Europe they were beaten.” Likewise, at Bannockburn, one of Morris’ sources writes, “I have never heard of such an army having been so suddenly routed by infantry, except when the flower of France fell before the Flemings at Courtrai.”

Certainly at the Battle of Bannockburn in 1314, too, the Scots under the leadership of King Robert formed “clumps of spearmen.” Robert divided the Scottish army into four units of pikemen with a small cavalry reserve. Except for the reserve of 500 horse, all the other knights with their squires and retainers dismounted and fought in the general levy in order to strengthen its numbers. His opponent, the English king Edward II appeared at Bannockburn with at least 15,000-16,000 footsoldiers and 3,000 horse but, following the trend of the day, at first put into action only a minority of his combined forces—the archers and horse—while the majority of footsoldiers watched from the rear. Edward’s horse were divided into ten “battles;” an advance guard and three rows of three units of knights, who were well trained in the art of the cavalry charge.

In late-medieval times, were are told, just the sight of these formidable units with their speed and momentum; the sound of pounding horse-hoofs approaching; and the frightening mass and size of their fully-armored riders atop horses bred for war was

---

16,500 and Scottish: Light cavalry 500; trained infantry 5,000-5,750 and 3,000 ‘small folk’ including women. The English numerical superiority was overwhelming.

72 John E. Morris, Bannockburn (Cambridge: Cambridge University Press, 1914), p. 82. His source, as Morris tells us is an “English partisan, the so-called Monk of Malmesbury and author of the Vita Edwardi Secundi.”

73 On the numbers in Edward’s units at Bannockburn see Oman, Art of War, 89.

74 Ibid, 90.
enough to easily scatter footsoldiers. But, at Bannockburn, the English horse, like the French knights at Courtrai, rode towards an opponent who would not be so easily unnerved. Like the Flemish at Courtrai, Scotsmen at Bannockburn had chosen their terrain carefully and achieved surprise. Appearing suddenly from a forest atop “Gillies’ Hill,” they advanced downhill in column for about a mile, catching the English in disorder. Edward’s knights quickly shook off the shock and rallied, charging the Scots. However, Bruce had organized his footsoldiers in three “schiltrons” or columns in échelon formation with the Scottish right in the lead. Seeing it first, the knights charged this vaward (or forward) unit, but the Scots quickly moved into hedgehog formation, impaling a good number of horses in the initial charge. Some knights were able to draw back and regroup, but could launch only feeble charges, and these were continuously thrown into disorder each time they were broken.

But even worse, Oman tells us, was the English infantry’s disorder. Most of them stood and watched as their knights were impaled. The English archers tried to help, and did hit a few Scotsmen in the chest, but struck even more of their own horsemen in the back.75 By the time the English cavalry was “fought out” the whole army was pressed together in one big disorganized heap. Seeing the advantage, Robert ordered his infantry reserve to the front and in one huge mass the Scots charged. Edward and 500 knights fled and, seeing their leader abandon the fight, the rest of the army began to run as well. The Scots pursued and hundreds upon hundreds of Englishmen were impaled and left to drown or smother face down in the surrounding bogs. The Scottish historian J.H. Burton gives us a triumphalist account of the whole affair:

---

75 Charles Oman, Art of War, 2: 90-95; See also, Delbrück, Medieval, 438-442.
The spearmen stood against the charges of the horsemen firm as a rock. It was one of the formidable features in their method of resistance that a great proportion of the wounds fell to the poor horses, who rushed hither and thither in their agony, or, as Barbour has it, the horses "that were stucked rushed and reeled right rudely." In the front anything like combined movement or even ordinary discipline was speedily gone. There they were a mass of brave men well mounted for battle, and many desperate but useless onsets they made as single combatants on their compact enemy. Confusion was getting worse and worse, and only one result could be….The end was rout, confused and hopeless.  

So, although their formations were mobilized differently—the Scots employed the echelon and the Flemish one great phalanx—still the outcomes at Courtrai and Bannockburn were the same: common footsoldiers, in tight formation with pikes extended, had stood up to charging knights. See Figures 2.6 and 2.7. And the resemblance between Bannockburn and Courtrai is no accident.

During his study on the “Military Revolution” of infantry-soldiers in this period, Clifford Rogers even unearthed proof of “stimulus diffusion” from Courtrai to Bannockburn. A revealing description from a well-known chronicle, which others had missed, provided the clues. Sir Thomas Gray was its source. Gray is one of our best sources for Bannockburn since his father was defeated and taken hostage by a small party of skirmishers just before the main event. So Sir Thomas Gray, Sr. saw the entire battle play out as he sat in the Scottish “hostage ring” waiting to be ransomed. After Bannockburn he was ransomed, and took great interest in Scottish tactics, likely as a result of his experience with them. In fact, eight years later in 1322 when Edward II made him custodian of Norham Castle, he used the Scots’ own tactics against them.


77 See Figures 2.6 and 2.7.

When Scottish soldiers raided the castle in 1322, Sir Thomas Gray “formed up his men in the Scottish manner with his spearmen in a schiltron on foot.”79

In 1355 Gray’s son, also an English knight was captured and held hostage at Edinburgh Castle. There he began his Scalacronica, a history of England up to the reign of Edward III, which included detailed accounts of the English battles with the Scots in which his father had been a participant and eyewitness. Rogers found here a specific reference to the Flemings at Courtrai. The Scalacronica reads:

They [the Scots] resolved to fight, and at sunrise on the morrow marched out of the wood in three divisions of infantry. They directed their course boldly upon the English army, which had been under arms all night, with their horses bitted. They [the English] mounted in great alarm, for they were not accustomed to dismount to fight on foot; whereas the Scots had taken a lesson from the Flemings, who before that had at Courtrai defeated on foot the power of France. The aforesaid Scots came in line of schiltrons, and attacked the English column, which were jammed together and could not operate against them [the Scots], so direfully were their horses impaled on the pikes. The troops in the English rear fell back upon the ditch of Bannockburn, tumbling one over the other. The English squadrons being thrown into confusion by the thrust of pikes upon the horses, began to flee.80

His father in any case had certainly “taken a lesson” from the Scots. Rogers argues that Gray’s work is uniquely valuable in providing an insight into the historical material available to a well-connected soldier in fourteenth-century England. Written in French, it also provides invaluable evidence of the linguistic skills of a northern fourteenth-century knight. As a “layman’s history,” the work would have been both interesting and accessible to laymen elsewhere, who might easily have read or heard it. The work was

79 Morris, Bannockburn, 95. Duke Carmagnola, commander of the Milanese army of Filippo Maria Visconti, formed up his knights in the same manner against the Swiss at Arbedo in 1422. See page 260 below.

produced before Sempach in 1386, but long after the first Swiss triumph at Morgarten in 1315. But by implication it seems rumors of “commoners successful against mounted knights” could have served as a stimulus to the Swiss, just as they had to the Scots after the Flemish victory at Courtrai. The Confederates’ own story of success suggests the affirmative.

**Morgarten (1315)**

Now we come to the third in the series of battles hailed as exemplary of an “Infantry Revolution”: at the first battle for Swiss independence, Morgarten, (November 15, 1315) Swiss halberdiers were just as lethal as the Flemish and Scots. This first challenge to the confederation armies was the Habsburg response to an attack led by the Freemen of Canton Schwyz on a Habsburg protectorate, the Abbey at Einsiedeln. Quickly responding to the attack, Duke Frederick the Fair of Habsburg imposed an imperial ban on the Schwyzers and sent his younger brother Duke Leopold with a 9,000 man strong army with 2,000 knights to enforce it. The knights who came to punish the rebels found an army of commoners ready to support bold claims to autonomy. Austrians would not soon forget the harsh defeat by the “Swiss peasants” of the Confederation at the Battle of Morgarten.

---

81 Frederick the Fair was the Habsburg Duke of Austria from 1308-1330. From 1325-30 he claimed kingship jointly with his brother Leopold I, as King of Germany, Frederick II.

82 The body of knights was recruited from districts in Southern Germany, and also a number were drawn from among the free nobles of today’s North East Switzerland.

83 Our major primary sources for the Battle of Morgarten are the fifteenth-century chronicler Billibald Pirkheimer and the Austrian John of Winterthur, who was a young boy in 1315. Neither would have seen the battle first-hand, and their stories, as Delbrück points out, contain some discrepancies (Delbrück, Medieval, 559). For example, John of Winterthur (in some sources also referred to as Vitoduran) estimates Duke Leopold’s forces at 20,000 men (Winterthur, 26), while four or five thousand, according to Oman, would have been the largest possible figure (Oman, History of the Art of War in the Middle Ages, 2: 238). Delbrück argues them to be only 2,000 to 3,000 strong (Delbrück, Medieval, 553).
Long before the battle had commenced the Swiss had cut off nearly all the approaches to their territory with barricades over water and valley passages. The thirteenth-century chronicler John of Winterthur tells us that this was part of an elaborate battle-plan: these walls of defense, or *letzi*, sealed off first the vital point of access into Schwyz territory, then cut off nearly all the other approaches to their territory.

Meanwhile, the main thoroughfare to Morgarten was left open, to make that route seem the best route of approach, but this the Swiss flanked with stone fortifications. Thereby the Habsburg army was led into a trap—herded like sheep into a narrow pass from which escape was nearly impossible.

Additionally, the Swiss had brought together from Schwyz and Uri a united force totaling around 1,300 halberdiers—led by their Schwyz headman, or Amman, Werner Stauffacher. After blocking all entrances to the area with *letzi*, Stauffacher sent out

---

However, a large portion of the details in both primary accounts seems plausible and are useful (See Oman, 2: 239, n. 2 and 3; 2: 239, n. 1 and 2 and Delbrück, *Medieval*, 559.)

84 Johannes von Winterthur, 25, in Oman, *History of the Art of War in the Middle Ages*, 239, n.2. See also Verbruggen, 285, also Delbrück, *Medieval*, 552.

85 Winterthur wrote that the terrain at Morgarten was cramped and steep. Any who have seen the area today with its openness and small hills that slope gently from the woods into open pastures might be confused by Winterthur’s description. However, it is generally accepted among Swiss scholars that at the time of Morgarten a stone fortification stood on that road, causing the narrowness and steepness suggested by the chroniclers.

86 Delbrück gives the halberd as the main Swiss weapon. According to Bendict Tschlachtlan writing nearly two centuries later in 1493, but often used as a primary sources for Morgarten just as is the fifteenth century chronicler Billibald Pirckheimer, there were also pikemen among the Schwyzers. See for instance the 1483 illustration that accompanies Tschlachtlan’s chronicle in Figure 6.2.

87 I defer to the chroniclers on the number of troops, although there seems to be some confusion as to the actual numbers present. For an extensive discussion on this issue see Hans Delbrück, *Medieval*, 3, who believes the force probably numbered around 3,000-4,000 men. However, I see no reason to disregard the numbers given by Winterthur, who suggests that the reason for so small a force was that, although the Schwyzers were supported by Uri and Unterwalden, they were able in a short time only to assemble 1300 men at the narrow pass. See as well, Oman, *History of the Art of War*, 2; 239, n. 3—The fifteenth century chronicler Billibald Pirckheimer tells us that Leopold had sent a contingent of his forces to attack
scouts and observers. As soon as the Swiss reconnaissance returned with the news that the Austrian army was marching up the designated route, the commander left in place a contingent of crossbowmen, and led his troops into hiding on Mattligütsch ridge.\textsuperscript{88} From this concealed wooded slope, the Swiss could form up in battle order without being easily discovered—the area was protected against any direct approach by a deeply cut wooded ravine, the Haselmattruse.

Duke Leopold, the brother of the Emperor, was then moving along the east bank of Aegeri Lake with contingents drawn from the feudal levy of the Hapsburg lands in Swabia\textsuperscript{89} and other nobles from the regions that supported his brother,\textsuperscript{90} as well as, with Swiss forces from Zürich, Zug, Winterthur, and Luzern. In all, 2,000-3,000 men became blocked by a wall strategically placed on the road, at a spot where the route ascended and wound around natural stone outcroppings. The chronicler Heinrich Brennwald wrote of the place that “it was on an incline and so narrow that only one or two soldiers were able to stand next to each other.”\textsuperscript{91} The roadblock, then, was situated between a forested mountain slope and a lake on either side of the narrow road.\textsuperscript{92}

\begin{flushleft}
\footnotesize
 Unterwalden. This was done in order to keep the militias of Unterwalden from coming to the aid of the two other members of the confederacy, weakening the Swiss forces at Schwyz.

\textsuperscript{88} Billibald Pirckheimer, \textit{Bellum Helveticum}, in \textit{Mittheilungen des Historischen des Kantons Schwyz}, 41: 44-5.

\textsuperscript{89} William Martin, \textit{Switzerland}, From Roman Times to the Present (New York: Praeger, 1971), 33-34.

\textsuperscript{90} Oman, \textit{A History of the Art of War}, 2: 238.

\textsuperscript{91} Heinrich Brennwald von Zürich, in Hans Ruedi Müller ed., \textit{Morgarten-Sagen, Fakten, Meinungen} (Zürich: Zell, 1986), 15.

\end{flushleft}
The entire vanguard was forced to halt, yet the center and rear of the army continued to move forward oblivious to the problem ahead. The result was that the entire Austrian army became locked in a bottleneck. Furious, that his march was halted, the Duke ordered the wall stormed—probably by dismounted knights, since his infantry were in the rear of the army. Just as the knights began climbing over the roadblock, a shower of boulders and tree-trunks came rolling down the slope on the knights’ right flank. The dismounted knights ran for their lives, but as Winterthur tells us they were caught like “fish in a net and were slaughtered without any resistance.”

Eliminating the vanguard on the narrowest part of the pass, the attack of the forest cantons had cut down most of the aristocrats. The horses of those behind were thrown into confusion as their riders, knowing that they could not charge uphill, attempted to turn their mounts. The entire mass of knights was now pinned between two sheets of rock on the sides (the letzi), and their own packed forces and a lake below them. They were thrown into panic. Then, suddenly, movement was spotted from above: a huge body of halberdiers in dense column began rolling out from the woods and down from the ridge. Swiss pelters went before them unleashing avalanches of rocks, while the powerful Swiss halberd column rammed into the Austrian flank slashing and thrusting. The moment is captured by the illustrator of Bendict Tschlachtlan’s 1493 chronicle Die Schlacht am Morgarten. See Figure 2.8.

93 Chronik des Johannes von Winterthur, Schlacht am Morgarten in Wilhelm Oechsli ed., Quellenbuch zur Schweizergeschichte (Zürich: Schulthess, 1901), 54f; Oman, The History of the Art of War in the Middle Ages, 2: 240. See Figure 2.8.

94 On the one hand the Confederates had closed off retreat from the knights, and on the other hand they prevented the opposing infantry from intervening on behalf of the knights.
The penned-in knightly forces could do nothing to protect themselves from the mad onslaught.\textsuperscript{95} Some of the confederates rammed their long halberd spikes right through enemy chain mail, mercilessly impaling knights on their iron tips; others swung the enormously heavy axes slashing apart body armor, and then splitting open the exposed flesh.\textsuperscript{96} Knight and horse fell together at the pitiless onslaught of the massed halberds. The rout was so complete that John of Winterthur felt:

It was not a battle, but a mere butchery of Duke Leopold’s men; for the mountain-folk slew them like sheep in the shambles; no quarter was given, they cut down all without distinction. So great was the fierceness of the Confederates that scores of the Austrian foot-soldiery, when they saw the bravest knights falling helplessly, threw themselves in panic into the lake, preferring to drown rather than to be hewn about by the dreadful weapons of their enemies.\textsuperscript{97}

Thus ended what had began as a holiday of plunder for the knights The retaliatory campaign was supposed to have been a pleasure trip into a territory defended by disgruntled peasant farmers who would put up only a weak resistance, and would thoroughly and quickly be subdued. Winterthur wrote concerning this the following:

Also the men of [the Habsburg army] came together mainly to tame and humble those farmers, and they thought their victory to be completely secured, and the capture of the countryside and their dispossession and plundering so complete, that even the common scum and riffraff that came along with the army would be able to carry away booty and cattle from the simpletons.\textsuperscript{98}

Instead, the arrogant knightly force was completely annihilated without giving any resistance.

\textsuperscript{95} Delbrück, \textit{Medieval}, 556.

\textsuperscript{97} Oman, \textit{A History of the Art}, 2: 240-41.

\textsuperscript{98} \textit{Chronik des Johannes von Winterthur}, 54.
With this victory the Swiss joined the Scots and Flemish in laying the foundation for the “Infantry Revolution.” For consensus scholars it seems unlikely that Courtrai, Bannockburn and Morgarten, all occurring within the first quarter of the fourteenth century, could bear such striking similarities simply by coincidence. Just as it was not by accident that German Landsknechts resembled the Swiss—German leaders intentionally modeled their own armies on the Swiss system—likewise, there is no reason to believe that a similar stimulus diffusion had not occurred earlier.

Sir Thomas Gray certainly believed that the Scots had heard about the Flemish victories just before Bannockburn; and Flemish soldiers, in turn, had fought against and learned from the Italian communes in the late-thirteenth century. Likewise, the Swiss of the Alpine valleys were in perpetual contact with foreigners, including the Flemish, who crossed back and forth across their mountains on their way to fight in Italy; so we can make an educated guess as to how “the idea” that commoners could defeat knights made its way into Switzerland.

If we couple the Kroeber model with the consensus view in an attempt to explain how the transmission of this fighting-style might have occurred, our “ideational germ” would be that commoners packed together in formations with spears and axes can defeat elite, professional knights. This idea easily could have been transmitted to the Forest cantons due to their central locality, and the role they played in guiding foreign armies over their mountains into Italy.

Clearly the Confederates at Morgarten—exactly like the Flemish at Courtrai in 1302, and the Scots at Bannockburn in 1314—had taken advantage of the terrain, and through tactical concerted action, made up for their inferiority in both numbers and
training. They forced battle on their enemy at a spot where the Habsburg knights could not bring into play their military superiority and where they could not parry an attack: the Swiss engineered a position giving them exactly the same tactical advantage created by the Scots and Flemish at Courtrai and Bannockburn.

Likewise the militias at Legnano, Courtrai and Bannockburn were each successful because their members all held one core idea in common: footsoldiers could hold off elite knights. But the Flemish and Scots took this idea a step further than the Italian communes: footsoldiers could decide battle with a minimum of assistance from mounted knights, when their leadership chose advantageous terrain and kept the elite cavalry and archers of their foes from working together: this was achieved through surprise. So, if the Swiss heard of these battles—and likely they did—several core ideas would have been transmitted: militias made up exclusively of footsoldiers could defeat mounted knights; but this depended on a wise choice of terrain, a strategy of surprise attack, and a tactical formation that was simple, yet powerful and cohesive enough to inspire confidence in its members.

The utilization of halberd phalanxes, on the other hand, with weapons unique to the Swiss, might represent Krober’s “new materials and different methods” developed by the receiving culture. In other words, the Confederates did not import entirely any one of the Flemish, Scottish, or Italian systems. Instead of Flemish goedendags they utilized their own halberds; unlike the Italian communes they allowed knights neither to lead them, nor to decide their battles; unlike the Scots they replicated their initial successes time after time, and used what they learned on the battlefield to develop evolved formations that answered enemy responses to earlier tactics.
Other Swiss adaptations of these core ideas were, of course, to erect *letzi* to funnel the knights into a narrow trap from which they could not easily retreat; to throw the enemy into disorder by rolling down logs on their flank; launch a surprise attack, rapidly descending from the woods just when the Austrians were trapped. Psychological warfare was also at play as the Swiss turned Austrian panic and confusion to their advantage. Further, the Swiss added their own twist to the “core ideas” by utilizing their own the halberd/pike formation in a huge mass: they did not import wholesale either the Scottish échelon system or the Flemish phalanx, but used the weapons they knew best.

Morgarten, then, exemplifies stimulus diffusion. Through the Italian communes, Flemish, and Scots a system, pattern, invention, idea (commoners with pikes can successfully stand up to knights) diffused to the Swiss Confederates who accepted it, reinvented it, and made it their own by means of new materials (*letzi* and logs) and by different methods (a halberd, not pike, formation).

**The Problems**

However, there are three problems with this explanation. First, although there are hints that some Europeans had witnessed and written accounts of the “new and wonderful” events of Courtrai and Bannockburn—we know that after Courtrai, shocked chroniclers all over Europe created a crop of legends surrounding the event—we have no way of knowing for certain that accounts of these events made their way into central Switzerland before 1315. Whether *other* legends, like the knightly defeat at Legnano, inspired the Forest Cantons or Swiss leadership at Morgarten simply thought out their own good plan without any knowledge of what had transpired in 1176 we cannot know. Certainly at Morgarten, no king or prince engineered the battle plan; it was created by the head of the communal assembly of Schwyz, a middle class farmer and community leader,

---

the Landesamman Werner Stauffacher. Tales among knights, then, would not have applied here. So, Stimulus Diffusion can at best only provide a theoretical possibility for the Swiss tactics at Morgarten.

Second, even if future research proves that the Swiss did know of Courtrai and Bannockburn before 1315, still Stimulus Diffusion provides only a theory concerning the transmission of a “core idea”, but is incomplete without an understanding of the military culture of the Forest Cantons who “reinvented” it—why halberds, not pikes, for instance? To understand why the Forest Cantons chose the formations they did we must dig deeper into their past as a Germanic people to find if any cultural or military practices of the ancient Germanic tribal associations might have been preserved.

Finally the most significant snag in this interpretation is that that footsoldiers fighting in massed formations never disappeared in Europe. This error continues to be perpetuated as scholars unthinkingly follow Delbrück and Oman, or simply turn a blind eye to the obvious. A knightly class did appear as the result of feudalism. It is exactly because they wished to preserve their status that they spoke of the “common foot” in derogatory terms—as did their elitist chroniclers. But frankly, knights could not do without them. We will explore this topic in more detail in following chapters. However, as an example, let us return to the facts surrounding Bannockburn.

Contemporary chroniclers and commentators at Bannockburn are not to be trusted when they feign shock at footsoldiers who would “dare take the offensive against the mighty King of England.” This is simply aristocratic pomp and circumstance, not a statement of fact. In truth, the English had seen it all before. Seventeen years before Bannockburn William Wallace at the Battle of Stirling Bridge on September 11, 1297 had used tactics similar to the Swiss at Morgarten and a year later July 22, 1298 used tactics that Robert Bruce replicated at Bannockburn.

At Stirling Bridge, Wallace and his pikemen camped on a forested hill overlooking Stirling River. They waited until the British began to file across the river’s
narrow bridge and form up on the opposite side. As part of the British forces were on one side of the bank and the other section was attempting to cross, Wallace’s main body of pikemen rolled out of the hills, and attacked the men who had crossed. Meanwhile, a smaller detachment of Scottish pike charged the bridgehead. The English had been caught in a “net” similar to the one the Swiss had cast on the Habsburg army. The Scots impaled or drowned more than one hundred knights, and several thousand English and Welsh footsoldiers. So, King Edward’s shock that “Scots would actually attack” can be taken as little more than aristocratic scorn.

At the Battle of Falkirk the following year, Wallace again positioned himself on a hillside, not very far from the edge of a forest. He formed up his men in four great masses or “schiltrons.” Placing two to three hundred men-at-arms to his rear three units of archers on each of his flanks, he reserved a final unit of archers for his center. While these units were important, the “whole hope of Wallace lay in the solidity of his impenetrable masses of spears.” When the battle opened these pike units easily flung back the mounted knights who charged them: the front rows knelt with their spear butts rammed into the ground while those behind them leveled their pikes over the heads of the men in front. This forest of twelve-foot spears was far too thick for cavalry to break in.

But this time the English commanders had a solid tactical plan. The knights were pulled back, and the archers ordered to the front. As a synchronized unit the English archers pulled back their bows and on command riddled Wallace’s pike squares with arrows. Soon massive gaps began to appear in the enemy’s ranks: now the knights went back into action. They cut poor Wallace’s squares to pieces.

But it was not a “disciplined elite squadron of knights” who won the day at Falkirk, it was the King’s archers who showered Wallace’s squares with the arrows that opened the gaps for the knights to break through. This was the very technique that, of

---

100 Oman, *Art of War*, 77.
course, would be used later in the Hundred Years’ War: the tactics of the “crossbow revolution” had already been used in 1298.

Poor Wallace and his army were defeated here, but they had stood their ground, and they were not defeated by the “overwhelming superiority of massed cavalry tactics,” purported by some to be the decisive factor in medieval warfare. Archers, not superior massed cavalry tactics were the key to the battle. Also, had Wallace charged the enemy, as he did at Stirling Bridge, the battle might have turned out differently—as it did at Bannockburn.

The differences between Stirling Bridge and Bannockburn are twofold: discipline and movement. Bruce had observed the defeat at Falkirk from behind English lines, so he knew Wallace’s mistake. So when it came his turn to battle the British he prepared. First he drilled his men. He gave them “constant training with heavy lances” to build up their strength and to teach them to move smoothly from “massed lozenge to circular pattern.” Then he took them out on an open field—the one on which he knew they would likely do battle—and refereed “scrimmage” matches against the Scottish mounted cavalry. So, Bruce created for his men a sense of the “home team advantage”: they knew the field, they had practiced on it, and they knew how to win.101

Peter Tranquair’s comment that: “The idea the Scots attacked the English can be dismissed; the schiltron was still a defensive formation,”102 is dead wrong. The purpose of the training was so that Bruce could keep his men advancing against the shower of arrows he knew would come. He wanted to make contact with the main body as soon as possible. As Morris suggests,

The word, schiltron variously written as schiltrome, schiltrum means shield-wall…The secret of Bruce’s tactics was his training of his schiltrons to advance in

---

101 Reese, Bannockburn, 121.

an orderly formation *en échelon*, while he kept his light cavalry as he needed where they would not be out-numbered and useless. He established a tradition that the Scots should take the offensive.\(^{103}\)

As Peter Reese points out, “Bruce hoped the English would still view his *schiltrons* as essentially defensive formations like William Wallace’s, and fail to appreciate fully how vital their mobility was for his plans.”\(^{104}\)

Bruce needed to achieve surprise and speed to trap and compress the English. So he divided his army into *schiltrons* and taught them how to advance in step. Immediately behind and to his left was Moray, who had taught his men to form up in a “*hyrcheoune,*” or hedgehog,\(^{105}\) followed by a third Scottish column. Reese describes beautifully the steady advance of the Scots:

His men [The Scots] as seasoned soldiers would try to blank out the dangers that lay ahead and concentrate on the immediate problems in hand, striving to obey their sergeants’ instructions to keep good lines, to point their spears straight ahead and, with the hummocks in the ground, to take especial care over their footing. As they continued to advance, though, they must have felt the urge to tilt their helmeted heads forward and hunch their backs the better to meet the expected arrow cloud. Edward could only watch in amazement as the Scottish spearmen, in virtual silence, moved steadily across the carse toward his position. By now they were less than two bowshots away and the forward phalanx continued its relentless advance with the other *schiltrons* following close behind. In their tight formations the king must have thought them remarkably few compared with his own great army spread over the carse behind him…[But the Scots] showed no signs of slowing.\(^{106}\)

Clearly it was the knights, not the Scottish foot who were undisciplined here. Before allowing the archers to do their work, a commanding knight, Gloucester, mounted and rushed towards Bruce’s *schiltron* where he was impaled on a wall of spears. As for the

---

\(^{103}\) Morris, *Bannockburn*, 48.

\(^{104}\) Reese, *Bannockburn*, 153.

\(^{105}\) Morris, *Bannockburn*, 68.

rest of the knights, once their initial charge failed, they were plunged into disorder. The men who fell were a stumbling block to the rest and those who survived refused to fall back and allow the others to attack. The knights came to a standstill, as horses toppled and men-at-arms were thrown to the ground. Clearly there were also ax-men in the midst of the Scottish phalanxes, as there would be at Sempach—and nearly every Swiss battle after Morgarten. As Tranquair explains: “Many [knights] were trampled underfoot or suffered the final coup de grace from an ax-wielding Scot sallying from the schiltron.”

So, if infantry—or phalanx—tactics had died in the Middle Ages, how did the Scots learn to fight this way? The obvious and therefore most likely answer is that they did not have to learn: medieval infantry had been fighting this way throughout the Middle Ages. Swiss pike columns, then, were not the product of Stimulus Diffusion from Bannockburn and Courtrai. Stimulus Diffusion would require an originality on the part of the Scots and Flemish in building columnar formations from citizen militias, a system then borrowed by the Swiss. However, evidence suggests that the use of pike formations in Scotland, Flanders, and elsewhere in Europe had an earlier origin.

What was that origin? Is it possible that classical scholars, such as Victor Hanson are right? Might there have been a “Continuous European Tradition” of fighting in organized columns?

---

107 Morris, Bannockburn, 159; Traquair, Freedom’s Sword, 193.
Figure 2.1: The Courtrai Chest: Re-discovered circa 1909 at the New College in Oxford, England the chest shows scenes of the Battle of the Golden Spurs fought at Courtrai, Flanders in 1302 AD. It is assumed that the artist was Flemish and either saw or took part in the battle.
Figure 2.2: *The Goedendag*: Close-up from the Courtrai Chest, Illustration 11.
Figure 2.3: Extant goedendags
Figure 2.4: Reconstruction of the Flemish goedendag: The thick ring of iron around the wooden pole was used as a club, while the tip was used for thrusting.

Figure 2.5: The Flemish line of battle at Courtrai from the Courtrai Chest (see Fig. 2.2 Below): At the far right are the packed wall of pikes into which the French knights will crash. Behind the pikemen are the crossbowmen and the rest of the town militias—many carry the goedendag, a club-like weapon with a spiked tip widely used among the Flemish. The first slain horses can already be seen lying on the ground to the right. Guy of Namur, William of Jülich, Henry of Lontzen, the town guilds and Pieter de Coninč’s banners fly above the Flemish army. To the left a French knight is being stopped. A pike seems to hit him under his helmet and a sword is driven into his horse's chest.
Figure 2.6: Reconstruction of the Battle of Bannockburn
Figure 2.7: Modern Reconstruction of weapons and formation Bannockburn
Figure 2.8: Illustrated cover of Bendict Tschlachtlan’s *Die Schlacht am Morgarten* published in 1493. According to Tschachtlan both pikemen and halberdiers fought at Morgarten.
CHAPTER 3

THE PRODUCT OF A CONTINUOUS WESTERN TRADITION

For nearly a thousand years (479 B.C. to A.D. 500) the military dominance of the West was unquestioned, as the relatively tiny states in Greece and Italy exercised military supremacy over their far larger and more populous neighbors. The scientific, technological, political, and cultural foundations of classical culture were not entirely lost, but passed directly from the Roman Empire to European kingdoms or were rediscovered during the Carolingian period and later the Italian Renaissance.108

Perhaps the most controversial aspect of the Hanson argument on continuity is his blatant disregard for the largely consensus view among military historians that beginning around the time of Courtrai and Bannockburn something revolutionary was taking place in Europe, which had ties to the novel gunpowder revolution, the discovery of the new world and the later rise of industrial dominance in the West. These are the key factors in explaining the West’s rise to military superiority. However, Hanson argues that Western dominance rose not because something new was happening in western Europe, but because the scientific, technological, political, and cultural innovations of the late-Medieval, Renaissance, and Early Modern periods were the direct consequence of a classical culture that was passed on continuously throughout the Middle Ages and then revived beginning in the early 1300s and flowered in the sixteenth and seventeenth centuries. He writes, in fact, that:

108 Hanson, Carnage and Culture, 19. Emphasis mine.
The fall of Rome in some sense meant the spread of the West much farther to the north as Germanic tribes became settled, Christianized and more Western than ever before...The Military Revolution [including the proposed Revolution of pike tactics at Courtrai and Bannockburn] was no accident, but logical given the Hellenic origins of European civilization.109

The crux of the Hanson argument, then, is that medieval western Europeans inherited a ‘western culture” that began with the Greeks and was passed to Europe via the Romans. This idea is nothing new. The influence of Greco-Roman culture on Europeans is not a matter of dispute.110 What makes Hanson’s theory controversial is his suggestion that military expertise, like other scientific, technological, political and cultural ideas, was passed directly to the “tribes to the north.” He counters his dissenters by arguing that northern tribes could substantially change tactics around a classical core—the ancient idea that pikemen could withstand cavalry would manifest itself regionally and haphazardly. But “haphazardness” is not “a continuous western tradition.”

In any case, if Hanson were correct then, of European armies, the Swiss Confederate militias should be the ideal examples of a continuous military tradition, passing directly from the Greco-Romans to western Europeans. Swiss confederates in areas just outside the Forest Cantons, or the “outer” cantons descended directly from clans in close contact with Greek culture and ideas as early as the Bronze Age. These same peoples served in Roman, Frankish, Carolingian, and later Imperial armies. So, if Hanson’s argument holds any validity, the Swiss militias of the outer cantons, like no


others, would have fought in military systems retaining classical military techniques in a truly continuous manner.

We will explore the possibility that Swiss battle cohesion might be best explained as a *continuity of experience and tradition* which remained with the Helvetians over a number of centuries beginning with their days guarding Roman frontier garrisons, and serving as legionary auxiliaries. Likewise we will consider whether armies in which the Helvetii served, after the fourth to fifth centuries, preserved and incorporated Greco-Roman infantry tactics, and also whether this knowledge of *how* to successfully fight on foot was every really “lost.”

By reviewing the hard evidence (or lack of it) this chapter will test the Hanson theory using the Swiss as a test case. So, a major theme, here, is the degree to which the Helvetians\(^{111}\) fought in a way reminiscent of hoplites and legionaries throughout the Middle Ages.\(^ {112}\) In order to consider this possibility we must distinguish between the “inner” and “outer” cantons of the Confederacy.

The inner cantons, as we shall see in Chapter Six, are also known as the Forest Cantons—Uri, Schwyz, and Unterwalden—or the original three Cantons that created the Confederacy. It is not their history that we detail here, but that of the “outer cantons”—Bern, Zürich, Fribourg, Graubünden, and the other cantons which, either joined or, in the case of Graubünden allied, with the Confederates after Morgarten.\(^ {113}\)

\( ^ {111}\) The Helvetii were, of course, the ancient peoples who later called themselves the *Schweizers*, or Swiss.

\( ^ {112}\) Around AD 1000, of course, the ancient European tradition of citizen soldiers was largely replaced by three hundred years of knighthood with the onset of feudalism.

\( ^ {113}\) Wilhelm Oechsli, *History of Switzerland 1499-1914*, trans. Eden and Cedar Paul (Cambridge: Cambridge University Press, 1922), 2. By 1332 Luzern had joined the Alliance of the three communities, forming the Vierwaldstätten (the reason that Lake Luzern today is also called the Vierwaldstättensee)
The history of the outer cantons is important for three reasons. First, as these territories joined the original three Confederates during the fourteenth to sixteenth centuries, Confederate tactics began to change, and the changes—as we shall see in later chapters—which made use of classical tactics, were pushed by officials in the cities, not in the rural Forest Cantons. So, it is important to consider their military history separately from that of the Forest Cantons to see how their tactical experience developed over time.

Second, if there is any continuity in military practice from the classical world, the line must be traced, of course, from Rome to the “outer cantons,” since it was their territories’ peoples who had continuous direct contact with the Roman and Frankish armies: peoples of the inner cantons had only intermittent—although important—contacts with conquering tribes, so their martial history must be treated separately.

For that reason, military traditions that developed just outside the Forest Cantons in, for instance, Luzern, Zürich, Fribourg, Bern and Graubünden, will be explored here, with a focus on whether these “outer” cantons, in service to Roman, Carolingian, and later Imperial armies, were directly trained to fight in military systems that retained classical military techniques. A major theme is the extent to which the Helvetians, as part of the Roman Empire from the first century B.C., like other Europeans in contact with ancient Rome, fought in a way reminiscent of hoplites and legionaries.

which then comprised three rural communities and one city. Within fifty years other cities, now aware that the Confederates were able to back their claims to autonomy against foreign rule with consistently successful force, looked to become members of the alliance. In 1351 the imperial city of Zürich joined the alliance since they too were feuding with the Austrians and needed support. In 1352 Glarus and Zug were freed from Austrian rule and joined the alliance, and in 1353 the city of Bern, which had previously fought against the feudal nobility of Western Helvetia joined as well, and the second phase of the Confederacy had commenced.

114 The Swiss Canton of Fribourg is often spelled Freiburg in both modern and contemporary sources, and is not to be confused with the German Freiburg im Breisgau in Baden-Württemburg.
Third, military developments in the “outer” Swiss cantons serve as an ideal case study for determining to what extent classical military ideas survived in Medieval Europe. At the center of the western Roman, Carolingian, Hohenstauffen, and Habsburg empires, they served in nearly every major European imperial army during the 1,400 years before they joined the Swiss Confederacy. These inhabitants were descendants of Celtic and Germanic clans, and Roman veterans, who not only had direct contact with Roman armies, but had served in them, and lived as Roman provincial subjects. So it is worth considering to what extent classical military techniques survived in these areas to ascertain what latent memory and expertise might have been awakened as they joined Confederate armies during the fourteenth century.

We will explore the possibility that Swiss battle cohesion might be best explained as a *continuity of experience and tradition* which remained with the Helvetians over a number of centuries beginning with their days assisting in guarding Roman limes, and serving as legionary auxiliaries. Likewise we will consider whether armies in which the Helvetii served preserved and incorporated Greco-Roman infantry tactics after 401 A.D. when the legions pulled out of Helvetia, and also whether this knowledge of *how* to successfully fight on foot was every really “lost.” Let us begin with what we know of the ancient Greek influence in prehistoric “Switzerland.”

**Contact with the Greeks**

Before Roman times the proto-Swiss territories outside the Forest Cantons were possessed and settled by clans from the Celtic, war-like tribe of Helvetia. The first to document the existence of the ancient Swiss peoples were Roman historians who recorded the clashes that took place between the Roman armies and the Celtic *Helvetii.*
However modern historians and archeologists have reconstructed a much earlier “Swiss” past that reaches into the Bronze Age. Excavations from late-Bronze age (circa ninth century B.C.) lakeside settlements in the Mittelland and Jura Regions have turned up armor very similar to what we read about in Homer, and which we know covered the hoplites of the eighth to third centuries A.D: i.e. bronze helmets, shields, body armor plating and leg protectors. For example see Figures 3.1-3.3. The similarity is no coincidence: Frederick William Dame, among others, has suggested that these were ancient Swiss products replicated from weapons introduced into the area from Greece via Southeast Europe. An earlier alternate interpretation is that the dissemination went in the opposite direction. Hoplite weapons and armor did not appear in Greece before the mid-eighth century, so classical scholars often assume some elements came from central Europe, not the other way around. Either way, during the Iron Age, or in Switzerland, the Halstatt (c. 750-450 B.C.) & La Tène Periods (450-15 B.C.), the ancestors of the “Swiss” were certainly influenced by Greek culture.

The Iron Age

In the Jura and Mittelland archeologists have uncovered a number of localities that suggest to them a strong Greek influence. Many of these are sites built on fortified hilltops and mountains similar to those associated with the hilltop communities—from

---

115 See Figures 3.1-3.3.


which the first *poleis* sprang—in ancient Greece. Likewise, wagon-graves, found across the Mediterranean, but particularly associated with Greece, have been found at many sites across Switzerland. The most famous wagon graves are those at Bern-Kirchenfeld, Canton Bern; Kaisten, Canton Aargau; and St.-Sulpice, Canton Vaud. Their contents suggest that the Swiss practiced the same burial rites as the ancient Greeks. Some, such as the wagon grave at Ins, Canton Bern, even included Greek trinkets, such as a gold braided necklace with a gold pendant, both of Greek origin and dating to the sixth century B.C. Also in Canton Bern at Meikirch, a bronze jar with a figure of the Hydra was uncovered: it is known as the “Hydra of Grächwil” and has been dated to between (580-570 BC). Similar pottery and other artifacts, such as *situla*, have led experts to conclude that Greeks brought their wares to Switzerland either across the Adriatic Sea and over the Alpine passes or via the western Mediterranean and that trade with Greek colonists was a major driver of ancient Swiss economics and society.

Archeologists connect this phenomenon to the concurrent establishment of three colonies in the area: the Greek trade empire Spina (in the Po River Delta in Italy); the southern (French) Mediterranean Greek colonies, c. 600 B.C.; and those established by the Etruscans when they settled in the Apennines, c. 800 B.C. The Greek and Etruscan

---

118 Dame, *Switzerland*, 168, 194-5.

119 These are the wagon-graves represented on Greek dipylon vases.


settlers were responsible for a substantial increase in trading contacts between Greece, Rome and the Swiss alpine regions.  

When they settled near ancient Switzerland, however, Greek peoples brought more than just pottery and jewelry: they brought weapons. Grave sites suggest the Swiss acquired them in great numbers. Bronze arrows originating in Asia Minor or Greece have been found in Switzerland along with scabbards and coins engraved with apotropaic eyes—the Greek hex against evil.  

However, it was the Greek colonists of Massalia (Marseilles) that most influenced the Swiss Celts. By 600 B.C. wealthy Helvetian leaders were sending their sons, at the invitation of the Phocaeans to Massalia to be educated in the Greek language, way of life, and philosophy. The Greeks wanted to educate the Helvetii so that eventually contracts between them could be written in Greek. As a result in western Switzerland a Celtic-Greco-Ligurian language developed. Further, Adolfo Dominguez shows that the Greeks of Massalia not only maintained good relations with surrounding peoples with whom they traded, but they often intermarried as well. Classicists often speak of this period in Italy and the surrounding area as a time of “orientalization,” meaning that the new colonists had saturated the culture and economy with their ideas as well as their wares. 

---


124 Dame, Switzerland, 1. 260. 

125 Adolfo J. Dominguez, “Greek Identity in the Phocaean Colonies,” in Kathryn Lomas and Brian Shefton ed., Greek Identity in the Western Mediterranean, Mnemosyne, Suppl. 246 (Leiden: Brill, 2004). Dominguez shows as well, both that the Phocaens had a sense of “Greek” identity, and also were able to maintain their specifically Phoaean identity.
The Etruscans who influenced the Swiss of the southern alpine valleys were considered part of the “orientalization” process as well. They gave the southern Swiss “Lepontines” their language. Their alphabet, still partly known, is a direct descendant of the Etruscan alphabet, which, in turn, originates in Greece.\textsuperscript{126} They also fought in spear formations and wore armor similar to those of Greek hoplites. See Figure 3.4.

The influence of Greek language and culture among the Swiss Celts is one of several explanations offered for the “definite similarities” between Helvetii oral traditions and those of the Greeks.\textsuperscript{127} By the time of the Romans, the Helvetian sagas maintained that their tribe sprang from Paris, the son of King Priam of Troy and his wife Hecuba. Once Troy was conquered Paris’ son Lemanus, who had been brought up in the wilderness by a bear, fought with his cohorts against an army led by Hercules, the Greek hero.\textsuperscript{128} Lemanus defeated Hercules’ army at Lac Léman, which is where the lake gets its name. From the grandsons of Lemanus the three lands of the original Swiss get their

\textsuperscript{126} Dame, Switzerland, 1: 222; 2:10: The Lepontii were a Celtic tribe of the central Alps near Tessin, whose culture was closely allied with the tribes of Upper Italy. They were likely the parent tribe of the Insubres, Orumbovi, Venmonetes, Suanetes, and the Regusci. The term Lepontii survives in the name “Livantals,” which means the valley of the Leventines in Tessin. Both language and culture is a mixture of Early Celtic and Indo-European. The influence of Lepontine culture spread into the Upper Rhine Valley into the present-day cantons of Bern, Glarus, Uri and Graubünden: linguists have found that eastern and western dialects, and Latin either borrow heavily from one another, or perhaps have a common core. For instance, the celtic word for goat, “čamórć,” is based on the pre-Roman kamörkjo- or kamurkjo, derivatives of which are spread throughout Switzerland, southern Europe, and the Caucasus. Among the Romance languages kamörkjo or kamurkjo- became camox, and in 1389-1390 entered French as Chamonix, and is found in place names and geographical designations in Normandy, the West Alps and central Switzerland: in the Berner Oberland the common word gämmeli, which means a small stall or pen in front of an Alpine hut, or place where small animals like goats and pigs are kept. On other pre-Roman word stems and word derivatives see Johannes Hubschmid, “Vorindogermanische und jüngere Wortschichten in den römanischen Mundarten der Ostalpen mit Berücksichtigung der latinisch-bayrisch-slovenischen Lehnbeziehungen,” Zeitschrift für Romanische Philologie 66 (1950): 9. For Pliny’s quote see Pliny, Natural History 3 (Cambridge, Mass., Harvard University Press, 1938), 135.

\textsuperscript{127} Ibid., 2.19. Other explanations offered trade with the Mediterranean, and tutelage under the Greeks of Marseilles.

\textsuperscript{128} Of course, we should not read too much into the word “cohorts”: this likely meant simply “armies.”
name: Allobrox, was the father of the Allobroges tribe, given the land in present-day Savoy; Sequanus’ descendants lived in the land between modern Besançon and the Jura foothills, eventually expanding into the Seine River Valley; and Helvetius, of course, was the father of the Helvetii and was given the possession of Helvetia located in Switzerland proper. He named his capital city Aventicum (present-day Avenches in Canton Vaud) in honor of his beloved concubine Aventica. Dame believes that with this “genealogy” the Swiss were making it clear to the Romans that they were not barbarians: they were of the same stock from which the Romans claimed to spring.129

The Greco-Roman influence came partly through trade, but also through education: peoples of the Greco-Roman world influenced how the Swiss Celts spoke, taught their wealthier members to read and write, and they affected the ways in which the Helvetians saw themselves in relationship to their neighbors. So, it should be no surprise that around the sixth century the Swiss began to adopt Greek arms—bronze helmets, shields, cuirasses, and leg protectors—as well.130 Not only did they wear them, the Swiss learned to make Greek weapons: weapons caches made in the Greek style have turned up at cites which experts believe to be iron-age weapons manufacturing centers in Switzerland.

They also believe that it was via Switzerland that fighting techniques from Greece and Italy spread throughout Europe.131 In the case of “Greek” tactics, we must assume the Phocaeans would only have passed on some archaic, Homeric-style form of massed

---

129 Dame, *Switzerland*, 2.19.


fighting. Phocaeans were not, of course, Greeks of the mainland, but Ionian Greeks who settled in Asia Minor circa 1000 B.C. Classical hoplite warfare was in the process of developing on the mainland at the time the colony at Marseilles was established, so we cannot be certain exactly what tactics these Greeks may have “spread.” We can only speculate based on weapons excavations in Switzerland.

But the finds have been interesting. From about 600 B.C. the new colonists seem to have influenced especially Swiss weapons developments. Beginning in the Old Iron Age to the Late La Tène period, grave excavations have shown that there were three major developments in Swiss weapons construction and use. For the early years of the Old Iron Age (c. 800 B.C.) before their contact with the Greek colonists, graves yielded long swords with grips made of iron, and numerous bows and arrows. But by the late Old Iron Age (600-400 B.C.), after Helvetians began learning from the Greeks, swords disappear from graves and are replaced with a short dagger (short sword) and a fifteen-foot spear. According to Hans van Wees the shield and the single thrusting spear became universally adopted among Greek hoplites only shortly after the Persian Wars (490-481 B.C.). Admittedly, this development on the mainland in Greece falls at the end of the dating for the Old Iron Age Helvetian weapons, but may be significant nonetheless.132

Or it might not. Dame suggests that this change in weaponry points to a change in fighting tactics. But weapons do not necessarily imply a particular tactical system.133

132 Van Wees, Greek Warfare, 50.

133 Max Jahn, “Die Bewaffnung der Germanen in der älteren Eisenzeit,” Mannus, no. 16 (1916); “Galli,” in Paulys Real-Encyclopädie der classischen Altertumswissenschaft (Stuttgart: J. B. Metzler, 1910), 610-30; J. M. de Navarro, “Scabbards and Swords found in them” in The finds from the site of La Tène 1-2 (London: Oxford University Press, 1971); Dame, Switzerland, 2.23. Some graves from this period also yield shorter, lighter spears, which could be used as artillery.
A good example of this is in the other “Swiss” clan, the Marseillesns, who served as mercenaries to tribes in the area from about the fifth century. Their special weapon, too, was the spear and they were known as the Gaesati, or those with spears (gaesum). It is not known why the Marseillesns fought almost exclusively with spears, or whether they fought in concentrated military units. But, as auxiliaries to the Roman Legions, the Marseillesns had a “looser organization and more barbarous character” than other auxilia of the Roman army. In the Augustan military system the Raeti Gaesati fell under the designation “Numeri.” Unlike the Helvetii, who would later be incorporated into the legions of Rome, the Marseillesn numeri, were utilized by the Romans in their more raw form. Cheesman writes of them, “It was to provide a leaven of the old spirit that the numeri were raised from the wildest of the border tribes, and not only encouraged to fight in the manner of their fathers, but even permitted to continue the use of their native tongues.”

So, even as they served among the Romans, the Gaesati likely fought unlike Greek hoplites, in a loose formation, just as likely to throw their spears as they were to thrust with them.

Nevertheless, throughout the fourth to first centuries, it is logical that something of the contact Swiss mercenaries had with Greco-Roman fighting techniques had an influence. Not only did they experience Greco-Roman weapons, but also their fighting techniques, since they battled against them. Mercenary Swiss Celts were present at the

---


135 On the early days of the Gaesati and their modern identification as the “Swiss” Marseillesns see: Dame, *Switzerland*, 219; Siegfried Gutenbrunner, *Germanische Frühzeit in den Berichten der Antike* (Halle: Niemeyer, 1939), 52-70. Gutenbrunner describes the Gaesati as “a branch of the Alpine Germans, who served as mercenaries for the Celts in their conflict with the Romans during the decades of the third century.”
invasion of Rome in 390 B.C. and, under their leader Brennus, smashed the Roman army twelve miles outside of Rome at the Allia River. Next they besieged the Capitoline Hill for seven months and left Rome only after the dictator Marcus Furius Camillus paid the ransom Brennus demanded for the return of Rome. The Battle of Allia was significant since many scholars believe Roman militias of this time fought in a formation similar to the Greek phalanx.\textsuperscript{136} Four years later mercenary Swiss also participated in the campaign against Rome in 386 BC; and afterwards themselves invaded central Italy many times up until 282 B.C. In 279 Swiss mercenaries invaded Greece under their commander Brennus, and plundered Delphi, but were forced to retreat due to heavy losses and the wounding of their commander. Brennus committed suicide to avoid falling into Greek hands.\textsuperscript{137}

It was around the first century B.C., after these experiences with Greek and Roman armies, that the third development in Swiss arms and armor took place. Helvetians now used long cutting and thrusting swords in a scabbard on the right side of the body, and held a sturdy wooden shield covered in leather and iron which was held in the left hand, and spears which were held in the right. They also wore helmets made of iron: graves that seem to be from wealthier men, have yielded richly decorated chest protectors and chainmail shirts lined with leather and wood.\textsuperscript{138}


\textsuperscript{137} Dame, \textit{Switzerland}, 2.13.

\textsuperscript{138} Dame suggests that the latter more expensive weapons indicate that privileged leaders of the troops wore them, but they might have been used both for leaders and for those in the front of the column who would absorb the heaviest impact. See, 2.17.
So, Helvetian grave-sites (c.300-100 B.C.) of men who were educated by the Greeks, but in contact with the Romans, have yielded not only the spears and shields found in the late Old Iron Age (600-400 B.C.) graves, which were likely used as main weapons but, also, cutting and thrusting swords used as secondary weapons. The addition of the latter weapon might have been in response to the development of the Roman legion of maniples in which the *gladius* and *pilum* were added to the thrusting spear as main weapons beginning around 320 B.C.\(^{139}\) The long swords seem to be characteristic of Gallic weapons, which Polybius implies were not nearly as efficient as the Roman *gladii*. On the other hand, Helvetian weapons were, in part, responsible for the Roman disasters of the second century B.C., so they could not have been as ineffective as Roman writers would have us believe.\(^{140}\)

The Helvetians also had auxiliary forces likely made up of sword and lance carrying cavalry and specialized archers. Commanders used unit flags and banners to recognize their troops, it is assumed, for communications-command purposes.\(^{141}\) Clearly, Helvetian armies were not nearly as “barbaric” as Roman sources suggest.\(^{142}\)

---

\(^{139}\) For details on the development of the Legion of Maniples see below, p. 80-2.

\(^{140}\) Polybius, *Histories*, 2.33.3. On details of Helvetian successes against the Roman legion of maniples see below p. 82-3.

\(^{141}\) See Max Jahn, “Bewaffnung,” 15-17. Non-Helvetii celtic graves on the southern side of the Alps yielded the kinds of weapons we usually associate with “barbarian” warriors: heavy cleavage swords, knives and battle axes. Marseillesns wore bronze helmets, the tribes of the southern Alps helmets of bronze and iron.

\(^{142}\) For political developments see also Max Jahn, “Der Wanderzug der Kimbern, Teutonen und Wandalen” in *Mannus*, no. 24 (1932): 150-7. Possibly because of Roman influence, Swiss Celts replaced their old kings with elected rulers and governors and created a constitution. Their head magistrate, or *vergobretus*, was elected for one year. During his term of office he was not allowed to leave the tribal territory, and no member of his family could hold office or be elected to the tribal senate during his lifetime. This system was designed to insure that no one person or family would become powerful enough to develop into a dynasty or dictator. The Helvetians made no exceptions. When the *vergobretus* Orgetorix attempted to create a dictatorship he was imprisoned. Terrified that he would be tried, found
Alternatively, we cannot underestimate the influence of the Swiss Celts on the Romans. An exchange of military ideas between the Swiss Celts and Romans can be seen for example in Roman borrowing of words: the Celtic word for war was *lancea* (but came over into Latin and modern English as the Celtic weapon *lance*). This example underlines as well the importance of the spear in Celtic formations. But, again, this does not mean that either Marseillesns or Helvetii adopted the Greek or early Roman phalanx tactics any more than the Romans adopted theirs.

While Greek peoples probably influenced some martial developments among the early Swiss, there is no hard evidence to suggest the Helvetians adopted anything akin to either Hellenic or Hellenistic formal phalanx formations. Their earliest contacts were with Greeks who only would have known a primitive form of the phalanx—if they fought in phalanx at all. There is no literary evidence suggesting that the Greeks of Marseilles taught the Swiss how to fight, and even if they did, we have no way of knowing what exactly the Ionians taught the Swiss. Likewise, while Helvetian weapons developments seem to imply a Greco-Roman influence, there is no way of knowing how those weapons were used. They “might” have been used in a close formation resembling a phalanx, or they “might” have been hurtled, swung, or smashed in a loose disorganized manner.

Finally, even if Ionian Greeks taught the Helvetians to fight in phalanx, nearly two thousand years separate the ancient Helvetians and the Swiss Confederates. We cannot be sure what, if any, knowledge was retained from ancient times, or how it might have influenced the late-Medieval Swiss.

guilty of usurpation, and burned to death, Orgetorix committed suicide. So, it is clear that the Helvetii both elected their officials, and impeached them, with dire consequences, if they attempted to gain too much power.
Roman Conquest and Assimilation

Swiss contact with the Romans, on the other hand, continued until the early Middle Ages. During the late La Tène, the Swiss Celts or, Gauls, as the Romans knew them, were a significant threat to Roman northward expansion into France (Gaul proper), Germany, and the British Isles. By the time of this Roman incursion and its consequent conquest, the Celts were on the threshold of establishing their own national territory, or empire. The unification of the Tigurini, Raurici, the Sequani, Helvetii, and Allobroges created a confederation wishing to expand its territory. This brought the Romans and Celts into conflict.143 There were two significant changes that occurred in this period: one among the Roman armies, the other among the Helvetii.

From about 500-320 B.C. the Roman army was a militia system made up from a levy (legio) of all eligible Roman citizens between the ages of 17 and 46. Eligibility was based on land ownership. As discussed above many believe that Roman soldiers of this period fought as heavy spearmen, almost identical to the Greek hoplites of the fifth century. Before the reforms during the Second Samnite War (326-304) the Roman offensive use of shields and the application of pushing tactics, according to Santosuosso, was simply a reversion to the old fifth and fourth century phalanx as it had been used in Greece. The Roman version was simply: “a phalanx with joints.”144 J. E. Lendon, however, puts it best:

143 W. Gisi, Quellenbuch zur Schweizergeschichte, 49, 253; Dame, Switzerland, 1. 214.

The first reliable indicators have the Romans fighting in the phalanx...The men of the first class, that is, those with the most property, were armed with helmet, greaves, breastplate, and a round shield, the clypeus. They were armed with a spear, the hasta, and a sword. They were clearly hoplites.\textsuperscript{145}

But, they were not classical hoplites. This was the looser phalanx that is assumed in Homeric epic.

However, after the first wave of barbarian attacks in the fourth century followed by the Samnite Wars with Italians of the Apennines, the Romans sometime during the second Samnite War (326-304), and likely by circa 320 B.C., developed a more advanced system in the legion of maniples.\textsuperscript{146} According to Lendon, it had its origins in the phalanx, but was much more fluid. The Republican legions were made up of five arms: Cavalry, Light Infantry (Velites), Heavy Infantry (Hastati), Heavy Infantry (Principes), Heavy Infantry (Triarii). The cavalry was made up of the Roman wealthy who could afford own, feed and train the war horse. The Velites were generally the poorest soldiers—those who could not afford to properly equip themselves—and were used as scouts and skirmishers. The Hastati, or first battle line (echelon), were the youngest soldiers armed with javelins that were thrown (pilum) and short swords (gladii). The principes, veterans in their prime, made up the second echelon. Until circa 270 they were still using the hoplite thrusting spear. As experienced soldiers they were expected to

\textsuperscript{145} J. E. Lendon, \textit{Soldiers and Ghosts: A History of Battle in classical antiquity} (New Haven and London: Yale University Press, 2005), 182. Lendon adds that we are not sure how the Romans learned to fight in phalanx, although Roman tradition has it that the Etruscans taught them. See Figures 3.2 and 3.3 for a comparison of Etruscan and Roman arms.

\textsuperscript{146} Ibid, 183. Roman sources are contradictory on when and why the manipular legion was first created. According to Lendon, Romans changed their tactical system when it failed against “Roman enemies who fought in open order and on rough terrain.” In the case of the Helvetii this makes little sense. The evidence seems to support a Helvetian army that fought in tight formation on open fields, and still the Romans lost. In my opinion the fluidity of the manipular legion combined with tight discipline gave the Romans the edge they needed to “out-fight” armies whose tactical system was at first similar to their own.
“steady the line.” The *triarii* was the last *echelon* made up of the older veterans who were the “backbone” of the legion. They fought with the thrusting spear as late as the first century B.C.\(^{147}\) This could explain why the Romans could be defeated by the Celts—who far from being barbarians—had assimilated a great deal of Greek learning, perhaps also military training. It took a different system—the legions of Marius (created in 107 B.C.)—to defeat these armies of spearmen.

The Maniples fought in a formation called the *triplex acies*, or triple battle order. It resembled a checkerboard pattern. See Figures 3.5 and 3.6. By staggering the lines, the *principes* could cover the gaps in the *hastati* line, and the *triarii* the gaps in the *principes* line. The formation often presented a front of over a mile long. Is flanks were covered by the cavalry and allied auxiliaries (*alae*, or wings).

The *hastati* opened the battle by throwing their *pila* in order to create confusion and disorder among the enemy ranks. The *pilum*, or “hinged-spear” was an upgrade to the throwing spears of earlier days. Once it stuck into the shields (or bodies) it targeted it was extremely difficult to remove due to the hinge that attached the spear tip to the pole. In other words, it flew perfectly straight, but bent once the enemy attempted to remove it.

Once gaps had opened up in the enemy line, due to the *pila*-throw the first line would move forward with their *gladia* to cut apart the front lines of the enemy, many of whom were still struggling to remove the *pila*. When the *hastati* grew tired they retreated, and the *principes* moved forward, usually to finish the job.

This was the new Roman army that greeted the barbaric coalition of Marseillesn mercenary *Gaestati* and Boii in the third century. Between 225-222 B.C. the allies

\(^{147}\) Ibid, 182-3.
attempted to sack Rome, but they lost, and were pushed back into Cisalpine Gaul by the Romans.

But, when the Cimbri and Teutones invaded Gaul between 113-101 BC and inflicted on the Roman armies the heaviest losses since the Second Punic War, contingents of Helvetii and Tigurini were in their employ.\textsuperscript{148} This was the beginning of a coalition of Celto-Germanic tribes that would alter the nature of how the term Helvetii could be understood. Around 111 B.C. the Cimbri and Ambrones moved into southern Germany and joined with the Tigurini and the Teutoni-Toutonoi-Toygenoi, whom Posidonius saw as a subgroup of the Helvetii.\textsuperscript{149} Teutones as a subgroup of the Helvetii is at this time open to speculation but, either way, the Helvetii, part of whom lived in southern Germany, allied with the Teutones, Cimbri and Ambrones. These tribes began a joint invasion of Gaul.

The Tigurini (Helvetii) did what the Marseillesns could not. They defeated a Roman manipular army under L. Cassius Longinus near Agendicum in 107 B.C.\textsuperscript{150} In 105 B.C. the allies, made up mostly of Cimbri and Teutones (the southern German Helvetii) launched campaigns against the Romans under their great military commander Divico, and crushed the legions in the major disaster at Arausio (Orange, France).\textsuperscript{151} In


\textsuperscript{149} See Andres Furger, \textit{Die Helvetier: Kulturgeschichte eines Keltenvolkes} (Zürich: Neue Züricher Zeitung, 1984), 76f. Ancient writers generally classify the Teutons as “Germanic” and the Helvetii as “Gallic,” but the division was created by the Romans and is debatable. On the question of ethnic distinctions between Celtic and Germanic, see Ludwig Rübekeil, \textit{Diachrone Studien zur Kontaktzone zwischen Kelten und Germanen} (Wien: Verlag der Österreichischen Akademie der Wissenschaften, 2002).

\textsuperscript{150} Caesar, \textit{Bell. Gall.} 1.12

this battle the Romans supposedly lost 80,000 legionaries and 40,000 non-combatants, although this may be an exaggeration.\textsuperscript{152}

It was the great Roman commander Gaius Marius who had initial successes against the invading Germano-Celtic barbarians—they had terrified other Romans. Certainly, they were fierce and warlike people who were to be taken seriously. Plutarch records that the Italians had never seen such people before. Their enormous stature, blue eyes, and the fact that the German word for robbers was \textit{cimbri}, terrified the Romans and led to a number of theories about them.\textsuperscript{153} Some thought they were a mixed people, who fought every summer to expand their territory westward. Others believed that they were the Cimmerians, first identified by the ancient Greeks as a warlike people who lived at the ends of the earth in gloomy, thickly wooded forests. They came from that part of the world, argued others, which provided material for the story in Homer of Odysseus and “the ghosts of the dead.”\textsuperscript{154}

However, Marius, was not impressed. After spending two years reforming the Roman military, Marius defeated the Teutones at Aquae Sextae (Aix-en-Provence) in 102 BC. According to Roman sources 90,000 where killed and 20,000 captured. The Cimbri and the mercenary Helvetii were subdued in the Po River Valley in 101 BC: about

\textsuperscript{152} Dame, \textit{Switzerland}, 2.214.


140,000 were killed and 60,000 captured. Afterwards, generally, Roman writers disparaged the Swiss Celts as untamed people who fought in disorganized masses. Yet, the Romans’ own records tell us a different story.

As we have seen the Helvetii were not the illiterates Roman propaganda suggested. Julius Caesar makes this clear in *De Bello Gallico*. As consul in Gaul, only a half-century after Marius’ struggles against the northern barbarians, Julius Caesar realized that the Helvetii were a force to be reckoned with. In fact, the purpose of his first campaigns in 58 B.C. was to keep the Helvetii, who had made a home in the Alps, from invading Gaul. He was forced to build earthworks nineteen miles long and sixteen feet high, with forts from Lake Geneva to the Jura Mountains in an attempt to keep them from moving in Gaul and uniting with other Celts there. This action against the movement of the Helvetii to the west was recorded both by Caesar in his *Gallic Wars* and by Plutarch, who describes the Helvetii as brave fighters whose “wives and children also joined in the resistance and, fighting to the death, were cut down with the men.”

Caesar comments that:

> Some documents found in the Helvetian camp were brought to Caesar. They were written in Greek characters, and contained a register of the names of all the emigrants capable of bearing arms and, also, under a separate head, the numbers of old men, women, and children, comprising 263,000 Helvetii."

---

155 Dame, *Switzerland*, 2.14. Dame quotes the Roman numbers. Yet, here, as throughout the discussion of Roman battles numbers given by Roman military authors must be taken as gross exaggerations. Gerold Walser discusses these exaggerations in *Caesar and die Germanen. Studien zur politischen Tendenz römischer Feldzuggerichte*, Historia, Einzelschriften 1 (Wiesbaden: F. Steiner, 1956).


158 Caesar, *De bello Gallico*, 1.29. Again, the numbers here are probably untrustworthy.
According to Wyss and Dame, Caesar recognized the Helvetian army as an organized force, whose leaders prepared battle plans, and recorded them using Greek characters, suggesting continuity with Greek fighting tactics. Modern archaeologists believe that Caesar can be trusted in his identification of the Greek characters in Helvetian military lists, since Greek characters have been found elsewhere in Switzerland.

In the Late La Tène (100-51 BC) period, for instance, sword blades became heavily decorated, and were even inscribed with production and model numbers. One sword discovered at Bern-Port had the inscription of the Celtic term *Korisios*, in Greek letters, which experts agree most likely meant “Inspector of Weapons,” engraved into the sword blade. Both Wyss and Dame believe this is an important discovery, since it proves that even if we cannot trust Julius Caesar's numbers, his statement in *De Bello Gallico* that Helvetii military records were written in Greek, is accurate.159

But, does all this prove that the Swiss fought against the Romans in early encounters in some sort of fifth century classical phalanx? Probably they did not. It only implies that the Swiss kept records in an organized fashion, that they had learned some Greek, and that they had some kind of fighting skill that could stand up to the Romans.

In the end, however, both Roman armies and the subsequent ever-pervading Romanitas conquered the Helvetii. After a number of vicious conflicts, Caesar finally defeated the ancient Swiss and resettled them back into their original homeland—the Rhine, Alps and Jura mountains.160 The Helvetii as a tribe were defeated at Bibracte in

---


160 Tactius, *Germania*, 5. 18. 20-26; Caesar, *De bello Gallico*, 1.11-29.
58 B.C. and finally subdued in 52 B.C. This final defeat consolidated all of Gaul under Roman rule. As part of their reparations, the Helvetii were required to pay tribute and to serve in the Roman army as allies.161

As John Warry points out, it would have been very lucrative for Caesar to sell the conquered--over 100,000 of them--as slaves.162 However, it was the farsightedness of Caesar that caused him instead to “grant” *clementia*, or clemency and, thus, force them to return to their original location to serve as a buffer state against the Germanic tribes.163 Thus, from 52 B.C. forward, the Helvetii, ancestors of most central Swiss, gradually became Romanized and eventually shared in the material prosperity which Rome brought to all its conquered territories.164

Swiss assimilation into Roman—although provincial—society is certainly not a matter of dispute. The Helvetii were now educated for a second time under the Romans. Both gyms for physical exercise and libraries for mental exercise existed in towns throughout Roman Switzerland. The language of the Helvetii now became Latin and the Swiss were literate. The Romans, likely, educated them for many of the same reasons the

---


162 Warry, *Warfare in the Classical World*, 160. See also Caesar, *De bello Gallico*, 1.11-30.


164 Martin, *Switzerland*, 11; On the various Helvetian tribes who settled in today’s Switzerland see, Wieland, *Kriegsgeschichte*, 2-3, who gives them as: Tigurnians, Tugeners, Urbigeners, Berbigeners; and their surrounding neighbors as: Raurachers, Thulingers, Boii, Lothabrigers, Marseillesns, Leopontiers, Veragners, Seduners and Nantuateners, Sequanen, and Mediomatikers. See also Dame, *Switzerland*, 35. After the initial conquest of the Swiss Gaul in 58 B.C., it took the Romans another seventy-three years to fully subjugate the peoples of modern day Switzerland. The Roman occupied the Eastern Alps and Marseilles between 27 and 25 B.C.; the Small and Great St. Bernhard Passes and the Italian Cantons in 16 B.C.; and Central Switzerland the following year in 15 B.C.
Greeks had in the sixth century B.C. Swiss boys generally learned reading rhetoric, writing and mathematics. Upper-class children, trained as administrators, bankers, lawyers, magistrates, learned both Latin and Greek. The very wealthy also sent their children to study rhetoric in Rome and a years’ travel abroad, especially in Egypt and Greece, was not uncommon.  

More significantly, as the Roman Empire began to encounter and conquer tribe after European tribe from the first century B.C. to the fifth century A.D., the region between the Lakes Constance and Leman served along the Roman limes. There, majestic Roman cities were built, great roads laid, and Roman culture blossomed throughout the land. See Maps 1 and 2.

Both along the border, and later further inland, Swiss Celts began to adopt the Greco-Roman style of local government at its most basic—they voted for their leaders. The coloniae Julia Equestris, Augusta Raurica, Constance and others throughout the Roman provinces of Germania Inferior and Marseilles became chartered towns. They had the right to elect the general assembly of their public officials—a city council (ordo) that totaled 100 members (decurion) and served for life. If necessary, replacements were elected at five-year intervals. On the other hand the executive body of a colonia was made up of two, sometimes three, individuals who were usually former magistrates and served one-year terms, among other things they conducted the census, collected taxes,

---

165 Dame, Switzerland, 2. 83.

166 Ibid, 2. 85. Three major Roman cities at Aventicum (Avenches), Augusta Rauracorum (Augst bei Basel) and Vindonissa (Windisch) at the intersection of the Reuss and Aare rivers were the ornaments of a Roman system of defensive fortifications extending to the Province the Romans named Belgium.
organized celebrations such as cult ceremonies. For these officials election was indirect.167

Many places in Switzerland, in fact, claim to have once been Roman *vici* and included Roman temples and baths, amphitheatres and arena. In some of these spots archaeologists have confirmed these claims.168 At another in Deitikon, Canton Zürich, on the west bank of the Limmat River, remains of house foundations, a Gallo-Roman temple foundation, and the vicus walls, were found, all within two hundred meters of the river.169 The *colonia* and *vici*, so named because they were located along strategic points of the main roads (*vici*), also included a voluntary fire department.170

Roman strategic roads passed throughout the country. All along these routes, and near the garrisons, Roman towns were founded and luxurious villas built. At places, such as Augusta Raurica and Augst, archeologists have uncovered Roman amphitheatres, mosaics of gladiators, and fragments from military orders.171 Most of today’s Switzerland belonged to this territory. The Romans enlarged the old Celtic settlements

---


168 Felix Stähelin, *Die Schweiz in römischer Zeit* (Basel: B. Schwabe, 1948), 615 and 621. At Vitudurum (Oberwinterthur, Canton Zürich), about one hundred meters from the Frauenfelder-Straße the remains of a Gallo-Roman temple are still extant: the adjacent ground are thought to have served as a forum.168 In 1946 it was discovered that Salodurum, present-day Solothurn in Canton Solothurn, was also a Roman vicus. This was discovered when stones were identified as belonging to a Jupiter Temple dated to ancient Rome. At the Vicus Juliomagnus at Schleitheim in Canton Schaffhausen the remains of Gallo-Roman temple grounds, a thermal bath and a few foundations of houses are still extant.


170 Dame, *Switzerland*, 2. 25. One road coming from North Italy—by the Julier and Septimer passes to Chur—followed the valley of the Rhine to meet at Vindonissa the road which came from Aosta by the Great Saint Bernard, Octodurum (Martigny), Aventicum (Avenches) and Solodurum (Solothurn).

and built new towns, and improved water supplies. In addition, Roman villas were built providing the bases for agricultural exploitation and for spreading of Roman influence into the surrounding countryside.\footnote{Carl von Elgger, \textit{Kriegwesen und Kriegskunst der schweizerischen Eidgenossen im XIV, XV, und XVI Jahrhundert} (Luzern: Militärisches Verlagsbureau, 1873), 7.} The Helvetians completely assimilated to the Latin civilization, felt pride in the connection with Rome, gained great material advantage from it, and willingly fought for it. So, is Hanson right that Greco-Roman culture spread to the Swiss? Yes, there is no doubt that it did. But does this mean that Roman military practices diffused to the Helvetii, as well, as part of a larger classical legacy that spread beyond the Eastern Mediterranean? Let us consider what we know of Roman military structures in Helvetia.

\textit{The vicus}

The vicus was a civilian settlement, but had a close connection with the military men in the area, since it meant, literally, a city or village that was developed near military establishments. Its primary purpose was to serve the needs of those military men who lived nearby.\footnote{See, for instance, John Wacher, \textit{The Towns of Roman Britain} (Berkeley: University of California Press, 1975), 53.} This would be similar, for instance, to any city or town today that grows up around a military base. It is civilian, but its shopping areas are filled with cars sporting army, naval or air forces base stickers.

\textit{The colonia}

A colony, too, was primarily military in nature. \textit{Coloniae} were established specifically to secure territories that had been conquered. The term is also used to designate those towns founded in the provinces by Roman citizens. In Marseilles and Helvetia, as in Britain, “those who held Roman citizenship” referred, in part, to those
auxilia who had completed their military service in the legions and were thus owed a grant of land by the state.\(^{174}\)

The Villa

This leads us to the nature of the villa in Helvetia and Marseilles. Villa simply means a ranch, or estate, in the country. The villa or main building could be palatial but, also, could be a simple farmhouse—or anything in between. It is important in terms of Romanization—in particular for the longevity of a Roman military influence—because of its owners. Villa owners might be simply wealthy locals. But, in provinces like Helvetia and Marseilles they were often retired Roman veterans who had decided to settle out in the colonies near their former military units. Estates belonging to retired military personnel ranged from about ten hectares (24.7 acres) as a minimum, to 200 hectares (494 acres) and in some cases even 400 hectares (988 acres) as a maximum. Retired veterans did not live here alone: many had families, and sons who grew up to be soldiers like their fathers, sometimes even serving in the same units as their father.\(^{175}\)

Purchases of these villae were possible due to the institution of a Roman military pension. In 6 A.D. a retirement fund, the aerarium militare was created by Augustus for former soldiers. It provided for retirement benefits that would become automatic after twenty years of active duty. At the same time Augustus encouraged retiring soldiers to settle in the provinces near their old units by allowing them to choose plots that would be their own personal property as a “retirement gift.” It was a wise move by Augustus. Essentially what he had created was a reciprocal system of protection for both Rome and

---

\(^{174}\) See Dame, Switzerland, 2, 243; Sherwin-White, Citizenship, 105-7. See also Lesley Adkins and Roy A. Adkins, Handbook to Life in Ancient Rome (New York: Facts on File, 1994), 1-51 and 139-85.

\(^{175}\) Dame, Switzerland, 2, 44.
its colonies. A well-trained citizen-soldier class was given ownership of their own colonial property in exchange for securing their provinces in the event of an emergency.\textsuperscript{176} The Roman veterans remained loyal to Rome, the source of their autonomous livelihood, and in the event of an attack, fought hard for their colony, when their own privately owned land was in jeopardy. So, the \textit{villa} became part of a larger military defense system that crossed Switzerland along with legionary bases, small fortresses, and watchtowers in northern and western Switzerland.

At this stage Hanson’s argument for continuity holds up rather well. The \textit{villa}e themselves were Roman defensive positions, but they were also farms. So, what Augustus had recreated in Switzerland was an elite force of soldiers, who lived in the country and farmed until they were called on, in the event of an incursion, to protect their local territory: the system replicated the citizen militia, and for at least six or seven generations these veterans kept the Helvetian provinces secure. Further, by 212 A.D., the provisions of the \textit{aerarium militare} were also offered to non-Romans. Earlier members of the \textit{auxilia} were given a stipend, along with citizenship, which included important tax exemptions, but they were not offered the \textit{aerarium militare}, which was limited to Roman citizens. But, after 212, Helvetians and Marseillesns along with all freeborn inhabitants of Europe (under Roman rule) were granted Roman citizenship with its full benefits. At this point, there was no longer any distinction between \textit{legion} or \textit{auxilia} and all members of both groups were eligible for the Roman pension.\textsuperscript{177} Many veterans used


\textsuperscript{177} On these and other aspects of the \textit{aerarium militare} see Richard Duncan-Jones, \textit{Money and Government in the Roman Empire} (England; New York, New York, USA: Cambridge University Press, 1994). See, especially, p. 34: Duncan-Jones argues, here, that even before the grant of citizenship in 212
this benefit to purchase rural estates. So, the Roman *villa* became widespread throughout Switzerland. These farms held both by Romans and non-Romans, are indicative of thousands of individuals who had accumulated at least twenty years of active duty in the Roman army.\(^{178}\)

In Canton Zürich alone there were at least 120 of these landed estates and, at least, 150 in Canton Fribourg. But they could be found in every corner of Switzerland, in the Valais and Tessin, as well as Geneva, Vaud, Bern, Basel, Aargau, Schaffhausen, Zürich, St. Gallen, and elsewhere.\(^{179}\) So, when we speak of a Roman military influence in Switzerland it is a direct one. Romans assimilated into the Helvetic culture, and the Helvetians absorbed Roman culture. There can be no doubt that the Helvetians were trained in Roman military tactics and that Roman military ideas planted deep roots at this time.

*Roman Military Posts*

There were also, of course, regular Roman military posts everywhere in Switzerland. They were originally established at the developed Helvetian cities of Basel-Münsterhügel, at Zürich-Lindenhof, Oberwinterthur, Biblichopf, Stralegg, Filzbach-Vordemwald and Walensee.\(^{180}\) These military posts made it possible for the Roman military to concentrate on incursions of the Germanic tribes into Gaul along the Rhine

---

A.D., although there is no evidence that auxiliaries were paid a pension, the fact that many Roman citizens joined the *auxilia*, rather than the legions, supports the idea that service in the *auxilia* was competitive and that the retirement pension might have been paid to the *auxilia* as well.

\(^{178}\) Dame, *Switzerland*, 2. 44-7.


\(^{180}\) B. Overbeck, *Das Alpenrheintal in römischer Zeit* (München: 1973), 83.
border. In addition to these, military posts have been found at Zurzach, as well as at Rheinheim and Dangstetten, located across the Rhine from Zurzach. In 16-17 A.D. the 13th Legion was stationed, as well at Vindonissa, which became a military logistic base and army base from 73-4 A.D.

These sites are important for our understanding of the deep-rootedness of Roman military traditions in Switzerland. But, they are also indispensable to our military knowledge of this time, since we cannot rely on weapons excavations or proof of direct continuity in plentiful literary sources. Few weapons have been uncovered for the Roman period since swords, shields, and javelins were issued by the state. They were considered state property, so men could not be buried with their weapons as in ancient times.

As a result of the militarization of Helvetia, the Swiss became absorbed into the Roman army. At the battle of Idistaviso in AD 16, for instance, the Swiss fought with the Roman legions under Germanicus defeating the German Chief Arminius’s cavalry. Although the Helvetians are often mentioned as “auxiliary” troops we should not assume this meant they were in any way inferior to the legions. In fact, at Idistaviso, Germanicus employed the Helvetian auxiliaries as legions. Auxiliaries often took the front lines in

---


182 Ibid, 1-22. The 1st, 7th, and 11th legions were also stationed there. At Zurzach, Canton Aargau there was also a double Castelli Tenedo, and its fortified wall with tower foundations and the main gate in Kirchlibuck; the remains of a heated public bath at Sidelen and parts of a bridgehead across the Rhein in Rheinheim are all still extant.

183 Dame, *Switzerland*, 2. 105.

pitched battle while Roman legionaries served as reserve troops.\textsuperscript{185} So, once incorporated into the Roman army, the Helvetians were trained to fight like the legions, although, they could also be formed up in pike squares, like the \textit{cohors gaesatorum Raetorum},\textsuperscript{186} who fought alongside the Roman legions in tactical pike units.\textsuperscript{187}

The \textit{gaestorum Raetorum} were not simply one unit of Swiss soldiers. Roman provincial divisions had split modern Switzerland in half. Eastern Switzerland made up most of the Roman colony of Marseilles;\textsuperscript{188} Luzern, Bern, and Zürich were located in the Roman Province of Belgium, which included mid-west to west Switzerland. The purpose of Marseilles was both to serve as a North-south passageway over the Alps into Italy, including the Reschen Pass, the Flüelan Pass, the Maloja Pass, Pas del Gügli, and the Pass d’Alvra, and as Roman buffer zone against incursions by peoples of the Celtic-Germanic Danube region. It was a good place for Romans to recruit “auxiliaries,” since these people had served as mercenaries in other armies before the Roman conquest. They retained their pre-Roman mercenary name in the designation \textit{gaesatorum}.\textsuperscript{189} Finally,

\begin{itemize}
\item[\textsuperscript{185}] This practice might have been instituted to save Roman lives, allowing barbarian blood to spill instead. See Tacitus, \textit{Annals}, 2.16-18; and especially Catherine M. Gilliver, “Mons Graupius and the Role of Auxiliaries in Battle,” \textit{Greece & Rome}, 2d ser., 43, no.1 (April 1996): 54-5; 57-8.
\item[\textsuperscript{186}] Literally translated, “Cohort of Marseillesn Pikes” from the Celtic word for pike or javelin, \textit{gaesum}.
\item[\textsuperscript{187}] Oechsl, \textit{Quellenbuch}, 37.
\item[\textsuperscript{188}] At this time the Forest Cantons of Uri, Schwyz and Unterwalden were subsumed under the province of Marseilles. The Romans took little notice of these Forest Peoples, who had no written language in Roman times. So, we know very little about their participation, if there was any in the armies of Rome.
\item[\textsuperscript{189}] See page 75 above.
\end{itemize}
Rhaetia served as an outpost for the protection of Roman merchants. Therefore, the Marseillesn history under the Romans was decidedly military.

According to Swiss authors Martin and Gilliard, Switzerland’s status as a Roman military zone of occupation finally led it to isolation from Rome and its culture. There are two reasons for this. First, as elsewhere in the Empire, the Helvetii became caught up in conflicts that were the direct result of political disputes in Rome, and won for themselves an exceptional degree of autonomy and prosperity. The provinces of Marseilles and Helvetia remained military posts along the Roman limes until the fall of the Western Roman Empire. Their positions as garrison provinces on the limes meant that, while they shared a common history with other Roman frontier provinces for over four hundred years—well into the fifth century—they also maintained autonomy from Roman control. But this simply cannot be the case, as we have seen above. The

---


192 William Martin, *A History of Switzerland. An Essay on the Formation of a Confederation of States*, trans. Grace W. Booth (London: Grand Richards Fronto Limited, 1931), 12. For example, they were involved in the “Year of the four emperors” (A.D. 69), when Galba, Otho, Vitellius and Vespasian all vied for the Imperial throne. Sulpicius Galba, governor of Spain, was the first to make his way to Rome and seize the imperial throne on the death of Nero (A.D.68). Marcus Salvius Otho, who had hoped to succeed Galba, was disappointed by Galba’s adoption of L. Calpurnius Piso as his client and successor, and conspired with the Praetorian Guard to overthrow Galba. Galba was murdered (January 15, 69 A.D.) and Otho succeeded him. But the legions of Germany had already risen in revolt against Galba and declared for Aulus Vitellius, their general. On April 15th, Otho was defeated by Vitellius at Bedriacum and shortly afterward committed suicide. Vitellius then became emperor. But on July 1, 69 the legions of the East proclaimed Titus Flavius Vespasionus and marched on Rome killing Vitellius and taking Rome in Vespasian’s name (December, 69). For Helvetia the crisis meant that local troops fragmented more than once. In 69 A.D. the legions on the Rhine having risen against Galba and having chosen as emperor their general Vitellius, crossed Helvetia, sacking the towns that had remained faithful to Galba, especially the capital, Avenches. Vespasian and his successors of the Flavian line took a special interest in Aventicum because they had stood firm for Galba.

193 See Map 2.

provinces of Rhaetia and Helvetia would have been administered like any other Roman province.

A more accurate consequence of Helvetia’s role as a military province on the limes was that it was one of the first Roman provinces to receive the shock of the late-Imperial ‘barbarian invasions.” In the third century AD the necessity of a military presence to combat the Parthians, as well as the Goths in the lower Danube Valley, caused a weakening of Helvetian military posts as Roman legions were pulled out of the area. Inevitably, the Alamanni attacked along the limes in 259 AD, and penetrated into the Swiss Mittelland. Large cities such as Aventicum and Augusta Raurica were sacked along with some landed estates in the countryside. At first the Romanized Swiss and Romans in Helvetia successfully fought back.¹⁹⁵

But in 352-3 the Alemanni now began attacking Gaul and threatened to overrun Helvetii lands as well. Constantius II (317-361) in 354 led his troops across the Rhine and forced the Alemanni to make peace and held them in check until 361. As a result fifty-two watchtowers (burgus) were constructed along the Basel-Lake Constance axis

¹⁹⁵ See L. Berger and W. Brogli, *Wittnauer Horn und Umgebung* in Archäologischer Führer der Schweiz 12 (Basel: Schweizerischen Gesellschaft für Ur- und Frühgeschichte, 1980), 1-11. The Wittnauer Horn, once populated as a defensive community in the Bronze and Iron Ages was built back up, its walls fortified throughout the third and fourth centuries A.D. For other fortifications built in response to the third and fourth century “barbarian” invasions see Staehelin, *Die Schweiz in römischer Zeit*, 12. Huge fortifications were erected at Castellum Tassetum (Burg near Stein am Rhein), was 100 X 100 meters with 15 towers, Vitudurum (Oberwinterthur) was 100 X 50 meters, Arbor Felix (Arbon, Canton Thurgau), 150 X 50 meters, Irgenhausen (near Pfäffikon, Canton Zürich) 55 X 55 meters, Ad Fines (Pfyn, Canton Thurgau) 165 X 50 meters and Tenedo (Zurzach) with its double castelli, the first, 100 X 70 meters with nine towers and the second, 50 X 50 meters with five towers were constructed.¹⁹⁵ In places like Irgenhausen, villas that had been destroyed by the Alemanni in 259, were rebuilt and incorporated into the defense fortification. See also Ernst Meyer, *Das römische Kastell Irgenhausen* in Archäologische Führer der Schweiz, 3 (Basel: Schweizerische Gesellschaft, 1969), who covers Castrum Rauracense (Kaiseraugst, Canton Aargau), 280 X 150 meters with 18 towers, was built around 330 AD for occupation by the 1st Legion that under the Emperor Chlorus Constantinus (r. 296-303) had defeated the Alemanni near Vindonissa in 298. Fifty years of peace followed, and earlier destroyed farms and small settlements were re-populated.
and Roman castelli were renovated and strengthened here and elsewhere. So, the Alemanni were contained. That is until Visigoths under Alaric began attacking Rome.

The Visigothic invasion in 401 A.D. forced General Flavius Stilicho to withdraw troops from Swiss military posts because he needed them to defend Rome. Roman troops never returned to Switzerland. At this moment in Swiss history the Celtic Swiss began to lose their traditional separate tribal ethnicities. They become Schweizer: a mix of Celtic, Alemannian, Langobardic, Frank, and Germanic. While remnants of Roman influence remained, the people that were now referred to as Swiss continued to be part of a new process of syncretism. At the same time they continued to maintain a healthy degree of independence and sense of identity that would eventually lead them to separate from the Habsburg Holy Roman Empire. In fact, some Swiss townspeople, with their cities in constant danger of being sacked, fled to remote defendable mountain and hillside fortresses. They developed independent ideas concerning both how to fight and how to govern themselves. Here lies one of our major gaps in terms of continuity. It is difficult to estimate to what extent Roman ideas persisted and influenced this time of change for all the Swiss: it is impossible to determine whether or not Roman military practices continued.

What we know is the following. While we generally think of 476 A.D. as the year the Roman Empire in the West collapsed, Greco-Roman learning, cultural and

---

196 M. Hartmann, “Der Spätromische Wachturm Oberes Bürgli bei Schwaderloch” in Vom Jura zum Schwarzwald (Basel: Ur-geschichte, 1978), 1. A second group of defensive posts were also erected from Solothurn (a bell-shaped castellum 155 X 110 meters at its widest points), located on the Aare River, via Olten (the city ring shows the negative imprint of the castellum), Brugg (a bell-shaped Castellum 65 X 55 meters at its widest points), Baden, Zürich (approx. 100 X 90 meters at its widest points with ten towers), Schaan (55 X 55 meters), and Chur, which was built on the location where the city castle and church now stand.

197 Dame, Switzerland, 2.51, 80.
governmental standards established in Switzerland by earlier Roman administrators did not simply disappear with the Germanic invasions. Quite a bit of the former cultural standardization still continued in Switzerland. The reason for this is that many of peoples who “invaded” Switzerland were themselves Roman Provincials. Burgundians and Langobards were just as Romanized as the Helvetii and settled peacefully among the peoples of western Switzerland. Their migrations were peaceful and they preserved Roman art, buildings and architecture. Long Rome’s allies, the Burgundians, who had earlier adopted Roman customs, found like-minded friends among the western Helvetians, with whom they mingled, adopting their language and customs. These peoples gave western Helvetia its Frankish (French) character. Roman military traditions may have been preserved here, in the manner of religion or architecture, but we cannot be sure.

The Alemannians, whom we tend to envision as wild, barbarian destroyers of Roman culture in Switzerland, over time, also fell under the Roman cultural sway. While some Alemanni tribes attacked Rome, others became foederati troops in the Roman army, and by the first half of the fourth century Alemanni soldiers held prominent positions in the higher ranks of the Roman army. Michael Speidel, in fact, has argued that some tribes among the Alemanni may have been regii, or units of the Royal bodyguard. Likewise, in 372, an Alemannic king was given the tribunate of an

---


Alemannic unit in Britain. So we know that Alemannians served in—even led—late-Roman armies.\textsuperscript{200}

It was, in fact, a respect for Roman civilization that drew Alemannian “invaders,” better put “settlers,” to Switzerland during the fifth and sixth centuries: ironically, they were attracted to the old Roman villages and rural settlements which had not been destroyed by their plundering ancestors. These romanized Alemannians became firmly established residents east of the Aare River, in present-day German speaking Switzerland.\textsuperscript{201}

Further, the Alemannians provide a good example of how barbarians, over time, came to respect and preserve Roman literature and ideas.\textsuperscript{202} Particularly those “barbarian” rulers who assumed roles of leadership in Western Europe, tended to preserve some classical military literature.\textsuperscript{203} However, there is no evidence that

\begin{footnotesize}
\begin{enumerate}
\item This is evident in figures such as Cassiodorus (480-570), who was the minister of Theodoric the Ostrogoth. A great patron of classical art, literature and architecture, Cassiodorus preserved a number of classical sources in a large library, which included Greek manuscripts, preserved by trained copyists. He was the first person to deliberately utilize the quiet of the convent for the preservation of classical learning. For him classical military literature was quite appealing as is evident in his own \textit{History of the Goths}, which outlined the conflicts between the Romans and Goths and is one of our major sources on military matters for the period of the “barbarian invasions.” See John Warry, \textit{Warfare in the Classical World,} 205. \textit{History of the Goths} is lost, but was summarized in the extant work of Jordanes, a Romanized Goth who lived about 550. See also E.A. Lowe, \textit{Paleographical Papers 1907-1965,} vol. 1 (Oxford: Clarendon Press, 1972), 190; Gustav Becker, \textit{Catalogi Bibliothecarum Antiqui} (Hildesheim and New York: Georg Olms Verlag, 1973), 64-73; Muratori Antiquit\textit{à}, \textit{Italicarum}, 3: 817-24. For these and other classical sources in medieval Europe see Appendix A. In copies of \textit{The History of Troy}, Demosthenes, and \textit{Alexander’s Letters to Aristotle}, Greek military conflicts from earliest times through the wars of Alexander were preserved. Copies of Cicero, Cato, Virgil, Josephus and Livy preserved Roman military conflicts, techniques and ideals from the Republican through Imperial eras. Between the fifth and sixth centuries--monasteries at Bobbio and Avellino also had collected and preserved copies of Virgil, Cicero, Demosthenes, Cato, Alexander’s \textit{Letters to Aristotle, The History of Troy}, Josephus, and Livy (Third Decade). Further, this trend was not exclusive to Italian scholars: classical works existed elsewhere such as the fifth century Livy
\end{enumerate}
\end{footnotesize}
classical military practices remained, or mere expert theories, forged with popular folk wisdom, to ensure classical continuity.

This early history of Swiss contact with the Greco-Romans also shows that Hanson’s theory of a “western way of war,” based on “a continuous western tradition” of “direct frontal warfare” beginning with the phalanxes of the Greeks through to the levies of the Middle Ages falls short. Even if we can show that the Romans influenced “Swiss” and generally European warfare, we cannot linearally connect the dots from phalanx to maniple to mass formation.

Further when Rome finally “fell,” the territory from the Jura to Lake Geneva became Burgundian territory, while the area from the Aare to the Bodensee remained in the hands of the Alemannians. Although both tribes had been Romanized, in time, the Schweizers tended to embrace their pre-Roman roots. As German tribes, both Alemannians and Burgundians strengthened the sense of local autonomy already practiced under Roman rule. The tendency toward a tribal chauvinism seems to develop quite independently of Greco-Roman culture; in fact, it may have been a reaction against classical practices, and was so strong that unification and organization became unworkable. As a result the Swiss became powerless to defend against later Germanic tribes, which had developed more advanced political structures. The Franks were the first of their new overseers.

(First Decade) found in modern times at the archive at Luxeuil in France, and Livy (Fifth Decade) at Lorsch in southern Germany. Clearly the Germanic invasions had not completely destroyed Roman learning during the first couple centuries after the “Fall of Rome.” However, in Alemannian Switzerland there is a noticeable deficit in copies of classical texts from this period.
THE FRANKS

The Germanic Franks considered themselves to be a “free” people. The idea of free is derived from the Old French word *franc*, meaning free. In English we take from them the saying “to be frank, i.e., to be free in saying one’s opinion. There are some etymological experts who argue that the nomenclature *Frank* is derived from the Old Nordic *frakka*, which came into Old English as *franca*: both words mean *javelin*. Therefore, the Franks were that Germanic tribe associated with the spear, which also fought with the *sahs*, a stone knife that was the predecessor of the metal sax, the dagger. It may be possible that the two origins of Frank are connected with the idea that the *frakka*—javelin—made them free in the sense that they were able to secure their independence from other Germanic tribes by fighting with it. The word “Frank” remains The New High German in the 18th century phrase, *frank und frei*, a term which suggests the willingness to defend freedom.204

In any case, this autonomous Germanic association of the Franks, first noted in historical records after 250, originated from inner Germania. In the fourth century they, like the Alemanni, crossed the borders of the Roman Empire sometimes as invaders, but also as *foederati*. By the time they began to conquer Europe they were Romanized, and later Christianized.

At the battle of Zulpich in 496 A.D. the Frankish army led by Clovis, ruler of Gaul, defeated the Alemannians. Then, in 534 A.D., the Franks conquered the Burgundians. The entire people of the former Helvetia were assimilated into the Frankish

---

political, military, and social structure.\textsuperscript{205} So, any discussion of Greco-Roman continuity among the Swiss must be traced through the Franks. To what extent did the Franks follow Greco-Roman ideas, in particular their martial models?

While, true, the Franks set up those conquered, like the Romans had done, as military colonies and their tribal leaders as commanders of the military, we cannot know if this system was something they borrowed from the Romans. Nevertheless, government administrations were soon created whereby armies could be trained and organized, so we know that there was some central administration. In addition, Generals or Dukes were placed over the largest territories; Colonels or Earls over districts; and the lower officers oversaw agricultural and dairy farms. In other words, the military aristocracy received estates and had the duty of continual preparation and mobilization for military service. In fact, the entire political system was geared toward universal conscription. Such conscripts were called “militias” or general levies and were considered to be part of the property that came with an officer’s land. But these were not the citizen armies of the ancient Greek city-state, nor those of the Roman Republic. This was the earliest form of the new social and military structure that would dominate all of medieval Europe—a sort of proto-Feudalism. Further, it not only developed separately from, but was the antithesis to the Greco-Roman notion of a citizen army. While, we focus here on the legacy of fighting en masse—not always doing so under democratic or consensual auspices, cf. Alexander the Great’s phalanxes—still cultural changes affected military practice.

For instance, although a number of small farmers could be counted among the Frankish subjects, they were the exception, not the rule in the early medieval socio-political system. Most of these held *mansus* just large enough for the subsistence of the farmer and his family, but most of these also worked the land of the larger landowner—their Lord. They were hardly free farmers in the sense that, say, a farmer of Hellenic Attika, would have been. While true that the free farmer status did not disappear at this time, most “farmers” worked the lands of the Lord “freely” (meaning they were not *paid*) in *exchange* for economic, legal and personal protection: peasants did the farming, knights did the fighting. Again, this is the antithesis of the concept of a citizen army.

Granted there were small areas where personal and private land remained in the hands of free self-sufficient farmers. In these autonomous zones, farmers were able to withstand the counter-pressures stemming from the nobility class that also held large land possessions. In one such area—the central valley in Switzerland—a farmer middle class would develop in Uri, Schwyz and Unterwalden.\(^\text{206}\) However, even here, until the late-Middle Ages, knights, not citizen armies were responsible for protection of territorial lands.

But, knights did sometimes bring along footsoldiers to assist them in battle. Perhaps these footsoldiers were trained to fight with spears, like their Celtic ancestors the *gaesatorum*. Likewise, knights, who usually rode to battle on horseback might have dismounted and fought in organized units.

This is certainly not an untenable idea. After all the Franks, like many western tribes, were assimilated into the Roman Empire by 350 A.D. In 413, 420, and 428 Franks fought against the Vandals on the side of Rome. Some historians believe that the

\(^\text{206}\) We will return to this topic in Chapter Six.
Rhineland Franks might even have been Roman federates. However, here again, a gap exists: we cannot know how exactly the early Franks fought, either during their time serving the Romans or later. We can only make assumptions, based mostly on archeological finds.

For instance, what is thought to be the grave of King Childeric, may support the idea that the Franks had great respect for Roman culture. Childeric’s seal ring with the inscription CHILDERICI REGIS—meaning belonging to King Childeric—and its stamp of a long-haired king wearing a Roman *cuirass* and holding a spear, if it is from Childeric’s grave, (archeologists are not certain) implies that the King proudly thought himself a Roman and a continuator of the Roman Empire. But this does not necessarily suggest any real continuity with Rome or its culture.

Other digs have discovered a great number of Frankish weapons. But these findings, too, are controversial and inconclusive. For instance, while the main weapon of the Frank is traditionally thought to be the *francisca* or throwing ax, cemeteries from graves in Gaul, which archaeologists are sure must be Frankish, have been found, not just with *francisca*, but spears, axes, and swords. Archaeologists and historians believe these soldiers were *laeti*, a group fighting in Roman armies. They lay just at the place where the *Notitia Dignitatum* records that Roman military officials, the *praefecti laetorum*, were stationed as administrators and recruiters of the *laeti*. If the impressions of archeologists and historians studying the site hold up, these graves would suggest, again, a continuous Roman military influence on peoples thought to be Franks.\(^\text{207}\) However, the weapons themselves tell us nothing about how they were used.

The most influential military historian for this period, Bernard Bachrach, certainly sees continuity between Frankish and Roman military techniques. He adamantly argues against the theories of nineteenth and early-twentieth century historians, such as Oman and Delbrück who both argue that with the Fall of Rome, Greco-Roman military techniques simply vanished and were replaced with a feudal military structure that emphasized the armed knight.

In fact, Bachrach argues, it was footsoldiers, not cavalry that formed the backbone of the Frankish armies. He writes:

In what has amounted to a highly romanticized search for the origins of chivalry, scholars have for too long ignored the balance of the evidence, focused upon bits and pieces of inconclusive data, and magnified the importance of these to help create a flawed picture of warfare in the early Middle Ages.208

In fact, like the other western German tribes, the Franks were originally democratic, electing their leaders by merit and they fought on foot.209 When we remember that the Franks were a Germanic tribe; that all Germanic tribes fought on foot; and that from Romans times Frankish armies are described exclusively as fighting on foot, it becomes clear that Bachrach may be on to something important.

In fact, Edward James has shown that Franks defined themselves to some extent based on their participation in the Roman army. One Frankish epitaph reads “Francus ego civis, Romanus miles in armis: “I am a Frankish citizen, and a Roman soldier under arms.” This Frankish soldier was not alone. The fifth century Notitia Dignitatum lists


several cohorts and alae of Franks within the various sections of the Roman army.

Franks served in legions stationed at Apollonos and Diospolis in Egypt, in Asia Minor and in Mesopotamia. According to Constantinus Chlorus, the Franks were taught Roman discipline, and congratulated themselves for having served in the Roman army.

Archeologists believe that Roman belt fittings found in Frankish graves represent Franks returning home after serving in the Roman army. Franks also held high positions in the Roman army. Silvanus, for instance, became *magister militum*, or Master of Soldiers, a position similar to Commander in Chief under the Emperor. The Frank Richomer was the supreme military commander in the East from 388-393 and his nephew Arbogast was magister militum in the West. Clearly in the fourth to fifth centuries Franks not only learned Roman tactics, but also knew them so well that they became commanders of Roman armies.

Yet, one hundred years later, the record for Frankish military practice becomes fuzzy. We know that Franks fought on foot, but we cannot be sure what tactics they employed. There is one early chronicle, however, that describes the Frankish system. At the Battle on the Casilinus in 554 A.D. a Frankish army under two Allemanian commanders, Buccelin and Lothar, fought against the Romans under Narses’ command in eastern Gaul. The chronicler Agathias described the battle as follows:

> When Narses had reached the place where he planned to fight, he immediately drew up his army in a phalanx, placing on both flanks the cavalry….The entire space in the center was occupied by the infantry. At the front of the line were stationed the forward fighters, covered in iron from head to toe, forming a protective wall, and behind them the other ranks were drawn up in close formation all the way to the rear….Buccelin…led his army forward. Eager for combat, they all rushed towards the Romans, not at a steady pace and well ordered, but as if they could not move forward fast enough, ready and aggressive, as if they
intended to throw the enemy army back on its heels in their first assault. Their battle formation had the form of a wedge, so that it resembled a Greek delta; out in front, where it came to a point, the shields were pushed tightly together like a roof so that it looked like a boar’s head. The flanks were formed in echelons of sections of platoons and sloped very sharply so that they gradually spread out to a greater width, and an empty space was created in the middle, and one could see the bare backs of the soldiers in their ranks. That is, they were placed facing the enemy toward both sides and could fight covered by their shields, while this very type of formation was supposed to provide automatically for protection from the rear…. [But], the Romans struck them down not only with their arrows, but now the heavy infantry and lightly armed troops also attacked, with spears, rods and swords…. The Franks and Alemanni were destroyed [but] on the Roman side only eighty men had fallen, those who had to withstand the enemy’s first shock. 210

This chronicle makes several things clear. First the Franks and their allies the Allemans fought on foot in the old Germanic wedge—a modified phalanx of sorts—a modification, in fact, proposed by Asklepiodotus, too, in his treatise on phalanxes. 211 But, this was a Germanic, not Greco-Roman wedge. So, by the sixth century it seems that the Franks had fallen back, at least in part, on their own Germanic way of fighting. Further, although the primary weapons of the Franks, according to Agathias were the 
ango, or throwing spear, and a spear used for thrusting, we have no way of knowing how these weapons were used. Spearmen might have been formed up in some sort of phalanx/legion combination with the first rows throwing spears to create confusion in the enemy ranks, as the Romans did, followed by an organized phalanx of spears, which, in the confusion, broke the enemy army apart, similar to how the Greeks did it. But, there is no way of knowing for sure.

211 See Appendix C.
Most importantly, the chronicler’s report suggests that the Franks rushed at the Romans in an “unorganized mass,” not in the steady, organized tread of a Greek phalanx, or Roman legion, which we might expect from a “romanized” Frankish army. Agathius makes a clear distinction between the Franks who fought “not at a steady pace and well ordered, but as if they could not move forward fast enough, ready and aggressive, as if they intended to throw the enemy arm back on its heels in their first assault” (a disorganized mass) and the Romans, who restrained their massed footsoldiers, kept a steady pace, and stayed in formation with shields locked in a protective wall. The Romans, of course, won. The Franks lost owing precisely to the fact that they either did not understand massed infantry tactics or that they did not utilize them—or that they were fighting not against other barbarians, but against crack Roman legions.

But, the chronicles are contradictory even in terms of primary weapon use among the Franks of the sixth century. The chronicler, Procopius, while not mentioning the ango, argued that the throwing axe was the Frankish infantryman’s key weapon, and his description of its construction and use dominates his picture of Frankish tactics and armaments. Nothing here supports the idea that Franks fought in organized pike squares or in legions.

On the other hand, another chronicler, Sidonius Apollinaris, writing during the second half of the fifth century, mentions that the Franks used the axe, the ango (lancea
uncata) as missile weapons, and the spear (hasta), for thrusting. Libanius, a sixth century chronicler, suggested the latter was of primary importance to the Franks.

The weight of the evidence, then, suggests the Franks of the sixth century, at least sometimes, used spears as primary weapon in a formation called the wedge and were quite aware of past Roman military practice. This wedge, likely, was different from the organized formation proposed by Asklepiodotus: Franks probably did not march in organized units. And, even if they did, the Germanic wedge is just that—German. While it may be a cousin of the Greek phalanx, the Germanic tribes that created it had no early history of contact with the Greeks, so the development of the formation was independent.

While Bachrach’s argument that at turn of the sixth century neither Franks, nor Allemannians suddenly abandoned their infantry tactics and replaced them with mounted elite knights is valid, this does not mean Frankish footsoldiers fought as organized tactical units. More importantly, it does not prove continuity in fighting style from the Greco-Roman world to the Franks.

It is possible, though, that later Franks revived the old Roman tactics they had learned in fourth and fifth centuries as part of the survival of a larger classical legacy? Perhaps by Merovingian and Carolingian times, the Franks had advanced, adopting Greco-Roman organized warfare. Did the Swiss learned to fight in organized pike formations at this point?

---

212 Of course we cannot be certain that Apollinaris knew what a hasta was in its original Roman context, but he certainly understood that the Franks used some sort of spear for thrusting, not throwing as one would a javelin.

213 Bachrach, Early Medieval, 437.
At the outset Merovingian armies seem to be a good place to look since they were composed mostly of citizen footsoldiers: during Merovingian times all free men performed military service. But we know little more than this. All that the evidence tells us is that the Swiss were a part of the Merovingian kingdom and fought for it. Swiss graves yield clues as to their participation in Frankish armies, since they contain the same weapons carried by the Franks. The Alemannic cemeteries at Basel-Kleinhüningen, Basel-Bernerring, and Canton Zürich uncovered graves with spathae, short swords, lances, combat axes, and shields with pointed umbos. However, these weapons tell us little since they could be those either of footsoldiers or knights, and there is little evidence to prove how these weapons were used. So, for the Merovingian Period we know little about Swiss warfare.

In the eighth century, the decay of the Merovingians brought Pipin and his son Charles Martel to the Frankish throne. Already by the time of Martel, who was the Mayor of the Palace of Austrasia, Neustria, and Burgundy, the early German/Swiss provinces were part of the seat of power for the Carolingians, and were called upon to provide men for the early-Carolingian military machine.

Undoubtedly, Charles Martel seems to have created an exceptionally disciplined force of foot soldiers. As White argues, “it was not heavily armed horsemen engaging in mounted shock combat which were the decisive arm of Charles Martel’s post-733 armies

214 Bachrach, Early Medieval, 1; Wieland, “Herrschaft der Franken”, in Kriegsgeschichte, 17.


216 Wieland, Kriegsgeschichte, 18.

110
and those of his sons.” Instead, Martel created armies in which disciplined footsoldiers were the main arm in battle.  

We have very few clues concerning the organization of Martel’s military, except that due to Martel’s constant fighting there was a militarization of society. Growing numbers of subjects fought in Martel’s armies. If only knights were doing the fighting, the number of men should have decreased. But, the opposite was true. Martel mustered huge armies in which the majority of soldiers fought on foot. But, exactly how they fought is a blank. The scarcity of our knowledge on this topic is problematic, and is acknowledged by a leading expert in the age of Charles Martel, Paul Fouracre.

What we know is that at Poitiers (732) Charles Martel utilized a mass of infantry to create a closed formation of some kind that defeated the Saracens. The chronicle of the continuator of Isidore describes the “men of Europe” [the Frankish army] as “an immovable sea” that “stood one close to another” and stiffened like a “wall.” “As a mass of ice they stood firm together.” The description echoes Agathius’ account of the Roman phalanx the Franks had earlier encountered. Its soldiers were “covered in iron from head to toe,” formed a “protective wall”, and all the ranks were “drawn up in close formation.” Of course, we cannot be positive that the chronicler here witnessed some kind of formation like a legion or phalanx, but it does seem to be an organized unit of

---


219 Ibid, 145, n. 49.

some kind, which knew how to create a shield-wall. But, a shield-wall, suggests a
defensive formation, not necessarily a phalanx or legion. Mass formations do not
constitute phalanxes by themselves. But on the other hand, we do not know for sure
exactly what Agathius describes, so any speculation in terms of comparisons with Greeks
or Romans is useless.

However, Poitiers does show that in the eighth century A.D., footsoldiers had not
lost their importance as Delbrück suggests in “Barbarian Invasions.”

Given that the Franks had always fought on foot, and Charles Martel mustered large numbers of foot
troops, there is no reason to believe Martel was not utilizing foot troops in this instance as
well. In any case, if there was a “solid wall” of infantry that defeated the Saracens,
the future Swiss peoples—Helvetians, Allemans, and Burgundians—among others,
were likely its bricks. But, we cannot be sure. In fact, contemporary illuminations of
the Battle at Poitiers suggest that knights, not citizen militias fought in cavalry units, or in
individual hand-to-hand combat with sword, a far cry from anything resembling a spear
formation. See Figures 3.7 and 3.8. Is there any clearer evidence in the Carolingian
period?

Not really. Charlemagne’s Franks were the Germans of the Low Countries and
the Rhine. They had been in contact with Gallo-Roman civilization since the first
century B.C. As Bachrach has suggested, footsoldiers were vital to Charlemagne’s

---


222 See Figures 3.5-3.6.

223 Wieland, Kriegsgeschichte, 17-20.

224 Jones and Pennick, Pagan Europe, 128.
aggressive foreign policy. Like those of his father and grandfather, the majority of Charlemagne’s military operations were offensive, aimed at the conquest of territories defended by stone strongholds of Roman origin: *civitates*, *castra*, and *castella*. The wars of conquest in these regions, like the campaigns against Saxons, Slavs, Avars, and Bretons, where the fortifications were often of wood and earth rather than stone, required the use of siege equipment, so men fighting on foot who could operate battering rams, tunnel under walls, scale ladders, and fire catapults were indispensable.\(^{225}\) This, however, is hardly fighting on an open plain where battles are decided in one day—ubiquitous in classical times. Sieges took weeks, sometimes months, in some instances years, to yield a decision. Yet, here, there may actually be some continuity with Rome.

While Bachrach does not suggest that Carolingian footsoldiers fought in phalanxes or legions, he does show conclusively that classical technologies like siege equipment and logistical management confirms a strong Roman influence. Given our sources, it is impossible to determine exactly how Carolingian armies fought, but the balance of the evidence suggests that Roman infantry tactics—like other military practices—were not lost. On the other hand, there is no evidence, either, that phalanxes or legions, largely unchanged over centuries, were maintained and passed on to the Swiss

There is an interesting anecdote concerning what the Swiss believed about their past in relation to Carolingian service. Although no evidence exists to substantiate it, ancient Swiss legend claims that men from Luzern were among the foot-troops fighting with Roland at the disastrous Battle of Roncevaux (August 15, 778) in the Pyrenees mountains as the army was returning from Spain. Once word got to Charlemagne some

twenty-one years later, in 801, that the Luzerners had distinguished themselves in that awful battle, he presented them with their own field banner as a gift. Although it gives us no firm link to actual events, it does tell us something about the way Luzerners perceived their relationship to Charlemagne’s army: if they did not fight for him, they though it ennobling that they would have. But, this legend gives us no clue as to how they fought as footsoldiers, if they did.

After the death of Charlemagne in 814 A.D. until 1315 and the Battle of Morgarten, feudalism flowered in Europe. It is fallacious to suggest that citizen armies on the Greco-Roman model could have fought in legions or phalanxes at this time, although in many instances men still fought on foot. In fact, Verbruggen argues that:

At the end of the evolution, which transformed the Frankish army and gave supremacy to armored cavalry, an annalist wrote in 891 that the Franks were not used to fighting on foot. Nevertheless at Louvain when King Arnulf could not attack the Viking camp with his cavalry, his men made a successful assault on foot. Later, it often happened that the knights were obliged to attack a fortress as footsoldiers. In 1112, Louis the Fat and his knights attacked the castle of Le Puiset on foot. In May 1197 King Richard I’s knights stormed the castle of Milli, near Beauvais: William the Marshal directed part of the attack and climbed a ladder to take the wall. Sometimes knights also took part on foot in the naval operations of the Middle Ages. They were ready to fight dismounted during a landing at Constantinople on 6 July 1203. In the army of St. Louis near Damietta on 5 June 1249 Joinville and many other knights landed and took a beachhead on foot.

Clearly, knights often dismounted, fighting among the footsoldiers to strengthen their ranks. Verbruggen goes on to list eleven recorded instances where knights fought on foot during the ninth to thirteenth centuries.

---


228 Ibid, 96-7.
But, it was *knights* who dismounted. And knighthood, with its subsequent culture of the horse became symbolic of the High Middle Ages: it was not until the infantry revolution, nearly five hundred years later, that citizen footsoldiers fighting in organized units, again, began to dominate the European battlefield.

In fact, as Gerhard Förster has shown, in the areas that later formed the territory of the German state, feudalism was a social order of power for the few and suppression of the rest. There were only two real classes in this structure: the dominant feudal aristocracy and the feudal subordinate peasant farmers. The main way the subordinate majority was suppressed by the dominant minority was militarily. The military structure became a component of state power—and an instrument of power for the feudal lords exactly because “citizens” no longer had the right to fight and, thus, lost the power to participate in government. For nearly 1,000 years the social-economic, political and cultural conditions of feudalism in their various concrete forms determined the character of the armed forces; the military equipment as well as military thought, secured the rule of the feudal lords, exploiting people in their own country, while protecting against outside threats. As Förster writes:

The [aristocracy] gradually took from the peasants the old right of possession of arms, originating from the old Germanic democracy, and appropriated the privilege of possession and carrying of arms to themselves. With the development of an exploitative feudal society, the separation between the people and the army continued to deepen. The people created the material and technical means for the armed fight by their work in agriculture, trade and commerce. The castles, attached to the cities with their walls and towers, the armaments as well as the numerous hand-to-hand weapons, was the result of a diligence, skill and inventor spirit on the part of the farmers, craftsmen and citizens who made great achievements despite feudal exploitation and suppression.\textsuperscript{229}

\textsuperscript{229} Förster, *Militärgeschichte*, 17-18.
For the most part it was knights doing the fighting.

Where, then, might Swiss peasants have learned to fight? What was present in the Middle Ages that can account for their novel military system? In the following chapter we will consider a third possibility—perhaps the Swiss imagined a new type of formation based on the influence of popular Greco-Roman literature extant in the late-Middle Ages.
Figure 3.1: Greek Corinthian-style bronze helmet. 7th century BC.
Figure 3.2: Hoplite armor. Exhibit at the Archaeological Museum of Corfu.
Figure 3.3: Hoplite attacking. (The bronze’s spear is now lost.)
Figure 3.4: Etruscan Arms and Armor. Notice the outstretched arm with clenched fist at the bottom left. What is portrayed here is the typical fighting position for hoplites. The left arm held the shield as the right hand thrust the spear overhand.
**Figure 3.5**: The Roman manipular disposition after deployment but prior to engagement.

**Figure 3.6**: The Roman manipular disposition after *velites* engagement and retreat.
Figure 3.7: The Battle of Poitiers 1. “Charles Martel fighting the Arabs at Poitiers in 732.” (BNF, FR 2813), fol. 81, *Grandes Chroniques de France*, Paris, France, 14th Century. Note that this illumination has members of both armies fighting on horseback.
Figure 3.8: The Battle of Poitiers 2: Footsoldiers here fight with swords, not spears.
Map 1: Switzerland as Part of the Roman Empire
Map 2: The Roman Limes in Relationship to Helvetia and Marseilles.
WHAT SWISS FORMATIONS MIGHT HAVE BEEN
CHAPTER 4
FORMATIONS DRAWN FROM THE SWISS IMAGINATION, INFLUENCED BY POPULAR GRECO-ROMAN LITERATURE
(1191-1315 A.D.)

No man, therefore, up pain of loss of lif,
No manner shot, ne pole-ax, ne short knif,
Into the listes send or thider bringe.
Ne short-sword for to stoke with point bitinge,
No man ne draw ne bere it by his side.
Ne no man shall unto his fellaw ride
But oo course with sharp y-grounde spere—
Foine, if him list, on foot, himself to were....
The voice of peple touchede the hevene
So loude cried they with merry stevene,
"God save swich a lord that is so good:
He wilneth no destruction of blood!"

----------------- Geoffrey Chaucer

In “The Knight’s Tale,” the first of his Canterbury Tales, Geoffrey Chaucer (c. 1339-1400) sets the stage for a battle in ancient Greece. His medieval knight has recounted the story of two friends in love with the same woman. In the name of love the two, now foes, are ordered by King Theseus to gather their armies in a fight for the hand of a beautiful maiden. Yet, out of kindness and respect for human life, “the King of Athens” enforced the rule that the armies that would fight for the lovely Emelye were

to take neither horse, nor sword, nor pole-ax into battle--only pikes and maces. An odd suggestion? Chaucer hardly understood the horrible nature of phalanx battle in ancient Greece?

On the contrary, Chaucer’s “Knight” (like Chaucer himself) was obviously quite versed in classical martial literature. Chaucer, after all, was not only a brilliant poet, but also a soldier, translator, courtier, diplomat and civil servant, and well understood both classical and contemporary warfare. Admittedly the artistic and poetic conventions of his day gave contemporary attributes to classical scenes—and vice versa—yet in this case Chaucer connects the pike battle of his day and the hoplite formations of classical Greece. He understood that on both ancient and medieval battlefields, the deadly “push of pikes” in reality often settled disputes while keeping the loss of life to a minimum; he also knew that it was not the initial clash of pikemen, but the ensuing slaughter with short-swords and/or pole-axes once a formation was broken open, that caused the most corporal damage at a phalanx’s collapse.

So, once Chaucer’s classical pike battle begins, though it is a bloody affair and many men are seriously wounded by spear-thrusts, nevertheless the contest for the hand of Emelye is decided without the loss of life. In fact, the contender who dies, in the end, is not Palamon who is impaled on a spear, but the victor Arcite. Remounting his horse after the battle to receive his prize, Arcite is fortuitously thrown to the ground and his skull crushed. As for the footsoldiers, the “Knight” assures us that all wounded, on both sides of the contest, would soon recover:

That of hem alle was there none slain,
Al were they sore y-hurt, and namely oon,
That with a spere was thirled his brest-boon.
To other woundes and to broken arms
Some hadden salves and some hadden charmes

But they all lived.

Perhaps Chaucer simply imagined Greek battle without any understanding of Greek hoplite-warfare: closely-packed warriors, made up of a broad class of landed yeoman farmers, who fought in a way that enhanced their own agrarian egalitarianism and allowed for frequent wars without extensive fatalities and capital losses. After all, chronicles as early as the crusades described western armies as drawing up in organized tightly-packed units—just as Frankish armies had done at Poitiers in AD 732.

For instance, writing some 150 years before Chaucer, Ambroise D’Évreux (c. 1190), a poet and chronicler during the Third Crusade, explains in *Estoire* that in crusader formations at Acre:

> the [divisions] were close together in ranks as if they were chained together….you could not throw a plum on them without hitting someone clad in burnished armor. [Each man] stood so close to his comrades that an apple thrown into the line could not fall without hitting a horse or man.


Further, the chronicler of the *Itinerarium* (c. 1191-2) in his account of the same battle mentions that such formations were marshaled “in accordance with military practice.”

Ambroise describes how such formations fought in a later battle account:

> You would have seen marvels and our good people under pressure. They went down on their knees placing their round shields and long shields before them, lances in their hands. The king [Richard I], who was skilled in arms, had hidden behind the shields between two men….In this way was the army thoroughly protected. In this way they were ready for action….Then were the divisions established and then did the companies of Turks come and our men hold fast, their legs firm in the sand, their lances stretched out, ready to receive them….When they came up to our men and saw that they did not budge they turned to ride across our front….When the king and his men saw how many mounted men there were and that they would keep this up, they lowered the points of their lances, each threw himself forward, striking into the middle of the great press of the devilish unbelieving race. They came together with such force that the whole company trembled back to the third row.

It was no different over a century later at Courtrai in 1302. And just twelve years after that another form of the phalanx would reappear in Scotland at Bannockburn very close to Chaucer’s time.

Further, Chaucer cannot have been unaware that an important shift was taking place on the contemporary battlefield. Chaucer was aware of military developments on the Continent since he traveled extensively in Europe and was an English soldier during the Hundred Years’ War: from 1359-60 Chaucer served in the English army in France; in 1360 he was captured and held for ransom by the French; 1368 he traveled to the continent on the “King’s Service”; 1369 he served with John of Gaunt’s army in France; 1370 again served

---


with the English army in France; 1372 was sent on a diplomatic mission to Genoa and Florence; 1376-7, took a number of trips to France to negotiate for peace; 1378, took another diplomatic mission to Milan. He began writing “Palamon and Arcite,” which was later used as the Knights’ Tale in 1385-87, after his diplomatic travels and experiences on the battlefield. In 1387-92 he began writing the Canterbury Tales.236 According to William Frost, in fact, “Chaucer created the military elements of the poem by fusing his own knowledge of contemporary warfare with a classical tradition that stretches back through Boccaccio and Statius to the ancient Greeks.”237 Chaucer is also considered a dependable source for warfare in the fourteenth century. Stephen Herben says of him that, “Wherever we are able to verify him, [Chaucer] is fastidiously exact, although, like many a soldier, he is only allusive to those things which he knew so well.”238

Chaucer also would have known of the Swiss. By 1387, when he began writing the *Canterbury Tales*, they had defeated two great European powers on the battlefield—the Hapsburgs and the Burgundians—and their reputation for military prowess and new techniques—had spread throughout Europe. Chaucer knew well the carnage left behind by massed halberd formations since, with them, the Swiss scored a series of pulverizing defeats against the cavalry-dominated Hapsburg armies. The Swiss “take-no-prisoners” approach was associated, in the European mind, with this “commoner’s” weapon that could

---

236 On these and other events in Chaucer’s life see, Martin Crow and Clair C. Olson, *Chaucer Life Records* (Austin, Texas: University of Texas Press, 1966).


smash open knightly armor, not as a means to restrain and capture lords, but to kill them.

Chaucer witnessed a new era in which militia *infantries* began, once again, to dominate the late-medieval battlefield. So, it is possible that witnessing the pike formations of his own day, Chaucer was reminded of hoplite battle.

Europeans traditionally associated stories of the ancients with their own experiences and imagined themselves in the roles of the ancients. This is general knowledge. It is important to keep in mind that soldiers and chroniclers of battle in the Middle Ages, often compared their own experiences with those of the ancient Greeks and Romans.

We know that classical military works had made it into the popular imagination by 1191-2, since the author of the *Itinerarium Peregrinorum*, most likely an English soldier fighting in the Third Crusade (1187-92) used them to describe contemporary battles. He compares, for instance, the sea battle tactics at Acre with the Roman sea battle at Actium in 31 B.C., providing a great deal of detail concerning the names and types of Roman ships and how they were engaged. Likewise, the siege of Jerusalem is often compared with the siege of Troy in both the *Itinerarium* and in Ambroise’s *Estoire de la Guerre Sainte*. Alexander the Great, Achilles, Hector, Helen of Troy, Priam, etc., are mentioned by both chroniclers suggesting Homer’s *Iliad*, and the story of Alexander’s conquests were well-known in the twelfth century. Further, Roman generals such as Julius Caesar, Crassus, and the “Roman citizen” Antony appear often in the crusader chronicles. In addition, Greek mythological characters, such as Hercules, the Hydra

---


240 For these and other references to classical characters see *Itinerarium*, 21, 50, 74, 87, 93, 122-3, 145-6, 195, 324, 366, 385 and Ambroise, *Estoire de la Guerre Sainte*, 22, 33, 57, 65, 83, 122, 146.
and Antaeus are also mentioned. So we can assume that both Homer and the Greek myths were well-known in Europe by the twelfth century.241

A reawakening of interest in classical works began in Europe, not in the fifteenth century as we often imagine but, first, during the Carolingian Renaissance of the ninth century and, again, during the twelfth century Renaissance. It is not true that Europeans were illiterate. Large numbers of men could, and did, either read or hear the stories of classical battles. Often, as in the case of Chaucer and the author of the *Itinerarium Peregrinorum*, men were inspired by the ancient stories. Likewise, Charlemagne, and other leaders after him, had access to and preserved military treatises. As a result, a number of military treatises made their way to Switzerland by the ninth century.

It was Charlemagne who, first, systematically spread classical learning throughout his empire. The English scholar and chronicler Alcuin, brought to Charlemagne’s court to serve as one of his distinguished tutors, wrote of Charlemagne’s enthusiasm for classical learning. Drawing scholars from across Europe to educate both his people and himself, Charlemagne created an atmosphere of learning at court and throughout the empire.

Alcuin was apparently so pleased with his royal pupil’s progress in classical learning that he wrote, “Perhaps a new Athens will arise in *Francia* only much more excellent.”242 Charlemagne loved Greek and Roman learning so much, in fact, that the scholars he gathered to teach him adopted for all those in the inner circle great names of antiquity,

---

241 See for instance, *Itinerarium Peregrinorum et Gesta Regis Ricardi*, 21-2, 50, 57, 74, 83, 87, 93, 115, 122-3 145-6, 195, 324, 366, 385, 387 and Ambroise, *Estoire de la Guerre Sainte*, 72, 89, 92. Medieval crusader chroniclers also compared their own experiences in battle with those of the heroes and characters of the ancient world including: The siege at Troy, the Battle at Actium, Achilles, Paris, Julius Caesar, Darius the King of Persia, the Roman general Crassus, etc.

comparing their own works to those of classical Greco-Roman scholars. Alcuin, who enjoyed writing lyrics about spring and the cuckoo was called “Flaccius,” i.e. Horace; Angilbert the Abbot of St. Riguier was “Homer”; Charlemagne’s son Pepin was “Julius” and Aachen—the favorite residence of the court—was “the second Rome.” The emperor’s love of classical literature was fused with a respect for biblical writings—he was called “King David.”

Charlemagne’s knowledge of classical texts meant not only their preservation in Western Europe, but also a Renaissance of sorts, long before the fifteenth century. The emperor considered the pagan classics to be practical guides to earthly living that might help those within the Christian Carolingian Empire to serve God. Einhard writes of Charlemagne:

… he learned Latin so well that he could speak it as well as he could his own language, but he could understand Greek better than he could speak it….He cultivated the liberal arts zealously and he endowed with big rewards those teachers whom he greatly respected. To learn the rules of grammar he listened to the old deacon Peter of Pisa. In the other disciplines he has as his teacher Alcuin, called Albinus, likewise a deacon, a man of the Saxon people from Britain, the most learned man anywhere.\cite{munro1899}

Furthermore, Charlemagne expected the same devotion to classical study by others in the Empire. For instance, he demanded that reading and writing be taught at all religious houses of the kingdom, ordered a recension of the Vulgate to eliminate previous errors by former careless copyists, and created a new style of handwriting, both beautiful

\cite{munro1899} Dana C. Munro, ed. Translations and Reprints from the Original Sources of European History, vol. 6 (Philadelphia: University of Pennsylvania Press, 1899), 5:2–4. See also Roger Collins, Charlemagne (Toronto, Buffalo: University of Toronto Press, 1998), 121. who argues that Alcuin, and other members of the king’s scholarly entourage, provided a source of teaching and experience both for Charlemagne and his sons, had as a special duty training in practical military skills.
and clear, to make texts easier to read. The Romans had used only capital letters.\textsuperscript{244}

However, the scribes were commissioned not only to use the new script for making clear Biblical and clerical texts, but also to copy the works of Virgil and other classical writers. Einhard, (830) one of Charlemagne’s court scholars and a layman, for instance, used Suetonius’ \textit{Life of Caesar Augustus} (Octavian) as a model for his own \textit{Vita Caroli Magni}—a life of Charlemagne.\textsuperscript{245} In fact, Davis believed that:

\begin{quote}
It is no exaggeration to say that it is to the scholars of this period that we owe our knowledge of the classics. That fact is attested in a most impressive way, for when, some seven centuries later, the humanists of the Renaissance were ransacking the monastic libraries of Europe for manuscripts of the classics, the great majority that they found were written in Carolingian miniscule—so much so, that they mistook the handwriting for that of the ancient Romans themselves, called it \textit{scriptura Romana}, and propagated it as the only true classical hand.”\textsuperscript{246}
\end{quote}

Around 789 Charlemagne sent hundreds of letters throughout the Empire laying out his plans for educational reform—one to every bishop—and ordered them to pass the letters on to each church and monastery in their territories. It reads in part:

\begin{quote}
Be it known….that we, together with our faithful men, have considered it to be useful that the bishoprics and monasteries entrusted by the favor of Christ to our control…ought to be zealous in the cultivation of learning and in teaching those who by the gift of God are able to learn, according to the capacity of each individual….For although correct conduct may be better than knowledge, nevertheless knowledge precedes conduct….In the past few years letters were often sent to us from several monasteries….We have noticed in most of these letters both correct thoughts and uncouth expression, because…the tongue, uneducated on account of the neglect of study, was not able to express without error, as the skill in writing [had seen decline]. Therefore, we exhort you not only to avoid neglecting the study of literature, but also…to study earnestly…For we
\end{quote}

\textsuperscript{244} The script, Carolingian Miniscule, was rapidly adopted by scribes throughout Charlemagne’s empire, and is the basis of “lower case” print to this day.

\textsuperscript{245} Prof. Dr. H. Herkömmer, Lecture: \textit{Einführung in die germanistische Mediavistik}, Sommersemester 2003, Universität Berne.

\textsuperscript{246} Davis, \textit{Charlemagne}, 130.
desire you to be…devout in mind, learned in discourse, chaste in conduct and eloquent in speech.  

The “literature” Charlemagne was suggesting as a guide to proper reading and writing was of course the same literature he himself read: i.e. the Greek and Roman pagan classics. This is the same Charlemagne who attempted to wipe out paganism throughout his kingdom. So, why would Christian kings, priests, scholars and popes preserve sources like Homer whose epics depend on the desires, wills, and whims of the pagan gods; or the tale of Alexander, who identifies himself with a number of pagan gods, demi-gods, and heroes, and seeks to emulate them in his trek across the East? Perhaps, the answer lies in what other information such texts provided, and in what Christian literature lacked.

The Old Testament, for instance, is filled with battle scenes, but not much can be extracted from it in terms of weapons and tactics. So, Charlemagne could draw little practical strategic expertise from biblical descriptions of battles fought by the hero he wished to emulate. Biblical accounts also rarely provide any real feeling for what battle was like for the individual, what strategies great warriors employed; neither the

---

247 For the full details of the letter see “Charlemagne on the Cultivation of Letters,” in Translations and Reprints, 5:12-14.

248 Most modern scholars now believe that Charlemagne could read, even if he could not write: the issue remains controversial. Either way, as Alessandro Barbero points out, Charlemagne did not need to read, “he had readers who would read out loud to him, a standard practice since antiquity, but when necessary he could read for himself.” See Alessandro Barbero, Charlemagne: Father of a Continent (Berkeley, Los Angeles, London: University of California Press, 2004), 215. Matthias Beecher, Charlemagne, trans. David S. Bachrach (New Haven and London: Yale University Press, 2003), 5-6 also treats the subject of Charlemagne’s education.

249 For knowledge of and examples of classical literature in Charlemagne’s empire see “Golden Rome Reborn,” in Peter Godman, ed. and trans., Poetry of the Carolingian Renaissance (London, 1985), esp. 191, 193, 195. See also Appendix A for other classical literature in Carolingian libraries.

250 See “Bending the Saxons to His Will,” in Translations and Reprints, 5:2-3, 4.
importance of a warrior’s ethic, nor the élan of warriors in formation—whether among cavalry or infantry. Works like Homer’s *Iliad* filled this gap.

The exhortation of Agamemnon to the Argives, for example, provides a paradigm for how men should prepare for and fight in battle:

> But now let all of you go to your meal, so that then we may join battle. Let every man whet well his spear and keep his shield ready, and let him well give food to his swift-footed horses, and looking well to his chariot on every side let him meditate on war so that all day long we may contend in hateful battle. For of rest there will be none, not for a moment, until night comes on and parts the fury of warriors. Wet with sweat about the chest of many a man will be the strap of his sheltering shield, and about the spear will his hand grow weary…

Homer not only described battle, but the *Iliad* is filled with the sorts of references to nature—particularly pastoral—with which Swiss shepherds and farmers readily would have identified. In the following passage a phalanx is described using such imagery:

> …And a crowd of foot soldiers followed with them. Just as when from some look out point a goatherd sees a cloud coming over the face of the deep before the beast of the West Wind, and to him, being far off, it seems blacker than pitch as it passes over the face of the deep, and it brings a mighty whirlwind; and he shudders at the sight of it, and drives his flock into a cave; so by the side of the two Aiantes did the thick battalions of youths, nurtured by Zeus, move into furious war—dark battalions, bristling with shields and spears.

But the *Iliad* also provided practical knowledge, for example advice on how to successfully array an army for battle:

> … The charioteers first [Agamemnon] arrayed with their horses and chariots, behind them the footsoldiers, many and brave, to be a bulwark of battle; but the cowards he drove to the middle, so that, even unwilling, a man would fight out of necessity…

---


252 Ibid, 1.4.275-82.

And in a passage on the opening of a pike battle in which nature is, again, used to
describe the terror of the clash, we find descriptions of individual efforts in battle that
would have been quite instructive to medieval warriors. Take, for example, the following
passage:

As when on a sounding beach the swell of the sea beats, wave after wave, before
the driving of the West Wind; out on the deep first it is gathered in a crest, but then
it breaks on the land and thunders aloud, and around the headlands it swells and
rears its head and spews out the salt brine; so on that day did the battalions of the
Danaans move, rank after rank, without cease into battle; and each leader gave
orders to his own men, and the rest marched on in silence…. and on every man
flashed the inlaid armor in which they were clad. But for the Trojans, just as ewes
past counting stand in the fold of a man of much substance to be milked of their
white milk, and bleat without ceasing as they hear the voices of their lambs: so
arose the clamor of the Trojans through the wide army…. Now when they had met
together and come into one place, then they dashed together their shields and spears
and the fury of bronze-mailed warriors; and the bossed shields pressed one on
another, and a great din arose. Then were heard alike the sound of groaning and
the cry of triumph of the slayer and the slain and the earth flowed with blood. As
when winter torrents, flowing down the mountains from their great springs to a
place where two valleys meet, join their mighty floods in a deep gorge, and far off
among the mountains the shepherd hears their thunder; so from the joining of these
in battle came shouting and toil. Antilochus was first to slay a warrior of the
Trojans in full armor, a noble man among the foremost fighters Echepolus son of
Thalysius. Him was he the first to strike on the ridge of his helmet with crest of
horsehair, and into his forehead drove the spear and the spear-point of bronze
passed into the bone; and darkness enfolded his eyes, and he crashed, as does a wall
in the mighty combat…. As he fell lord Elephenor caught him by the feet and tried
to drag him from beneath the missiles…. [A]s he was dragging the corpse the
greathearted Agenor caught sight of him and where his side was left uncovered by
his shield as he stooped there and he struck him with a thrust of his bronze-tipped
spear and loosed his limbs.254

254 Ibid, 4.419-55. See also, Joachim Latacz, Homer: His Art and His World, trans. James P.
Holoka (Ann Arbor: University Michigan Press, 1996), 58, 87, and esp. 133 and Joachim Latacz, Troy and
Homer: towards a solution of an old mystery, trans. Kevin Windle and Rosh Irish (Oxford and New York:
Oxford University Press, 2004), 172-94. Latacz argues that Homer referred to early phalanxes of the late-
eighth century B.C. He convincingly maintains that the long battle scenes in the Iliad, such as the phalanx
battle above, were a reflection of Homé’s own time, not a memory from the Mycenaean/Greek Dark Ages.
Latacz further points out that the classical phalanx, which emerged in the eighth century challenged the
aristocratic order and led to the rise of democracy in Greece.
In this passage the reader is taught a number of lessons. First, it is possible for a common soldier of courage and a keen eye to defeat great, powerful, noble warriors. Secondly, specific verses describe how this is done. Finally, they show what not to do in pike battle—i.e. leave the flank exposed.

Homer, in bloody detail, also describes what battle was like for the individual—and how to kill an opponent. Spears strike “in the right buttock, and the spear-point passes clean through the bladder beneath the bone”; a “thrust of the spear in the back between the shoulders is driven through the chest”; sharp spears driven through the “sinew of the head, and straight through between the teeth” shear the tongue away at its base, while the warrior so attacked falls “in the dust and bites the cold bronze with his teeth.”

Finally, the *Iliad* contains descriptions of how successful archers can be against men-at-arms:

...Immediately he bent against the son of Tydeus his curved bow, and with sure aim struck him as he rushed onwards on the right shoulder on the plate of his corselet; through this sped the bitter arrow and went clean through, and the corselet was spattered with blood....

While we cannot know for certain if the *Iliad* was read at Charlemagne’s court or at those of his sons, a copy of the *Iliad* would have been available to him. St. Gall, which preserved more Greek materials than any other Carolingian center, held a copy in the

---

255 Homer, *Iliad*, 1.5.55-70.

256 Ibid, 1.5.95-100.
eighth century. Whether it was read to Charlemagne, or whether he took it seriously as any kind of reference for how to build armies, are different, irresolvable matters.

On the other hand, Charlemagne and his ancestors were aware of, and took quite seriously, the stories contained in the *Iliad* and Vergil’s continuation of the story in the *Aeneid* in other ways. As Marie Tanner has decisively shown, what is now known as the *Vatican Vergil* was a prized possession of the Carolingian rulers and was studied and copied actively by Carolingian scholars. Einhard’s portrayal of Charlemagne as “the new Aeneas” who builds “Augustus’s Rome in Aachen,” was not just a classical turn of phrase. It was propaganda: it alluded to Charles’ justification for his ambition to bring all of Europe “under the Christian [Charlemagne’s] yoke. As Tanner writes:

Charlemagne’s ambition to extend his domain beyond the Frankish realms was evoked by Alcuin’s use of the Vergilian dictum “Parcere subiectis” in a letter to the emperor. These famous words from the Aeneid were a directive from his ancestors that Aeneas must seek universal sovereignty. The Carolingian court was thoroughly familiar with the phrase and the context from which it came, as evidenced when figures from the ninth-century Vivian Bible were traced to this scene in the Vatican Virgil. Modeling himself in spirit as well as in practice on the ancient hero, Charlemagne assumed Aeneas’s epithet “Pius.”

And it did not end with Charlemagne. The Hohenstaufens made claims to universal sovereignty based on syncretistic genealogies that date from the twelfth century and combine Homer and *Genesis* in the historical chronicles and in vernacular Trojan legends. Godfried of Viterbo asserted that the Franks and therefore Emperor Henry VI (1190-97) had descended from Trojans and thus had universal sovereignty, and Phillip II

---

257 See Bernice M. Kaczynski, *Greek in the Carolingian Age: the St. Gall Manuscripts (Speculum Anniversary Monographs)* 13 (Cambridge, Mass: Medieval Academy of America, 1988), esp. 50-71. The *Iliad* was, in fact, used to teach Greek to Carolingian scholars.

of Spain (1527-98) made similar claims.\textsuperscript{259} There is no doubt that the courts of Europe were familiar with the ancient legends surrounding the Fall of Troy and the Founding of Rome.

However, this does not mean that either Homer or Vergil was used as a military source. In fact, the Aeneid provides little in the way of how one would build a cohesive formation of footsoldiers. Especially Books X-XII describe scenes of battle: “A thousand spears in warlike order stand….Foot set to foot and mingled man to man [Aeneas orders his men] to shun ignoble flight, trust not your feet…. Your hands must hew away.” The verb here is telling: we tend to associated “hewing” with swords and “sticking” with pikes. Pikes do appear in the Aeneid, but most often they are thrown. So, although the great classical stories of the Trojan War were known, and might inspire the medieval imagination, they were likely of little use for the practical building of pike formations in the Medieval Period.

\textit{Vegetius}

On the other hand, other sources, such as Vegetius, were well received by military thinkers in the Middle Ages. Over two hundred and sixty Latin manuscripts from this period are still extant.\textsuperscript{260} Charlemagne was likely attracted to Vegetius, himself a Christian, whose \textit{De rei militari} was devoted to restoring the same classical ideals Charlemagne wished to restore in his own Empire. Carolingian interest in \textit{De re militari} is underlined by the survival of a dozen ninth century copies of it.\textsuperscript{261} Written 371-392

\textsuperscript{259} Ibid, 88-9; 131-45.


\textsuperscript{261} Ibid, 16.
A.D., the work is dedicated to Emperor Valentinian II. Although Vegetius’ advice seems to have been ignored by the Romans for whom it was written, he pleads for a return to the classical virtue and courage of the ancients.262

The treatise must have been useful to medieval strategists on a number of levels. Following Aristotle, Vegetius opens the work with the declaration that:

No one can doubt that the peasants [farmers] are the most fit to carry arms for they from their infancy have been exposed to all kinds of weather and have been brought up to the hardest labor. They are able to endure the most intense heat of the sun, are unacquainted with use of baths and are strangers to the other luxuries of life. They are simple, content with little, inured to fatigue and prepared in some measure for a military life by their continual employment in their farm work, in handling the spade, digging trenches and carrying burdens.263

In addition, Vegetius provided specific guidelines for how levies should be taught to work on entrenchments, march in rank, and be instructed in the use of their arms. Initial training focused on teaching soldiers to march in step and to endure hardship, which could “only be acquired through constant practice of quick and collective marching.” In this section specific instructions are given: for instance, teaching recruits to march in step “twenty miles in five summer hours.”264 Vegetius also discusses how to create various pike formations, such as the triangle and the wedge, along with the Greek phalanx and its organization.

Book Three, however, was the most influential part of this work during the Middle Ages. It opens with a discussion of ancient Greek military practices. Vegetius explains


263 Ibid, 14.

264 Ibid, 18, 31. Although “marching in step” as a characteristic of classical (especially Greek) formations is controversial among modern classicists, Vegetius apparently believed that classical military training included marching in step.
the singular importance of classical Greek strategist: they were the first to apply reason to battle, recording their outcomes and reducing the military art to certain rules and fixed principles. They also established the first schools of tactics for instruction their youths in military maneuvers. The Romans, Vegetius points out, followed their example, and both practiced their martial institutions in their armies and preserved them in their writings. He then goes on to discuss the importance of restoring ancient discipline including how to maneuver formations in the wedge and saw and seven other variations. The descriptions are detailed and even Vegetius’ diagrams were passed down as they were copied and spread throughout Europe.  

Vegetius was well rehearsed by up-and-coming professionals of the twelfth to fourteenth centuries. As Allmand points out:

During the twelfth century Renaissance, sixteen manuscripts of Vegetius can be identified…[But] it was the clerical, educated, Latin-reading class, which, perforce, had assumed control of what Vegetius had taught. In the blending of Christian and Aristotelian thought to which the friars made so notable a contribution in the thirteenth century, Thomas Aquinas could claim the right of the individual state both to its existence and its right to self-defense, while Vincent of Beauvais, the encyclopaedist, and, in particular Giles of Rome, the author of the widely read De regimine principum (c. 1280), a work whose influence would later spread through translation, depended heavily on Vegetius when they came to discussing the military role and responsibility of rulers. Giles also emphasized the part to be played by the soldier acting under oath in the service of the prince, his role being essentially that played by the soldier acting service of the prince, his role being essentially that of defending society whose protective arm he personified.
Not only was Vegetius widely read, but his treatise was used as a practical guide to reform late-medieval armies. In 1351, for instance, John II of France reformed his army on the Vegetian model, and in 1374 Charles V, who encouraged the study of Latin authors through French translations, also began military reforms suggesting knowledge of the classics. This included promotion of individuals based on merit rather than on social rank, which in turn would lead to the creation of a modern professional class of leaders—military career structures in royal and other armies throughout Europe.267

Vegetius’ treatise was indeed the blue-print, not only for creating units of foot-soldiers made up of common citizens, but also for the foundational principles of war we tend to think of as “modern”: success depends on skill, theory and planning. To develop martial skill, soldiers must be put through a rigorous training program of running, jumping, swimming and the use of a wide range of weapons. Leadership skills of the “dux”—or military commander—included the ability to train; to create a positive élan; to build constructive relationships with subordinate commanders; an ability to communicate; and an awareness of, and appreciation for, the soldiers’ fears, hopes and frustrations.

In terms of military theory, a good commander had to know how to mobilize troops across different kinds of terrain with an enemy nearby; how and when to attack; how to retreat without causing his men to believe he had lost faith in their ability to win. Planning was also a major theme of Vegetius’ work. Forethought, the military virtue of anticipation meant: looking further ahead than the enemy, seeing difficulties, leading a well-trained, disciplined and versatile army, preparing for any situation; gaining both a

moral and practical advantage over the enemy; and a readiness at all times to seize any opportunity to harass, hinder, humiliate, or surprise the enemy. For this an advanced system of intelligence was needed, along with a chain of command to get orders out quickly.  

Other less explicit sources also provided military know-how. Josephus in his *Jewish War* lauds Roman discipline and describes it and battlefield maneuvers in vivid detail. Roman arms and armor, marching and encampment practices; siege and counter-siege equipment and tactics; the importance of the *testudo* formation—or linked shields—in siege battles; Jewish warriors falling on the serried Roman ranks by which they were “walled in;” early Greek battles at Salamis, Thermopylae, Plataea; and the battles of Philip of Macedon are all mentioned.

Most important to Josephus, as it was to Vegetius, was the importance of discipline, which began with the Greeks and was adopted by the Romans. He writes:

This perfect discipline makes the army an ornament of peace-time and in war wields the whole into a single body; so compact are their ranks, so alert their movements in wheeling to right or left, so quick their ears for orders, their eyes for signals, their hands to act upon them. Prompt as the consequently ever are in action, none are slower than they in succumbing to suffering, and never have they been known in any predicament to be beaten by numbers, by ruse, by difficulties of ground, or even by fortune.

Such works were available throughout Switzerland, too, in the Middle Ages.

---

268 Ibid, 19.


Although they likely were not used as actual blueprints for creating medieval phalanxes, still they were important enough to be preserved.

Also, there is no reason to doubt that if the Carolingians were reading classical military treatises, and using them as guide-books for their own military exploits—as Machiavelli would do in the fifteenth century—especially since the Roman tactics of fortification and siege were preserved, they may well have looked to the masses to provide the body of footsoldiers needed for implementing them. Aristocratic knights would not have been expected to do the messy work of digging trenches, laying tunnels, or defending garrisons for weeks at a time. So, it makes sense that there was a general levy and the Swiss would have been part of it.

Further, throughout their lands, Carolingian kings and their advisors deposited both classical political and social texts, as well as military treatises. One of Charlemagne’s most important foundations was the monastery school at St. Gall, whose Abbot, Grimwald, was Alcuin’s pupil.\textsuperscript{271} From the Carolingian period it held a number of works with military themes: Daretis Phrygus, \textit{History of Troy}; Alexander of Macedon; Vegetius, \textit{de re militari}; \textit{Epistola Alexandri de situ Indiae}; Julius Caesar, \textit{sex aetatibus mundi et chronica}; Justinus, \textit{Gesta Alexandri Magni}; Eusebius, \textit{Chronica}.

Particularly interesting was the private library created there by Abbot Grimwald. By circa 847 he was Arch-Chaplain of the Carolingian kings and created the library as a private government storehouse of important texts. In this archive were recorded: Vegetius, \textit{de re militari}; \textit{de regibus Merovingorum} and \textit{epistola Alexandri de situ Indiae}

in one volume; and Julius Caesar, *sex aetatibus mundi* and *chronica.* During the same period a ninth century list at the Stiftsbibliothek in St. Gall called the *Bibliothecae Constantinus* contained a copy of Vegetius, *de re militari; the gestae alexandri magni,* and *History of Rome.*

At precisely this time in Switzerland, as elsewhere in the Carolingian empire, clerics began to take on the role of military, as well as spiritual, leaders. As a result, churches and monasteries were presented with land and their new owners were considered rising aristocrats. Prince Bishops and royal Abbots came to have their own Vassals called “Vassals of the House of God.” They brought their own men to battle and possessed many castles belonging exclusively to them. So, it should be no surprise that monastery archives, then the warehouses of public knowledge, should contain works on military matters among its other holdings.

St. Gall, along with Tours, Reichenau, and Fulda, formed the four major centers of Carolingian educational reform. From the time of Charlemagne forward these monasteries were in close contact as “sister” Carolingian schools, exchanging scholars, books and ideas. In fact, a distinctive characteristic of the Swiss archives is the extent to which classical military sources were copied and exchanged between three major centers of learning—Germany, Switzerland, and Italy—from the Carolingian period forward.

In the following centuries the number of military sources grew substantially throughout Germany and Switzerland. Even scholars in the relatively isolated “inner”

---


273 Becker, *Catalogi Antiqui,* 33. See also B. Barack, *Katalog der Handschriften der Hofbibliothek zu Donaueschingen,* (Freiburger Diöcesanarchiv IV), 268.

Swiss cantons had access to some classical military literature. In the tenth century, for instance, the abbey library at Einsiedeln held excerpts from *De re militari*, 1.9-11—the chapters dealing with teaching new recruits the military step, exercises of running, jumping and swimming, and other practical matters of concern to a military leader.\(^{275}\)

The Benedictine Cloister lists at St. Gall from the ninth to tenth centuries held copies of Virgil; Dareis Phrygus, *History of Troy*; *Alexander of Macedon*; Justinus; and Eusebius, *Chronica*. These sources outline early Greek warfare (History of Troy), Macedonian warfare (Alexander of Macedon), warfare of the Hellenistic period (Justinus), and the wars of the Barbarian invasions (Eusebius). Along with these sources is listed the *Dialecta et rhetorica* of Alcuin, suggesting his influence on the transmission of classical literature in Switzerland. Not only cloister archives, but also town libraries often contained similar works.

By the eleventh century Bern’s *Bibliotheca Incognita* held copies of *Alexander’s Letters*; Frontinus, *Strategemata*; Sallust, and Homer, along with a number of political and literary classics including Virgil, Cato, Cicero, Juvenal and Pliny.\(^{276}\) Likewise, the Benedictine Cloister at Schaffhausen also held copies of *Libellus de ortu Alexandri Magni et epistola eiusdem*.\(^{277}\)

While scholars know that such works exist, they generally discount them, since there is a general tendency to assume that in the Middle Ages, “no one could read them.” But,

---


\(^{277}\) Lehman, *Mittelalterliche Bibliothekskataloge*, 450.
as we have seen with Vegetius, this is simply not the case: military texts were deemed quite important. And if we can accept that Vegetius was thought critical, why would we assume that military leaders would not have the curiosity to either look at other military works, or at least have them read to them? Further, if most classical works on military matters were thought unimportant in the Middle Ages then why were they preserved and copied in such high numbers? The issue must remain unresolved for now, until further proof can be uncovered. But, it seems highly unlikely that Vegetius was the only military treatise of interest to medieval tacticians. The important point is that they were preserved, so that once humanistic learning reasserted itself in the fourteenth to sixteenth centuries, thousands of classical military works could be rediscovered.

Certainly classical military techniques were never completely forgotten during the eleventh to fourteenth centuries. Time after time medieval chroniclers fighting in crusader armies make reference to classical battles to describe their own experiences. For instance, in his prologue to the Itinerarium Peregrinorum et Gesta Regis Ricardi the author of the chronicle mentions the importance Greek historians placed on eyewitness accounts. He writes:

Dares of Phrygia’s account of the destruction of Troy is given more credence than others because he was present and saw for himself what others reported from hearsay. On the same basis the history of Jerusalem which we recount should not be unworthy of belief.278

This passage suggests two things. First, crusader warriors believed ancient Greek historians exemplified great historical writing, and sought to emulate them. Secondly, the chronicler of Itinerarium clearly was familiar with Daretiis Phrygi de Excidio Trojae Historia: ‘Dares of Phrygia’s History of the Destruction of Troy,’

278 Itinerarium Peregrinorum et Gesta Regis Ricardi, 22.
supposed to be the Latin prose translation of the lost pre-Homeric account of the war at Troy written by Dares of Phrygia the priest of Hephaestus.\textsuperscript{279} He also knew the poetry of Horace since he quotes the \textit{Epistolae}, and seems also to know the history of Alexander the Great. He writes for instance of King Richard I of England:

What of the king, one man surrounded by many thousands?….His courage was always firm, he “could not be overwhelmed by the hostile waves of life,”\textsuperscript{280} he was always full of courage and, to sum up in a few words, always vigorous and untiring in war. What more is there to say?…The body of Achilles, who defeated Hector, is said to have been impenetrable to weapons because it had been dipped in the River Styx; but a lance head hit him in his heel, which was the only part of him which was vulnerable. The ambition of Alexander of Macedon armed his headlong pride to subjugate the entire globe. He certainly undertook difficult ventures and won countless battles with a force of elite knights; however, all his strength was in his vast forces.\textsuperscript{281}

Another crusader chronicler, Ambroise, described the relief of the beleaguered crusaders at Toron when a large company of warriors arrived led by the maverick James of Avesnes in Flanders. Ambroise writes of him, “I think that Alexander, Hector and Achilles were not more worthy than he, nor better knights.”\textsuperscript{282} Clearly the classical heroes were on the minds of crusaders as they reflected on their own battle experiences.\textsuperscript{283} Likewise, the Swiss interest in mobilizing bodies of disciplined troops to fight \textit{en masse} in an organized fashion in the fourteenth century might well have sprung from contact with classical tales.

\textsuperscript{279} See Homer, \textit{Iliad}, 5.9, which mentions Dares, and \textit{Itinerarium Peregrinorum et Gesta Ricardi}, 22, n. 2.


\textsuperscript{281} \textit{Itinerarium}, 366.

\textsuperscript{282} \textit{Estoire de da Guerre Sainte} 1, 2848-51.

\textsuperscript{283} On the wealth of classical literature preserved in Germany, France, Italy and Switzerland during the period of the crusades see Appendix A.
Yet, while Europeans were often inspired by Greco-Roman military literature, it is a matter of speculation whether this enthusiasm led to practical imitation or any real changes on the medieval battlefield. Likewise, the knowledge and preservation of martial texts does not in any way prove that this literature was used as a blueprint for creating pike columns. In fact, none of these texts explained how to build a phalanx. Anything the Swiss could have produced based on the literature reviewed in this chapter—i.e. the literature extant up to the thirteenth century—would have to be cursory and impressionistic. However, during the Renaissance period new texts became available that did explain exactly how to build a phalanx.
CHAPTER 5

FORMATIONS CREATED USING GRECO-ROMAN MILITARY TREATISES
(1474-1550)

The armor of the Greeks was not as heavy as that of the Romans, but for offensive weapons, they depended more on the spear than the sword...I imagine the Macedonian phalanx was most like the Swiss regiments of today, whose strength lies wholly in their pikes.... I should like to know why the Swiss, like the ancients form their regiments of 6,000 or 8,000 infantry drawn up in close order; why all the other nations have begun to imitate them, since that method exposes their army to no less danger from the artillery than many other institutions the ancients had as models. These are questions...which if you should propose them to soldiers of judgment and experience, they would tell you that they arm themselves in that manner not because they think such armor will protect them effectively against cannon balls, but because it will defend them against crossbows, pikes, swords, and many other weapons an enemy may use in an offensive. They will tell you further that the close order observed by the Swiss is necessary to push back the enemy’s infantry, to stand up against their cavalry, and to make it harder for the enemy to break in on them....For since we find that only the ancients’ pikes and close order—still in use among the Swiss—have done such wonderful service, and have contributed so much to our armies’ current strength, why may we not conclude that the rest of the military institutions observed by the ancients, but now entirely laid aside and neglected, might be equally serviceable?  

During the Renaissance period the ideals of the great classical writers permeated the works of celebrated poets, sculptors, and artists. But classical themes were not limited to literary and artistic masters: classical military ideas, too, struck a chord with renaissance strategists. The epitome of this trend came in 1521 with Niccolò Machiavelli’s *The Art of War*. In it, particularly throughout Chapters 2 and 3, the Swiss...
pike formations of the Renaissance period are frequently compared to those of “the Greeks.”

What gave the Swiss their battlefield superiority according to Machiavelli was both their mastery of ancient formations and—oddly enough—their lack of supporting cavalry.285 These confederate armies were also highly successful due to their ability to obstruct the advance of cavalry in a way that no other formation of pikemen before them had been able to do—few footsoldiers at any age have proven invincible to horsemen without the support of their own mounted troops. The center of the Swiss phalanx286 consisted of lightly-armed men equipped with long and short axes and short swords. However, the outermost contingents of the Swiss square—the pikemen—gave the formation an adeptness, with which it was possible for the entire formation to face the heavily armored knights. While Machiavelli compares the Swiss formation to the ancient column, its phalanx was somewhat different. Unlike the more linear system of the classical hoplites, which was, usually, eight-men deep and stretched for two to three miles,287 the confederates formed up in a more solid square. And the utilization of the square formation, additionally, made the Swiss phalanxes different from those of the ancients, precluding the old vulnerability of being easily outflanked or surrounded in toto.

In other words, if a formation had fifty ranks and fifty files, its front on the battlefield was twice its depth, because men required about three feet side-by-side but


286 Machiavelli, as well as other scholars of the Middle Ages, helped to define the components of a Renaissance phalanx for the modern world. In these medieval works phalanx, column, and square are used interchangeably to mean simply a mass of pike-bearing warriors. Phalanxes, columns, or squares, could assume different forms such as the Swiss form described in the above text.

287 The depth of classical phalanxes varied: the Theban phalanx was twenty-four men deep and a Macedonian phalanx sixteen.
only a foot-and-a-half back to front. Such a standard formation—more a rectangle than a true square—would have contained 2,500 men and occupied a front of fifty yards with a depth of twenty-five—reminiscent of the Boiotean phalanx at Delian (424 B.C.). Yet, even 2,500 heavy infantrymen thus arranged could still keep their formation and respond to orders because the Swiss subdivided their squares into further files. The file leaders formed the front ranks, and with no more than fifty men abreast, these leaders could usually keep shoulder-to-shoulder with one another, maintaining their short front in alignment, and avoiding any gaps in their line. The men in the files, by simply following the men ahead, could keep the square together without great difficulty. Unlike the old Greek phalanx of loosely affiliated lochoi, each Swiss square was more a self-contained unit designed to be autonomous, and in constant communication with its members. Clearly Swiss pike formations were not classical phalanxes.

Yet, Machiavelli’s comparison should not be taken lightly. As a military strategist, he certainly knew how Swiss pike formations operated, since by 1521 their system was widely studied, adopted and adapted by military tacticians in Europe. A contemporary painting of the Battle at Pavia in 1525 showing a German landsknechts formation—directly modeled on the Swiss pike phalanx--illustrates why Machiavelli would have made a connection to the phalanges of ancient Macedon. We can trust, too, that Machiavelli knew something about ancient tactics: he was after all, first, a

288 German, French, and Spanish forms modeled on the Swiss long-pike formations developed in the fifteenth and sixteenth centuries, and made an appearance a century later in the Thirty Years’ War. The Dutch and Swedish forms, too, were directly influenced by classical techniques.

289 See Image 5.1.
humanist scholar and then a political and military strategist. His ability to freely translate passages from ancient sources, especially Vegetius, Frontinus, and Polybius, shows his familiarity with the ancient sources. But, more important, his interest in ancient tactics was much more than just academic: it directly related to his interest in reforming the armies of Italy. He wanted to utilize the laws and principles found in ancient texts for the formation of his own citizen armies. As Felix Gilbert argues, “The new laws of warfare which Machiavelli wanted to see introduced in Italy were the old laws of the Roman military order.”

The application of classical texts to army reforms continued even during of the later period of the “Gunpowder Revolution.” In the sixteenth- to seventeenth centuries Maurice of Nassau (1567-1625) and William Louis of Nassau (1560-1620) drew from Roman and Byzantine military treatises to reform the Dutch army, reviving the legionary idea of ordered formations. They enlisted the help of their professor, the classicist, Justus Lipsius, who helped them apply the tactical principles of Vegetius and Aelian. As

---


291 Ibid, 154-5. Gilbert explains that, “The circumstances surrounding the return of the Medici to Florence—the dependence of Italy on the outcome of the struggle between France and Spain and the aid of Spanish solders in the overthrow of the republic, confirmed Machiavelli’s views on the role of force. In a practical way Machiavelli expressed these views by insisting on the formation of a people’s army to replace the practice of using mercenaries. This military reform, which had found and increasing number of advocates in the second part of the fifteenth century had been Machiavelli’s greatest concern when he was in the chancellery.”


293 M. D. Feld, “Middle-class Society and the Rise of Military Professionalism: The Dutch Army 1589-1609, *Armed Forces and Society,*” 1, no. 4 (August 1975): 421, 437-8. Feld adds: “It is incontestable that Lipsius played a major role in the reaffirmation of Roman discipline and military practices as the instrument of military reform….the tactical maxims of Vegetius and Aelian were commonplace to the military writers of the age. But their adaptation to the deployment of firearms and the attainment of continuous fire belongs to Maurice and his cousin William Louis.”
Gunther E. Rothenberg has pointed out, by the late-fifteenth century European strategists saw a need for army reform and Greco-Roman military treatises were the basis on which new military theories and practices were formed. Rothenburg continues:

The study of Roman military methods especially became a source of inspiration for reformers, and Machiavelli’s *Arte della Guerra* ranks only as the most famous in a long line of treatises that rediscovered the virtues of the Graeco-Roman military system and recommended its revival. Although frequently scorned as impractical amateurs, these “neoclassicists” actually included experienced soldiers like Lazarus von Schwendi and the Huguenot captain La Noue....

In fact, as Geoffrey Parker has definitively shown, the development of Renaissance volley fire also has roots in classical tactics. Volley fire, Parker writes:

…began in Europe only after Willem Lodewijk of Nassau…wrote a long letter on the subject to his cousin Count Maurice, the commanding general of the Dutch army, on 18 December 1594…discussing the use of ranks by the soldiers of Imperial Rome as described in the *Tactica* attributed to the ninth-century Byzantine Emperor Leo VI….He provided German or Dutch equivalents for thirty-four Latin terms in a Classical military treatise that had greatly influenced Leo: the *Tactica* of Aelian, written circa 100 C.E. Next came three more pages in Dutch about Aelian’s discussion of various types of volley fire, in which ranks of infantry advanced, hurled spears and javelins in sequence, and then retired, a technique known as the countermarch….On the last page of his letter…Lodewijk made the crucial leap: he described how he had trained men carrying firearms to imitate one of Aelian’s “countermarch” techniques.

---


295 For this and the details of Lodewijk’s reforms see Geoffrey Parker, “The Limits to Revolutions in Military Affairs: Maurice of Nassau, the Battle of Nieuwpoort (1600) and Their Legacy,” *The Journal of Military History* 71 (April 2007): 338-9.
Like other tacticians of his day Machiavelli knew both the Swiss system, as well as, at least the basics of the ancient Greek and Roman tactical organizations and we can put some confidence in his comparative analysis of the three systems.

However, *Art of War* is often confusing. Machiavelli tends to mix and mingle together the warfare of ancient Greece in all the forms it took over time. When he says “ancient Greeks” for instance, he fails to distinguish between a phalanx in its rough original form; the phalanx of the classical period; the phalanx of the Macedonian period; or the phalanx of the Hellenistic period. This tendency may be due either to a failure to fully grasp the nature of the phalanx as it changed over time, or to an assumption that his readers already understand the various forms, and there was no need to distinguish between them—or—that their differences were insignificant in comparison with their general commonalities.

Modern military historians, too, often mix and confuse ancient tactical systems, or fail to specify which ones they mean. Likewise, they make reference to the similarities between the Swiss long-pike formations of the fifteenth to seventeenth centuries and ancient “Greek” phalanxes and/or Macedonian phalanges of Philip and Alexander, but fail to distinguish between both the ancient tactical formations and the varieties of Swiss formations that appeared over time. The modern *Encyclopedia of Military History*, for instance, writes of the Swiss tactical system that:

> It was the [first] to bring back infantry into offensive warfare for the first time since the decline of the Roman Legion…. [they] discovered the benefits of mobility which they gained through lack of encumbrances, and had also rediscovered the ancient Greek concept of the massed shock of a body of pikemen charging downhill. Like the Greeks and Macedonians, they had also learned that this same principle would work on level ground if the pikemen could maintain their massed formation without gaps and without faltering in the face of a cavalry charge. If they could press their own attack home with speed and vigor, the
massed pikes would be more terrifying to horse and rider than the cavalryman was to the pikeman. To exploit this lesson required excellent organization, rigorous training, and iron discipline of a sort unseen since Roman times. The determined Swiss met these challenges, and produced forces comparable to the Macedonian phalanxes in maneuverability, cohesiveness, and shock power. As a result…they were universally recognized as incomparably the finest troops in the world.296

There are number of incongruities in the passage above but, as an example, let us consider the “downhill charge.” A body of “pikemen charging downhill” brings to mind, for the ancient world, classical Greek tactics at Marathon, not those of the Macedonian phalanges, for instance, at Issus. Likewise, the “downhill charge” is applicable to Morgarten in 1315, but not to Grandson in 1474. Further, the Swiss were not the first to try this technique: we see it for instance earlier at Bannockburn in 1314. So, which is it: did the Swiss fight like Greek hoplites or Macedonian phalangists? If they were more like Macedonians, then when and why did this system develop and not some other? Did they always fight this way, or did they, like Machiavelli and the Nassau cousins, utilize classical texts, to reform their militias on the classical or Macedonian model? Or are the similarities to ancient formations just a coincidence?

We will begin unraveling these knots by starting with the Swiss tactical formations at their most advanced stage, the “long pike” formations of the Renaissance period. Appearing first at the battles of the Burgundian Wars (1474-1477) these were the units that most resembled the Macedonian sarissa phalangists. However, in function they were most similar to a classical hoplite phalanx.

Classical Greek v. Macedonian Tactics

Swiss tacticians of the late-fifteenth century, even if they knew something of classical formations, probably had little understanding of what each style of phalanx in the ancient Greek world was meant to accomplish. This is evident in the fact, for instance, that while late-fifteenth century Swiss pike formations resembled in form the Macedonian sarissa phalanxes, in function they were most similar to the classical Greek style. In other words, Swiss footsoldiers carrying the long pike led the charge, and decided the battles. Philip and Alexander of Macedon utilized their phalanxes as a secondary arm to support the elite horsemen (including Alexander himself who, according to our sources, usually personally led the charge from atop Bucephalas, his horse.) This utilization of the phalange is more similar to the use of footsoldiers in medieval warfare when elite medieval knights led the charge.

But the Swiss use of the long pike formation resembled that of the classical Greeks. The reconstruction that held the consensus view until 2004 is that around 750 B.C. in ancient Greece middle-class farmer warriors created the hoplite phalanx to settle disputes over land. Friends and family members on both sides of a dispute packed together in spear formations and heavy armor and scuffled to decide, who had ownership of a farm, a particular piece of grazing land, or some other land dispute. It was a dangerous sort of reverse “tug of war”: whichever side was able to push against and

---

297 Renaissance pikeman needed two hands: in the ancient world they were called phalangites and carried sarissas. A hoplite used one hand, a shorter spear and was known as a hoplite.

298 Admittedly, Alexander’s use of cavalry was part of a very complex system. The point here is that cavalry, not sarissa phalanxes, were the decisive arm in Macedonian battle: the Swiss long-pike system utilized no horsemen, and the long-pike formations were the decisive arm in battle.

299 Hans van Wees in Greek Warfare has made this interpretation of the development of Greek warfare a controversial topic. The dating of the rise of the hoplite phalanx, its egalitarian base, and other issues concerning Greek warfare are now fiercely debated among classicists and military historians. Papers from the Spring 2008 Yale Conference, developed and organized by Curtis Easton, pitting Victor Davis Hanson’s interpretation against van Wees’s is scheduled for release in 2009-10.
break open the enemy formation won. The dispute settled, both sides buried their dead and went back to their farms.

Of course, during the classical period, when the period of the city-state was in full bloom, the “friends and family” of the original hoplite phalanx were replaced by citizens, and wars were fought more over political rather than agricultural boundaries. But, the tactical purpose of the phalanx remained the same: men armed with spears, packed into tight formations and perhaps marching to the sound of the fifer in order to keep step served as the main arm in battle.300 After Marathon other arms are added, such archers, slingers, horse, but the body of citizen footsoldiers lead the charge and decided the battles. This changed only with the Macedonians. So, as we shall see, the Swiss use of the pike formation—even though it was a “long-pike” formation, requiring two hands to handle the pike, resembled the classical Greek, not the Macedonian in function.

Swiss pike columns were made up mostly of Spießträger—or “Spear-carriers”—with eighteen-foot-long pikes.301 The Swiss organized themselves by units under banners in ranks and files, in row upon row behind each other, in the depth or width decided by their commanders, or the Ordnungsmacher.302 In the first and last ranks of every contingent stood the pikemen and, in the middle of the column, stood those with halberds and morning-stars. Once the contingents had been drawn up one next to another, the Ordnungsmacher would decide on the number and arrangement of the

---

300 Only the Spartans seem to have used flutes and, again, the notion of marching in step in the ancient world is controversial. But the point is that flutes either in the ancient world or the late-medieval would have had the same purpose—to soothe or mesmerize soldiers as they marched toward their fates.

301 See Figure 7.2.

302 These were special officers who were in charge of assembling the forms, breaths, and depths of the columns assigned by the commanders. See, for instance, Von Elgger, Kriegwesen, 276-7.
column. Where necessary, files were adjusted and a special effort was made to ensure that all four sides of the square were complete, with long spears surrounding the formation, so that it would be protected against the charges of the knights. In the battle at Murten 1476 no less than twenty-seven squares had to be put into position.

When separated on the march, if the columns came into danger, they would be halted and brought together into battle order through signals from the banners and horns. At the Battle of Grandson in 1476, the units from Schwyz and Bern broke out from camp too early, and were attacked by archers. When the thundering sound of the archers’ arrows hitting their targets resounded across the battlefield the army realized what had happened. Immediately the banner-carriers raised their flags, and contingents partly from over the mountains, and partly from along the lake, rushed to the battlefield. Immediately, to save time, all formed up in a huge battle square and pushed themselves together in double-quick step.\(^{303}\)

Columns had the ability to close together in tight formation quickly for battle, or to loosen out into march order. This was achieved by means of the flanks. A square could quickly be turned about into a wedge, by which an encirclement could be achieved. Other formations were the Ring, with a hollow interior, and the Igel or hedgehog, in which pikemen filled a circle to ward off attacks from horsemen from any direction.\(^{304}\)

Usually, though, on the open field and without a foothold, the Swiss formed up in an equilateral square of pikes. Blaise de Monluc gives us an understanding of how the


\(^{304}\) Von Elgger, Kriegwesen, 280-2.
Swiss used their pikes by the mid-1500s. At the Battle at Ceresole in 1544 he ordered his French infantry to hold their pikes in the middle of the hand, and sink their heads forward, in order to thrust and push forward, as the Swiss did.\textsuperscript{305} At battles where there was no threat from horsemen, or where it was possible to support both wings, the front of the column was lengthened and the depth shortened.\textsuperscript{306}

**An intentional Macedonian phalanx?**

By the late-fifteenth century a Swiss long-pike column certainly looked similar to Macedonian phalanxes, but was this intentional on the part of Swiss military strategists or the result of something else? There are only so many ways foot-troops, before the advent of accurate gunpowder weapons can fight. Also, the Swiss faced a tactical problem few if any Greek and Macedonian armies faced—an effective cavalry on the opposing side. Swiss long-pikes may, in part, have been a response to this threat.\textsuperscript{307} Yet, on the other hand, military strategists of the sixteenth to seventeenth centuries did use classical sources, of course mostly Roman, to reorganize their armies. So, it is not outside the realm of possibility that Swiss tacticians might have looked to Greek tactical manuals to refine their armies as well. To determine if classical sources had a direct influence on Swiss tactical formations of the late-fifteenth century the following must be considered: 1) did the Swiss have access to any classical literature which might give them the blueprint for recreating either sort of Greek phalanx? 2) even if they did, could military strategists read it? 3) and even if they could, did they deliberately seek it out, and 4) how

\textsuperscript{305} Blaize de Monluc, *Commentaries*, 2 (London: Henry Brome, 1674), 70. For details of the battle of Ceresole see Chapter 7 below.

\textsuperscript{306} Von Elgger, *Kriegwesen*, 278.

\textsuperscript{307} The development of the Swiss long-pike formation as a response to both mounted and dismounted knights is discussed at length in Chapter Seven.
did they apply it? 5) what was the relationship between such formal learning and folk knowledge dating from Roman times?

There are no simple answers to these questions for the Swiss. No “smoking pike” has emerged to settle the question definitively: we have nothing like Machiavelli’s *Art of War* for fifteenth-century Switzerland. However, it is possible to weigh the evidence we do have. The secrets to unlocking the mystery of Swiss tactics lie in three important arenas: Swiss literary archives; central European humanistic circles; and Swiss military manuals. The first subject of inquiry concerns what classical military sources were available to the Swiss; the second with how well Swiss tacticians could have understood them; and the third with whether they were applied to the Swiss system.

**Classical Tactical Manuals in Switzerland**

Like the Dutch, in the seventeenth century, Swiss military strategists, too, had acquired classical military treatises--probably with an eye to applying them to their own techniques. In Bern the leading Confederate city (and later the capital of Switzerland), the Bern Burgher Library (or Burgerbibliothek) was formed to augment a newly created public school system in 1528. It held a number of interesting classics, but perhaps most significant was a collection of manuscripts recorded in the *Catalogus Codicum Bernensium* simply as MS 97. This folio was a 421 page collection of ancient Greek military treatises from the fifteenth and sixteenth centuries with the title: *Scriptores rei militaris Graeci: Praemittitur hic titulus: sequuntur authores de re militari nondum traducti*\(^{308}\): Asklepiodotus, *Tactica*; Arrian, *Preparatory Exercises*; Apollodorus; Emperor Leo, *Abridgement on Military Matters*; Posidonius of Rhodes; Aelian, *Tactica*;

\(^{308}\) In English: *Greek Authors on Military Matters: Set down under this title: here follow authors on military matters not yet translated.*

Posidonius is now lost, but was apparently a Hellenistic writer often copied in classical times and evidently still extant in fifteenth century Switzerland. Pyrrhus and Clearchus, Alexander’s Biographer, are also now lost. We are familiar with the *Tactica* of both Arrian and Aelian, and even Polyaenus is now in English translation. But perhaps the most striking of these sources is Asklepiodotus. One glance through his work and it is evident why he sits at the top of Bern Library’s list of ancient writers. Asklepiodotus’s treatise was written in the second century B.C. after the golden age of the hoplite era. It has been described as “a funeral oration on the past glory of the Greek phalanx,” and is so detailed that it was mentioned by Seneca in *Tactica* and served as one of Aelian’s major sources for his *Tactica,* along with those of Aeneas, Cineas, Pyrrhus of

---

309 *MS 97, Saec. XV-XVI,* Bern Bürgerbibliothek, Hermann Hagen, *Catalogus Codicum Bernensium* (Hildesheim and New York: Georg Olms Verlag, 1974), 147. The list in the original Latin in which it was written reads: Asklepiodotus, liber unus de acie instruenda; Aelian, *tactica;* Arrian, de acie instruenda libri tres; Apollodorus; Leonis imperatoris, *epitome rei militaris;* Possidonii Rhodii liber unus; Aeliani libri duo de obisione urbium; Pyrrhi , epirotarum regis de perita eius qui est imperator exercitus lib. Unus; Problematum militaria: de rei militari lib.; Concionum sive exhortationum ad fortitudinem lib unus; Constantini lib. 1, *de varis gentibus et ut unaquaeque pugnat, utque sit eis resistendum;* Polyeni, *ad imperatorem Antoninum, stratagematum* libri tres octo; Clearchi, *stratagematum* lib. Tres, quorum omnium autorum in summa sunt libri Septuaginta quator; Maxime digni convertan turn in linguam latinam, quorum capita crassa Minerva, non tamen omnium infra scripta sunt; *Rhetorica militaris;* and Rufi *lex militaris.* See Appendix B.

310 For the most recent translation see, Polyaenus, Peter Krentz and Everett L. Wheeler, *Strategems of War* (Chicago: Ares Publishers, 1994).
Epirus, Clearchus and Poseidonius.\textsuperscript{311} But it is particularly interesting in terms of Swiss tactics, since it also presents the Macedonian system of fighting with “long spears.”\textsuperscript{312}

After the title page follows an eighteen-page index of MS 97 listing in detail exactly what can be found in each author. For instance, under Asklepiodotus, to find “a general overview of the phalanx,” you would see Chapter One; “on the numbers, manipulation, and exercises of phalanges see Chapter 2”, and so on.\textsuperscript{313} Following the index are 409 pages of Greek text.

Swiss military strategists would have been attracted to Asklepiodotus’s work particularly for its precise and detailed descriptions of the different branches of the ancient Macedonian army; their equipment; their numbers; and how to successfully organize them for battle.\textsuperscript{314} For instance, they would have been told that a battalion (\textit{syntaxiarchia}) was the same as a square. Two battalions make a regiment (\textit{pentakosiarchia}) and its commander was a colonel (\textit{pentakosiarches}). Two regiments formed a brigade (\textit{chiliarchia}) and its commander was a brigadier-general (\textit{chiliarches}), and so on. The union of two wings was an army (\textit{phalanx}) under the command of the general comprising in total two wings, four corps or one-half wings, eight divisions, sixteen brigades, thirty-two regiments, sixty-four battalions, one hundred twenty-eight companies, two hundred fifty-six platoons, five hundred twelve double-files, and one

\textsuperscript{311} See editor’s notes on Asklepiodotus, in \textit{Aeneas Tacticus, Asklepiodotus and Onasander}, 5\textsuperscript{th} ed. (Cambridge, Mass: Harvard University Press, 1986), 232, 234-5. Asklepiodotus may have been a pupil of Poseidonius.

\textsuperscript{312} See the introduction to Asklepiodotus, 233, 242 where the editor tells us that:”The materials for a reconstruction of Macedonian tactics are….preserved here. See also Asklepiodotus, I.

\textsuperscript{313} Appendix B, \textit{MS 97}. 21.

\textsuperscript{314} See Appendix C.
thousand twenty-four files.\textsuperscript{315} Exact intervals between the men are also explained for the most open to the most closed formations.\textsuperscript{316}

This is followed by a discussion on the best length for spears.\textsuperscript{317} Also included are exact descriptions and terms for military evolutions: ‘right-’ or ‘left-face (klisis), ‘about-face’ (metabole), quarter-turn (epistrophe), ‘back-turn’ (anastrophe), further ‘half-turn’ (perispasmos), ‘three-quarter turn’ (ekperispasmos), ‘return-to-original-position’ (epikatastasis), ‘van-position’ (protaxis), ‘rear-position’ (hypotaxis), ‘supporting-position’ (epitaxis), etc. Following the list of descriptive terms are details on how to move the formations and when to use each formation, with diagrams to illustrate each point. Further, the treatise discusses specifics on how to train armies to distinguish between commands—voice, visible signals, and bugles—and how to keep voice commands short and easy to follow. Some suggestions sound rather familiar: ‘Right, about face!’, ‘Stand by to take arms!’, ‘Right face!’, ‘Forward march!’, ‘As you were’, etc.\textsuperscript{318} The handbook is, in fact, a virtual “How-to” manual for “creating your own pike formation.”

Asklepiodotus was very precise in his descriptions of how to move columns from one position into the next, and his text included diagrams, which were passed down with the text. For instance, he explains how to move the files by quarter-, half- three-quarter turns, and return to original position. These were to be used whenever the enemy

\textsuperscript{315} Asklepiodotus, \textit{Tactics}, 2.6-10. See Appendix C for the full text of Asklepiodotus.

\textsuperscript{316} Ibid, 4.1-2.

\textsuperscript{317} Ibid, 5.

\textsuperscript{318} Ibid, 10-12.
appeared on the flank of an army. Also, diagrammed and described are counter-marches, the square, rectangle, extended front, oblique front; the formations in marching, march in line, march in file, oblique march in line, convex, concave, and half square forward and backward marches, the wedge, hollow-wedge and full échelon (or V-shape). Finally, Asklepiodotus diagrams and describes the formation most utilized by the Confederates. As Delbrück points out, this was the oblique technique utilized by Epaminondas and Alexander: the half échelon. The Swiss formed it up with three divisions: the Vorhut, Gewaltshaufen, and Nachhut. The first, or Vorhut (Forwardguard), was appointed to the preliminary opening of battle and to the cover or protection of an advance column. The second, Gewaltshaufen (Power-column) was the main arm in battle, the third or Nachhut (Rearguard) was a reserve force, whose job was to cover the rear. The Vor- and Nachhuts included a quarter each of the available footsoldiers and the Gewaltshaufen contained half. These new techniques gave the Swiss the ability to meet their foes on the open field.

But how closely does the Swiss long pike system match the Macedonian phalange organization as described by Asklepiodotus? The best method of comparison—besides, of course, extant weapons and armor—would be against a fifteenth or sixteenth century Swiss military manual. Unfortunately, we lack one. But we do have a seventeenth century version by the commander Colonel Hans Conrad Lavater, which illustrates and

319 Ibid, 10.4-17.
321 Delbrück, History of the Art of War, 3. 545.
322 Von Elgger, Kriegwesen, 284; Asklepiodotus, Tactics, 11.8.
describes the contemporary Swiss long pike system that remained virtually unchanged since 1500.323

**Lavater’s Seventeenth Century Swiss Military Manual**

We have access to Lavater’s manual, thanks to the nineteenth century Swiss military historian, Carl von Elgger, who describes and partially reproduces it in his *Kriegwesen*.324 Let us compare its descriptions of the Swiss long-pike formation with those of Asklepiodotus’ Macedonian phalanx, beginning with the different units of the infantry. Asklepiodotus writes, “the infantry is divided into the corps of phalangists, the corps of targeteers, and the corps of the so-called light infantry—or corps of short-spearmen.” In Lavater’s Manual (and elsewhere) we find that the Swiss Renaissance army was made up of the same three divisions: the corps of long-pikemen, the corps of crossbowmen, later arquebusiers (or targeteers), and the corps of “so-called” light infantry (the heavy-handed halberdiers and short-pikemen). Gunpowder weapons—glorified missile weapons—and the halberd are the only real differences in form, but they were the same in function.

As to the specifics on the size of weaponry, Asklepiodotus suggests that the best length for the long-spear, or *sarissa*, was, “no shorter than ten cubits (approximately fifteen feet), so that the part which projects in front of the rank is to be no less than eight cubits (approx. twelve feet), in no case is it to be longer than twelve cubits (approximately eighteen feet) so as to project ten cubits (approximately fifteen feet).”325

323 See Hans Conrad Lavater. *Kriegsbüchlein. Das ist, Gründliche Anleitung zum Kriegwesen, nämlich wie ein Vestung...angerichtet...und verwhret werden solle*. Zürich, 1651.

324 See Appendix D for the illustrations that accompany the descriptions.

Lavater’s manual specifies that the Swiss long pike was to be eighteen feet in length, and never any longer.\textsuperscript{326} On the armor of the phalangists, Asklepiodotus writes: “now the corps of [phalangists], since it fights at close quarters, uses very heavy equipment—for the men are protected by shields, cuirasses and greaves—and long spears of the type which will be called here Macedonian.\textsuperscript{327} Lavater illustrates and mentions the “shield of the foot-troops, which had a center groove for the arm to fit into.” The Swiss pikemen, “especially those in the foremost rows,” were the “best fighters, and led the men into battle. They wore cuirasses, and also leather arm and ankle protection.\textsuperscript{328} Similar “front row” fighters in the Macedonian phalange were called “Front-rank-men” or “file-leaders.”\textsuperscript{329}

The Swiss main body of long-pikemen was the \textit{Gevierthaufen}: a rectangle of 10,000 to 15,000 men. Asklepiodotus was flexible on the numerical strength of the phalanx, but commented, “you will find that most tacticians have made the phalanx to consist of 16, 384 [phalangists]. But the size of the main fighting formation is also similar in each case.” As to the break-down of the column, Asklepiodotus writes: “Two files will form a double-file and the officer in command will be a double-file leader, and twice this number will be a platoon and the officer in command a platoon commander, and twice the latter number will be a company, and the officer in command a company commander, and twice the number of a company will be a battalion and the officer in

\textsuperscript{326} Von Elgger, \textit{Kriegwesen}, 430.
\textsuperscript{327} Asklepiodotus, \textit{Tactics}, 1.
\textsuperscript{328} Although apparently some Swiss soldiers found this added protection awkward, and rejected the full panoply. See Volker Schmidtchen, \textit{Kriegwesen}, 233. See Fig 2.7.
\textsuperscript{329} Asklepiodotus, \textit{Tactics}, 2.
command a battalion-commander. The file has thus 16, the double-file 32, the half-company 64, the company 128, and the battalion 256.” Lavater does not describe the command structure of the army, but Swiss sources do suggest a similar organization. Men fought in units by canton. Once they arrived on the battlefield the Ordnungsmacher, or “battalion” commander would form them by banner into his preferred battle order.

Even Asklepiodotus’s “supernumeraries” (men outside the company itself)—army-heralds, signal-men, (or flag carriers) and buglers, fifers and drummers—appear in Lavater’s manual. Schmidtchen explains that the signalmen, i.e. the flag carriers and the piper and drummer (Pfeifer und Trommler) were placed in the center of the column for protection and each had a specific purpose. The heralds, signal-men and buglers ensured good communication between units in the noise of the battle, while the task of the drummer and fifer was to provide a steady and, perhaps calming beat, as the soldiers marched forward into battle, “more or less in step.” Asklepiodotus’ supernumeraries performed the same tasks. He writes, “The first (the army herald) was to pass on the command by a spoken order, the second (flag carrier) by a signal, in case the order could not be heard because of the uproar, the third by the bugle, whenever the signal could not be seen for the dust.” Asklepiodotus did not mention the fifer, but oddly enough, this was a Spartan tactic, described by Thucydides at the battle of Mantinea (418 BC).

330 Asklepiodotus, Tactics, 2.
331 See Appendix D, Lavater’s Fig. 31.
332 Schmidtchen, Kriegwesen, 175.
333 See Appendix B, Asklepiodotus, Tactics, 10
So, for the most part, army divisions were similar, the command structure was similar, and the communications arrangements were the same for both systems. But this still does not prove that the Swiss adopted these tactics based on Asklepiodotus.

However, a couple of clues in Lavater’s manual hint that they did. The first are two diagrams Lavater adds that are fairly similar to those found in Asklepiodotus. Figure 47 is described as “Doubling in Depth or Doubling the Ranks.” It illustrated the movement by which, men of the even numbered files move a step to the right and backwards behind the men to the right or left in the odd numbered files. After doubling the ranks and files the column assumes the regular intervals of three feet. Doubling in Depth was the way to decrease the number of the ranks and to strengthen the numbers of the files. Doubling, in the same way, a number of times, would form the wedge. This figure represents a column made up of eight ranks wide by eight rows deep. After the doubling it would become four rows wide and sixteen files deep. Other similar formations began with eight ranks, which, at will, could shift into a number of different formations. The second, Figure 48, illustrates “Doubling in Width, or Doubling the Files.” This was the way to widen the Front: the depth was decreased in order to strengthen the files. On command, the even numbered rows took a step to the side and a step forward next to the men in front of them in the uneven numbered ranks. After the movement the normal gaps were resumed. The Doubling of the files could be arbitrarily implemented to the right or to the left.

---

334 See Appendix D, Lavater Figures 47 and 48.

335 Von Elgger, Kriegwesen, 436.
Exactly the same movements are described with similar terminology in Asklepiodotus, and are accompanied by diagrams nearly identical to those in Lavater.\textsuperscript{336}

Asklepiodotus writes:

The term doubling is used in two ways… also called by depth or by length. Doubling of men takes place by length when we interject or insert between the original files or other files of equal strength, maintaining all the while the length of the phalanx, so that a compact order arises only from the doubling of men; doubling takes place by depth when we interject between the original ranks others of equal strength, so that a compact order arises only by depth. Doubling of place occurs by length when we change the about mentioned compact formation by length into a loose formation….whenever we wish to return this compact formation to its original position, we shall command the men who have changed their position to counter march to their original stations….by such evolutions a phalanx assumes sometimes a square….an oblong rectangle, or again, of an extended form when the length is many times as great as the depth, or of an extended depth when the depth is as many times as great as the length.\textsuperscript{337}

Although we cannot prove that the Swiss utilized Asklepiodotus, or any other classical military author as a blueprint, a case can certainly be made that they did. However, if we knew that burghers, or even members of the leisurely classes, of the late fifteenth to sixteenth centuries could not read Greek the case would be significantly weakened. If they could not read Latin we would have to discard the argument altogether, since it is unlikely that classical texts were commonly either translated into Germanic languages or readily available.

However, just when the new Swiss “Macedonian-style” pike squares appear on the battlefield, the Renaissance swept Northern Europe. Their existence at Bern is particularly important since this city from the late-Middle Ages was known to be a center of military knowledge within the Empire. Bern also had a strong burgher class who were

\textsuperscript{336} See Appendix D, Lavater Figure 49

\textsuperscript{337} Asklepiodotus, \textit{Tactics}, 10, see Figures 1-10.
educated; and a strong aristocratic element remained, even with the creation of the democratic Confederacy, into which they became incorporated as civil and military leaders, former knights, with an education and a great deal of military knowledge and experience, became commanders. These upper-class elements were important to the Confederacy because they were both educated and willing to give up a great deal of their aristocratic power to live in a burgher-controlled Confederacy, and their influence, particularly at Bern, remained strong. This meant that the major military strategists, in a city with a reputation for military thought, were the educated and “leisurely” upperclasses. They had time to search out literary sources on military matters, which, as we shall see, they did—and they could read Latin. Some, like leisurely/diplomatic classes elsewhere, could also read Greek, and would have been just as interested in the Greek military manuals that remained untranslated into Latin as was the great French collector, copyist and diplomat Jakob Bongars.

**Bongars: Humanist Learning Trickles Down**

In the story of Jakob Bongars (1554-1612) we become aware of how the humanist interests of the upperclasses led to public access of classical literature in Bern. Ambassador to the King of France, Bongars followed in the footsteps of his ancestors who were counselors to the Kings of France; but Bongars, himself, acquired his position more on the basis of his broad humanist education and knowledge of languages than for family inheritance. For ten years he studied in Germany at the Latin schools at Marburg

---

338 The study of classical Greek became widespread among humanists, who came from the old or rich families in the free cities, in both Italy and Germany by the early-1400s. Humanists in Bern, also a free city, would have benefited from contact from North to South, and vice versa. On the study of Greek and movement of humanist ideas see, Rudolf Pfeiffer, *History of Classical Scholarship from 1300 to 1850* (Oxford: Clarendon Press, 1976), 47-70.
and Jena, so that from a young man he was familiar with the ancient authors. He studied under Christian Martin. After this, he began his higher studies—philosophy and philology—at Orleans. In Bourges he attended the lectures of Cuiaciaus and Donellus, who lectured on the Roman state and law. At this time he started collecting books. After this he studied under Hotomannus, and then journeyed to Rome where the famous classical researcher, Fulvius Ursinus opened his collections to him.

He also met and became friends with Justus Lipsius—the later mentor of the Nassau cousins—then traveled on from Hungary east to Constantinople in a quest to recover ancient texts. When he returned, in 1585 he went into the service of Henry of Navarre. His first position in the government was as translator and Ambassador to the German princes, but was soon given more important responsibilities. As a diplomat, he continued to travel widely for twenty-five years in the service of the king, and was sent on missions to protestant Germany, Denmark, and England. His letters show he was in contact with men such as Tycho Brahe, Justus Lipsius, the physician Camerarius, Peucer, Petavius, Schoppius, Pithoeus, Joseph Scaliger, de Thou, Casaubonus, and P. Daniel.339

This is interesting, since during this time Bongars’s primary responsibility was to procure funds for the French military, and to secure alliances with powers that could supply mercenary troops for the French king. He was also involved in French intelligence. So, it should be no surprise that among his acquisitions, which continued to grow during his time as a diplomat, were classical military treatises. However, what is

339 Hans Blösch, Die Stadt- und Hochschulbibliothek Bern: Zur Erinnering an ihr 400 jähriges Bestehen und an die Schenkung der Bongarsiana im Jahr 1632 (Bern: Buchruckerei Dr. Gustav Gaunanu, 1932), 40-2. See also p. 39 where Bliches tells us that Bongars irritated by the “craze” among the French to trace their origins back to Troy tried his hand at genealogy and created a family tree. The sketch is still extant at Bern and from it we know that his great-grandfather, Guillaume Bongars was counselor to Charles VIII and captain of the archers of Nivernais; his grandfather also counselor to the king of France, and his father held the title of ecuyer.
most impressive about these treatises is that they were not ancient Roman works, but Greek. And Bongars set them aside as a special collection within his library. Further, either he, or the person in the fifteenth to sixteenth centuries who copied them in a “humanistic hand,” took notes on them; scribbled notes in their margins—in Greek—and diagrammed what was being discussed.\textsuperscript{340}

\textbf{Bongars’ gift to the Bern Bibliothek.}

Bongars left this collection to the son of his best friend, Reinhard Graviseth, to whom he felt indebted. Many times Bongars had turned to Graviseth, a banker, to provide him with funds for raising mercenary armies for the king of France, much of which the king was unable to pay back. So when Bongars thought he was near death, he bequeathed his library, which he knew was of great worth, to Reinhard Graviseth in order to repay his debt to the family. However, the will stipulated that the young Jacob Graviseth (b. 1598) would receive the collection on the condition that he continued his humanist studies, so that he could successfully use the collection himself. Jacob, fulfilled the obligation, learning Greek and Latin, and becoming a humanist himself. In 1619 he moved to Basel, and received Bongars’ collection in 1622. In 1624 he married Salome of Erlach, daughter of the Bernese mayor, Franz Ludwig of Erlach, and as part of the marriage contract promised to acquire Bernese citizenship and purchase a house in Bern.

Bongars’ and the Graviseths’ friendship and link with the von Erlach family is significant. In 1628 Hans von Erlach, descendent of Rudolf von Erlach who was commander of the Bernese forces at Laupen in 1339, reorganized the Bern militia on

\textsuperscript{340} See Appendix B. \textit{MS 97}: 9-10.
Dutch lines, which were themselves the product of classical learning. He later commanded the “Bernardines: a semi-autonomous army during the Thirty Years’ War.

F. Walter writes of him:

In 1628 Hans Ludwig von Erlach, who had served with Maurice of Nassau, returned to Bern and reorganized the Canton’s militia along Dutch lines; while three years later Hans Wilhelm Stapfer, another Dutch Veteran, produced a “Drill Manual [Exerzierreglement]” taken straight out of de Gheyn for the Zürich militia.

Later the same year, Jakob gained citizenship in Bern, and the Bongars collection was given as gift to the city in return for the city’s grant of citizenship. The city of Bern acquired it in 1632. With it the library (discussed below) more than doubled their possessions, some 3500 printed volumes and over 500 handwritten documents were added to the library’s holdings. Key to this donation is the stipulation Graviseth left in his will: as a condition of the gift, the entire collection was to be available and free to the public, with a “check-out counter” being established so that citizens could peruse the documents.

MS 97

Among those works that could be checked out by Bernese citizens was Bongars’ MS 97 the anthology of Greek tacticians, copied in the fifteenth to sixteenth centuries.


342 F. Walter, Niederländische Einflüsse auf das eidgenössische Staatsdenken in späten 16. Und frühen 17. Jahrhundert (Zürich, 1979). Chapters One and Two examine the reform of the militias of the Cantons Bern (1628) and Zürich (1629).

343 Blœch, Bibliothek, 55-60,110 . These mercenary troops came mostly from the Swiss Confederation and the South German cities.

344 Ibid, 12. Blœch believes this stipulation, and the liberality with which its was carried out is the reason some books mentioned in the old catalogue today are no longer there, despite ongoing searches for them.
MS 97 also includes Aelian’s, *Tactica* with sketches, which were passed down integrated into the text. Other parts of the Bongars collection contain Greek military treatises covering Greek siege techniques, Greek grammars, and other items that might have been of interest to a military tactician. We cannot be certain where Bongars picked up these sources, but we do know they were circulating much earlier. A tenth century copy of Aelian’s *Tactica* found its way into Cod. Laurentianus L V-4\(^{345}\); and Cod. Parisinus graecus 607 (eleventh century) and 2445\(^{346}\) (eleventh-twelfth centuries), contain fifteen sketches on the first two pages of Asklepiodotus’ Chapter eleven which illustrates his march and attack formations. This latter folio also includes other ancient sources such as Athenaios, *De machinis*; Apollodorus of Damascus, *Poliorketika*; and Heron, *Belopoiika* with sketches of military siege machines, weapons, and tactical formations.\(^{347}\)

Clearly, the Swiss and the Dutch not only recognized the ties between their own militaries’ tactics and those of the Greco-Romans, but were discussing and *exchanging* the classical military texts themselves. Further, they taught each other how to *apply* the classical tactics to contemporary battlefield conditions.

**Influence of the Humanists**

The problem with MS 97, for our purposes, is that it arrived in Bern in 1632, too late for *its* Greek military treatises to have been used as a blueprint to create long-pike formations, since these began sometime in the second half of the fifteenth century, first appearing in the Burgundian wars of the late sixteenth centuries. However, this does not

\(^{345}\) At the Laurentian Library, Florence, Italy.

\(^{346}\) At the Bibliotheque Nationale de France, Paris, France.

\(^{347}\) On these and other sketches passed down by copyists, see Alfred Stückelberger, *Bild und Wort: Das illustrierte Fachbuch in der antiken Naturwissenschaft, Medizin und Technik* (Mainz am Rhein: Verlag Philipp von Zabern, 1994), esp. 109-11.
mean that Asklepiodotus would not have been available; the Greek tactical manuals, along with their Roman counter-parts were being reproduced in ever increasing numbers in the late-fifteenth century. Of course, the Bern Burgher Library’s founding and the history of its greatest collection of classical literature—the *Bernensium Bongarensia*—is also closely tied to the history of humanism and its influence on European thought, just at the time the Swiss long-pike formations were created.

From Italy, humanistic thought had already disseminated to Europe by the first half of the fifteenth century, and humanistic ideas were already spreading to a wider, nonclerical public, even before the introduction of the printing press, which Chastely argues was simply the response to a demand, an answer to the problem of providing texts to the great numbers of new students who were seeking an education. This new humanist education was directed towards the young. Unlike, the earlier scholastics who believed education should be a pursuit of adults, “a certain number of [humanist] teachers with a true vocation and entirely different in outlook, some of whom were endowed with real genius,” were willing to take the young into their tutorship. “Considerable journeys were often undertaken to entrust children to such masters…” The new education took shape not so much within the Universities themselves as in the communal schools and private boarding establishments.” At the same time movements of enlightened monks, such as the Brethren of the Common Life, founded in Holland at the end of the fourteenth century and the Windesheim Congregation—Erasmus, was one of its pupils—began infiltrating communal schools in Holland and in Germany. They produced the famous schools at Deventer, Zwolle and Münster.
Alexander Hegius, the greatest teacher outside Italy, had more than 2,000 pupils. The movement created confirmed humanists, as four hundred and fifty *incipit* by classical authors issued from the Deventer presses. So, even religion became infused with humanist thought. As Chastel has found:

The *Devotio moderna* evolved naturally towards humanism by way of its concern for education. In Italy a similar concern resulted in an accentuation of the pious intentions of humanism. As early as the 1420s Italian humanists were providing a comprehensive education to all classes: poor students were allowed in free of charge and without the discrimination that was practiced at the colleges. Meanwhile, Byzantine scholars came in to teach Greek.  

Swiss intellectuals, like their European counterparts were just as taken with humanistic thought as others throughout Europe. A prime example of this is the poetry of Heinrich Loriti (1488-1563) written in the early sixteenth century, which opens the tale of William Tell with the line “For us, Brutus was Tell from the land of Uri.” He is, of course, referring to the Roman Senator Brutus who was involved in the conspiracy to kill Julius Caesar to prevent him from destroying the Republic by making himself “Ruler of the Romans” (or the first Roman Emperor). As Chastel suggests, the Florentines and others after them preferred to consider themselves in the tradition of Brutus rather than that of Caesar; i.e., they advocated a Republican government over an aristocratic one. So, long before the Tell legend was associated with Republicanism in the eighteenth century through the opera of Schiller, it was already being used in Switzerland as

---


349 Heinrich Loriti, as early as 1511, was also called Heinrich Glarean, or Glareanus. The name comes from Glarus, the canton in which he was born.


351 Ibid, 11.
political commentary on the rule of aristocratic elements in Europe. The hero Tell would not bow to aristocratic power; instead he would lead an insurgency to kill the Habsburg bailiff Gessler: thus, he was the Swiss’ own “Brutus”.

Likewise, in Switzerland, what began as cloister educational reforms soon led to the foundation of secular schools and libraries in order to teach the “younger generation”—the children. The founding of the Bern city library in conjunction with secular schools in the early sixteenth century is a prime example. In 1528 the Bern city council first issued orders that the doors of the Chorherrenstift be opened to educate the younger generation. Four years later the same counsel unanimously decided to allocate the property of the Kloster to the school, including all of its books. So, what was once a cloister now served as a public school, whose books became available to the young pupils. Blœsch provides a hint as to what these books contained when he writes: “The booty was not great; apart from an occupation with martial and political ideas, the old Bernese had little time or aptitude for intellectual interests.”

Along with these books, the school acquired another collection of books from Basel, and began a library.

In 1535 the school and the library moved to the Franciscan monastery on the Herrengasse. Increasing numbers of students attended the school and an interest in collecting books continually rose: the school acquired donations from both professors and clergymen and the library grew substantially by 1548. One large collection came from Jörg Schöni, who was happy to donate the books to the public library, but worried that public access would lead to a loss of books, stipulated as a condition of his gift that

352 Hans Blœsch, Bibliothek, 9: “Die Beute war keine grosse; den alten Bernern war neben der kriegerischen und politischen Betätigung wenig Zeit und Begabung fürgeistige Interessen übrig geblieben.”
his books be chained to the library. The next big collection came from the will of a
Professor of Greek and Latin, Niklaus Pfister of Balingen: we can imagine what sorts of
books he donated. Further, by nature of his position as Professor of Greek and Latin, we
know that by 1548 Greek and Latin were taught in Bern. Not only did the public have
access to these works, but a large number of them disappeared—until in 1579 the Senatus
academicus, or school board, issued an order that no one was allowed to take books
home, so that particularly the costly and uncommon books would be not be lost. These
donors to Bern’s library also give an idea of what was going on elsewhere in Switzerland,
and the rest of Europe.

The fact that scholars in Switzerland could read Greek and Latin in the late
fifteenth century does not mean that they would have had any influence on the creation of
Swiss formations—and we have no first-hand testimonia that they did.

Yet, by 1343, archives in Switzerland held two copies of Frontinus; six copies of
Vegetius; and five of Sallust. Between 1353 and 1400, Bernese monasteries acquired
(among other classical sources): Frontinus, Strategemata; exerpts of Orations in
Thucydides; Tacitus, Germania; Cicero; Demosthenes, Philippics; and Plutarch, Life of
Cicero. Such works would have been practical guides to military stratagems, orations,
justifications, and rhetoric.

---

353 Ibid, 10.
354 See Pfeiffer, Classical, 45-52.
355 Gustav Becker, Catalogi Bibliothecarum Antiqui, 4-12, 131-2, 147-48, 208-9, 252; Walter
Berschin, Griechisch-Lateinisches Mittelalter von Hieronymous zu Nikolaus von Kues (Bern & Münich,
1980), Hermann Hagen, Catalogus Codicum Bernensium (Hildesheim & N.Y.: Georg Olms Verlag, 1974),
502; Hermann Hagen, Jahrbuch für Philologie, 99, 115; Paul Lehman, Mittelalterliche
Bibliothekskataloge, 89, 192, 196-8, 258-266, 455, 479.
356 Frontinus, Strategemata, 2. 3. 1-6.
have transmitted classical justifications for war, egalitarian idealism, as well as providing examples of effective wartime rhetoric. The famous “Funeral Oration of Pericles the Orator” is instructive in this context. Further, during the fifteenth to sixteenth centuries—just at the time the Confederates had suffered their first defeats and reinvented their new system—new sources appear in Bern: the speeches of Demosthenes: *Olynthiac, Contra Philip I, II, III and IV, De pace, Haloneso, De rebus Chersonesi, De Philippi epistula*—all criticizing Philip, King of Macedon, and encouraging the Greeks to fight against his rule; and Xenophon. All of these sources suggest the Swiss were reading classical sources that echoed their own struggles against foreign domination.

Demosthenes and Xenophon are particularly interesting since the former develops the reasons egalitarian city-states should unite in a pre-emptive strike against foreign oppressors; the latter includes descriptions of classical Greek phalanx battle.

For example, Demosthenes encourages the citizens of Athens to rise up against the Macedonian aristocrat Philip who poses a threat to their democracy. Like Thucydides, Demosthenes would have provided the Confederates with justification for their militia system and the policy of fighting against aristocratic enemies: that no free man should give up their right to fight for themselves by allowing others—in particular aristocrats—to fight on their behalf. His words would have been confirmation that the Swiss had been

---


right to retain their warlike spirit even at a time when others, unwilling to fight, had allowed the warrior-class to prosper at their expense.

The Confederates wished to turn this situation around, perhaps to heed the call of Demosthenes, and take back their power from the nobles by fighting for themselves. It was during the fifteenth to sixteenth centuries, in fact, that the lower social strata—the Swiss burghers and peasant—took power into their own hands. By 1499 fifty castles belonging to counts and 160 other seats of noble authority and their owners had been defeated or expelled. As a result, the higher and lower nobility completely lost their control, except as they submitted to absorption into the community of citizens. So, it is no surprise that we find nearly all of Demosthenes’ speeches of exhortation on this subject at the Bern Burgher library.

In Xenophon, as in Vegetius, Swiss leaders would have found clues to what techniques work well and not so well, and how their new militia formations would be best served over long marches—a theme that continues to play a large role in Swiss militia training even today. That the Swiss took such instructions to heart is reflected in the tradition that is still extant today of training recruits to march in step for long distances covering Switzerland. At least by 1499 this was an institutionalized practice, which included exercising units through long starvation marches. Still today, part of the promotion process for Swiss officers includes marching endurance tests. At certain stages officers must prove that they can march without food from one side of Switzerland to the other. Xenophon also includes practical advice for commanders, including what

---


360 For the earliest documents recording the origins of these exercises see, Staatsarchiv Zürich, A 159; A 159 2. Mai 1499; A 159, 30 Apr. 1499 and Staatsarchiv Luzern, *Urkunden* 236/3546.
to say to soldiers fearful of horsemen, before facing armies consisting mostly of horse.

He writes, for instance,

But if anyone of you is despondent because we are without horsemen while the enemy have plenty at hand, let him reflect that your ten thousand horsemen are nothing more than ten thousand men; for nobody ever lost his life in battle from the bite or kick of a horse, but it is the men who do whatever is done in battles. Moreover, we are on a far surer foundation than your horsemen: they are hanging on their horses’ backs, afraid not only of us, but also of falling off; while we, standing upon the ground, shall strike with far greater force if anyone comes upon us and shall be far more likely to hit whomsoever we aim at.\footnote{Xenophon, \textit{Anabasis}, in \textit{Xenophon in Seven Volumes III Anabasis Books I-VII}, trans. Charleton L. Brownson (Cambridge, Massachusetts: Harvard University Press; London: William Heinemann Ltd., 1968), 3.2.18-19.}

When retiring with the enemy in pursuit, Xenophon suggests:

It will be safer, perhaps, for us to march with the hoplites formed into a hollow square, so that the baggage train and the great crowd of camp followers may be in a safer place. If, then, it should be settled at once who are to lead the square and marshal the van, who are to be on either flank, and who to guard the rear, we should not need to be taking counsel at the time when the enemy comes upon us, but we should find our men at once in their places ready for action.\footnote{Ibid, 3.2.36-7.}

As we have seen, the Swiss system often formed into a hollow square, and used banner men to insure that everyone could be organized quickly into position. Xenophon discusses fighting on different terrains, how to wheel troops around to face various enemy dispositions, and the utilization of light-troops such as peltasts and slingers, the pros and cons of fighting in line verses column, the élan inspired in the phalanx when the commander fights among their ranks, and much more.\footnote{See for instance, Xenophon, \textit{Anabasis}, 4. 2. 9-33, 4.3.30-34, 4.7.1-7, 4. 9. 10-13; 5. 2. 11-23; 7.3.45-48.} His work would have provided
practical battlefield know-how for a militia that fought nearly exclusively on foot with pikes.

So even if *Asklepiodotus* was not available to the Swiss in the late fifteenth- to early-sixteenth centuries, other classical sources were circulating. There is also good reason to believe that centers of humanist learning sprang up in the larger cities like Bern, Zürich and Luzern, as they did elsewhere in this period. By the early 1500s important Swiss leaders could read both Greek and Latin, and, those who could not, likely knew who to ask for a translation. So, at the time of the rise of Swiss pike phalanges, classical military treatises were available in Switzerland, and they could be translated and duplicated. There is no absolute proof that the Swiss used Greek tactical manuals, such as Asklepiodotus, to create their Renaissance formations, but the overwhelming evidence suggests they did.

The problem is that while there is evidence of a copy of Asklepiodotus, and others, at the Bern Burgerbibliothek in the seventeenth century, nothing similar has turned up for the fifteenth century when Swiss pike columns were developed. So, alternative pathways must be also considered in the quest to uncover the foundations of the Swiss way of war.
Figure 5.1: Battle of Pavia in Ashmolean Museum.
PART III:
WHAT SWISS FORMATIONS WERE
CHAPTER 6

THE PRODUCT OF A DEMOCRATIC SOCIETY IN THE “INNER” CANTONS
WITH ROOTS IN THE GERMANIC GAU
(1240-1315 A.D.)

It was the inner cantons of Uri, Schwyz, and Unterwalden that laid the foundations of the Swiss way of war. See Map 3. Delbrück, Oman and Verbruggen have emphasized the egalitarian nature of the Swiss commune and the “democratic spirit” of their armies as explanations for why the Swiss were able to replicate their success at Morgarten and dominate the late-Medieval battlefield. But, communes elsewhere in Europe were also experimenting with egalitarian ideals that laid foundations for their own armies. Verbruggen writes of the Flemish and Swiss, for instance:

Peasant communities, a sort of ancestral organization of Germanic autonomous republics, remained in existence in the Frisian lands of the North Sea coast, in Dithmarschen, and among the Sfedinger on the Weser…. [Likewise], in Schwyz communities of a hundred families inhabited the valley in the time of the Franks. Up to the beginning of the thirteenth century they were under the leadership of a hunno…. Both free and non-free formed the ‘mark association’ or free community, which controlled the allmendes, or common meadowland, and economic policy. The free peasants made up approximately two-thirds of the population, which around 1289 were over [3,000] families strong…. [And] a strong bond formed among the inhabitants…. [Schwyz, Uri, and Unterwalden] were in constant touch with the north Italian cities, and well understood the struggle of those communities for freedom and independence…. Soldiers from Schwyz and Uri fought for the abbot of St. Gall in 1251, and ten years later for the Baron of Vatz. In Italy they learned the tactics of footsoldiers from the communal armies.

---

364 See Map 3.

365 Verbruggen, The Art of War, 100-1.
So, what made the Swiss different from the others? Verbruggen recognized, but made no
distinction between the Swiss and other communes that also had a special history of
autonomy, which he links to especially strong communal struggles for independence. So,
why did Swiss armies succeed in their struggles for independence when others failed? In
order to determine to what extent the Swiss communal armies could claim a “special
egalitarian spirit,” communal proto-democratic institutions elsewhere in Europe must be
evaluated to weigh their affect on the development of European communal military
systems.

**European Communal Development.**

Rural communal institutions secured to countrymen “from the most remote times
the enjoyment of liberty, equality and order, and as great a degree of happiness as is
compatible with human destinies,” wrote the nineteenth-century historian Emile de
Laveleye. While modern historians, such as Pierre Goubert, have argued that
egalitarian institutions were non-existent even within the communal systems of the late-
Middle Ages, we now know that Laveleye’s idealistic picture of the peasant commune,
more closely resembles the historical reality. Admittedly the old peasant communes were
not democracies, but they certainly entailed proto-democratic institutions that reflect
ancient Germanic communal practices. As Jerome Blum argues:

> [The commune’s] control over village life varied with local needs and
traditions and the extent to which its autonomy was limited by the lord and
by the state. [Yet], whatever the limitations imposed on it, the rural
community was simultaneously an economic community, fiscal

---


367 See P. Goubert, *Louis XIV et vingt millions de Français*, trans. Anne Carter (New York:
Communes, not their lords, made decisions about and coordinated all farming activities: the selling, exchanging, leasing and buying of common lands; settling disputes among members; providing welfare services and relief to members in times of crisis; and maintaining public works, such as, maintenance and repair of roads, bridges, ditches, and water courses. Most had their own fire departments, repaired their own churches and founded and operated their own community schools. By the late Middle Ages communes began to write down the rules, regulations, obligations and privileges that had been earlier passed down through oral tradition.

Typical of the old Germanic system, the basic social and economic unit in the commune was the family. Leaders of family clans met in the communal assembly once a year to receive reports, elect officers, and make community decisions. A village headman (originally the Hunno) was generally a man of strong character and status—just another peasant farmer—respected by the community. The position usually fell to a middle class peasant, since the very affluent often used their wealth and influence to avoid the responsibilities of the position, and poorer peasants had neither the time nor experience to take on the requisite everyday tasks of the office. But in certain isolated areas like the Forest Cantons of Switzerland the local structure of Germanic society was preserved and emphasized. The hunno, or Landesamman, became the leader. He was not


369 Ibid, 542, 544, 546.

a king or a chief, but just a leader, chosen by the local assembly of the people. Further what was once property owned in common by certain families became held in common by communities. As Jerome Blum puts it: each family clan within the tribe held in common a piece of land, a concept that would later have expression in the “communal march” and which later would form the basis of constitutional law in Europe. Even peasants who worked the soil of landowners were given a great deal of autonomy in managing their own affairs.

Often historians have drawn a sharp political distinction between the classical Greco-Roman constitutional governments and modern constitutions on the one hand, and medieval law in which classical political trends were supposedly lost, on the other. But for Brian Downing, and others, the distinction is not so sharp. In fact, the reality was that medieval peasant struggles actually linked the political thought of the ancients with those of modern thinkers. Downing writes that:

“The political struggles for nineteenth century Europe, though decisive for the growth of liberal democracy, must not be mistaken for its origins. When Chartists marched for citizenship rights, when new middle-classes pressed for government reform, when subjects demanded legal guarantee, and when representative assemblies attempted to check the power of monarchs, they were fighting very old battles over institutions, rights, and ideas that had marked the history of Europe even during medieval era.”

371 Jerome Blum, “Community,” 547-9. Blum argues that the older Germanic communal system was preserved in Western Europe throughout the Middle Ages in the local commune. By the late Middle Ages communities had written down the rules and regulations for the communal system, which had been passed down through oral tradition. On the Markgenossenschaft in Switzerland and elsewhere see Fritz Wernli, Studien zur mittelalterlichen Verfassungsgeschichte, 1 and 5, Die Talgenossenschaften der Innerschweiz: Ein Beitrag zur Frage der Hundertschaften und Markgenossenschaften (Zürich: im Selbstverlag, 1959-68).

372 Ibid, 552, 559-60, 562.

It was the demands of rural communes and their eventual allies the city Burghers, which led to constitutional, democratic governments. Communal citizen militias lent weight to communal ultimatums throughout Northern Europe even when they were unsure of the process by which much of their agendas had filtered down from classical antiquity.

**The Armies of the Germanic Commune c. 1300**

But the development of constitutional government in Western Europe is tied to military service in another equally important way. Even at the peak of feudalism in post-Carolingian Europe, social structure was predicated on a network of mutual obligations based on feudal military exchange. While clearly these feudal institutions were usually repressive, nevertheless, the system contained within itself the basis for citizenship and representative institutions and law.\(^{374}\) Originally, although knights did most of the fighting, they were also bound by contractual obligations, through free and consensual agreements with communes, to defend and protect them against any harm. Communes depended on the knight’s lawful right to resist any unfair authority, and to use this privilege on their behalf.

In addition, as Max Weber repeatedly points out, feudal Europe included so many citizenship rights—the franchise, political representation, immunities, rewards for military service—that in order to regulate and protect these rights an entire corpus of legal thought was created to settle disputes.\(^ {375}\) The system had its origins in the

---


Carolingerian period, where military service was contractual, and kings called assemblies of knights to settle matters of general policy and military operations, just as their Germanic ancestors had done. From 1000-1300 A.D. warrior assemblies became the baronial *curia Regis*. A warrior’s right to consult with kings before battle, set the precedent for later communal armies. A knight was under contract to a king: he was not a slave, but a partner with rights of vassalage.

In turn, communes under baronial control could demand the knight’s protection from outside oppression. So when knights were called to advise the king, particularly in military matters, they were required, at least to some extent, to speak on behalf of their own vassals. This was necessary since vassals had the right of protection. From Carolingerian times, the failure of a knight to protect his own vassals was quite literally a deal-breaker. A free vassal could, by law, break the oath of loyalty to his lord, if the lord failed to protect him. So, knights (or lords) essentially were military servants of their peasants and burghers. Eventually, communes turned the system on its head: they became their own protectors, and made alliances with kings to protect their own communities from oppression by local feudal lords.

As Marxist historians have rightly shown, it was the very exploitation of the vast majority by their feudal overlords that led to the peasant rebellions of the early-fourteenth century. According to Max Förster, in the fight against feudal domination, the oppressed classes developed specific forms of combat, created their own armed organizations and crafted unique military ideas. This ruined the feudal social order and thereby prepared the soil for the later defeat of feudalism politically and socially, by the alliance of the rising Bourgeoisie with the peasant farmers who massed in communal militias.
The development of an antagonistic class society gave warfare a pronounced class character. This was possible, of course, since throughout the Middle Ages the peasant classes had already developed fighting skills even though the feudal aristocracy always led the charge in battle. As Förster writes:

The defense against the assaults of Arabs, Hungarians, Northmen, and Mongols into Europe was supported by the people; a number of these wars and their military achievements of the "the people" and the deeds of military leaders evoked a strong emotional response for some time in the collective memory of the peoples of Europe, and the notion of a "people's style of war" progressively developed and became a tradition among the people. [Later] the people fought for a life of peace and security, and freedom from feudal oppression, and grabbed at any means possible to fight. Despite the military supremacy of the feudal lords and despite defeats, the peasants in different areas of the German feudal states rose again and again….They founded a long tradition of a revolutionary-democratic fight to overcome the feudal social order. 376

So as early as the end of the thirteenth century the importance of the communal militia throughout the German lands, but in other places too, was increasingly recognized. This was especially true in places where geography was unfavorable to the knight and where feudalism had shallow roots, as in Switzerland, Scandinavia, Scotland, the Low Countries and Wales, where communal militias were the strongest. But everywhere throughout England, Scandinavia, and the Germanic lands, citizenship rights and military service was as closely connected as it had been from ancient times. The village "hundreds," in Scandinavia and Switzerland, for instance, were both instrumental in the development of constitutional government, and created infantry formations from male populations who, in turn, were given a voice in popular assemblies. As in ancient times, members of the assembly arrived with their spears (frameae), which were raised to

376 Förster, Militärgeschichte, 17-20. This is, of course, the Marxist interpretation, but has become the consensus view.
indicate consent—a tradition that *does*, in fact, have continuity with ancient times.\(^{377}\)

The same system was at work in medieval towns, where citizen militias were raised to protect the town from royal or aristocratic assaults, and were in turn enfranchised. As Weber points out:

> The basis of democratization is everywhere purely military in character: it lies in the rise of disciplined infantry [from] the hoplites of antiquity [to] the guild army of the Middle Ages…. Militia discipline meant the triumph of democracy because the community wished and was compelled to secure the cooperation of the non-aristocratic masses and hence put arms, and along with arms, political power, into their hands.\(^{378}\)

So we can make the case that a “democratic-spirit” likely drove the Swiss peasants to fight against their overlords; but this also happened elsewhere. Does the historical development of the central cantons, then, hold any clues that would explain, a “special freedom-loving character” particular to the Swiss?

THE CONSENSUS VIEW ON THE ORIGINS OF THE FOREST CANTON COMMUNITIES

Despite various interpretations on the details of Confederation’s founding there is consensus on one issue: the Forest Cantons were an isolated pocket within the German Empire that retained an ancient Germanic democratic social structure. Likely this is the reason that Carl von Elgger, the nineteenth century Swiss military historian, argued that tactics at Morgarten reflected Celtic/Germanic roots. He believed the first settlers of the Forest Cantons were skilled explorer-immigrants from Celtic tribes who sought to create

---


independent settlements away from their larger groups sometime around the first century B.C. These peoples had long been in contact with the Greco-Roman world, through both warfare and trade.\textsuperscript{379} We cannot be certain; of course, if any who settled in the Forests during this period had any experience with Roman tactics. However, the Forest Cantons were part of the Roman province of Marseilles, so the opportunity to serve in the Roman army was available to them.

A second wave of immigrants from Alemannian tribes settled among the forest cantons during the fifth century A.D. Since this second group seems to have been fugitives, von Elgger speculates that they were perhaps deserters from armies, who fled to the isolated region since desertion from German armies could result in public humiliation and sometimes hanging.\textsuperscript{380} Finally groups of Lombardic peoples moved into the area in the sixth century presumably on their way to Northern Italy.\textsuperscript{381}

It is likely that around the sixth to seventh centuries the various early clans—all refugees from larger tribes—may have allied to form the first colonies that would later become cantons. Over time their society was organized on the Germanic model, based on the communal family-clan. As Celts and Germans, their main weapon, originally, was

\textsuperscript{379} See Chapter 3 for a discussion of Celtic Swiss contacts with the Greco-Roman world. Von Elgger, \textit{Kriegswesen}, 5, n.1. A number of Roman coins from this period have been discovered in the central cantons, although there is some controversy concerning how they made their way into the area. Modern archeological artifacts from this period are few and far between. However, the evidence suggests a Romanized ancient people settled on the borders of the central forests at this time. For instance in 1962 a Gallo-Roman temple was uncovered on the island of Ufenau on Lake Zürich in modern day canton Schwyz. Shards and masonry uncovered there from the first century A.D. suggest a romanized Celtic settlement. For further details on the Ufenau temple see Benedikt Frei, “Der gallorömische Tempel auf der Ufenau im Zürichsee,” in \textit{Provincialia}, 299-316; André Lambert and Ernst Meyer, \textit{Führer Durch die Römische Schweiz} (Zürich und München: Artemis, 1972), 66-7. This shows that a Romanized people settled very close to the Forests and were likely some of the earliest settlers of the Forests.

\textsuperscript{380} Jones and Pennick, \textit{Pagan Europe}, 116.

\textsuperscript{381} Von Elgger, \textit{Kriegswesen}, 4-5.
probably the spear. On the other hand, Frankish-fighting techniques could have influenced the weapons of the Forest peoples as early as the eighth century AD when all of Alemannia became part of the Frankish empire. However, we cannot assume from this that the halberd was a descendant of the Frankish throwing ax. The former weapon was utilized in the late Middle Ages specifically to crack open plate armor.

The conservative nineteenth-century military historian Hans Delbrück (November 11, 1848 - July 14, 1929) likely became interested in the Swiss during his study comparing tactics and strategies of the ancient Greeks in the Persian Wars with those of the Swiss during the Burgundian Wars. In his later *History of the Art of War* the Swiss military and social system is described as democratic, but Germanic in origin, a retention of the ancient Gau.

In the post-World War Two era, Fritz Wernli’s massive study on the history of the medieval social structure proved that in the valley communities of Schwyz, Uri and Unterwalden (The Forest Cantons) free peasants were an ‘estate’ (*Geburtsstand*) of free people who enjoyed personal liberty, and had developed a free constitution (the *Talgemeinden*), which was at the root of the conflict with the Habsburgs, since it conflicted with their feudal claims.

Likewise, Marxist historians of the 1970s, argued that the isolated Forest Cantons were the product of the old Germanic “military democracy” in which “the tribal assembly

---


384 See Fritz Wernli, *Hundertschaften und Markgenossenschaften*, 1-58. Wernli accused the Nazis of rewriting German history to fit their ideologies by suggesting that an all-powerful German state had existed throughout the Middle Ages, and ignoring the evidence of communities of free men across Europe (the *Markgenossenschaften*). Wernli meant his study as a correction to this idea, which was apparently still circulating in some German historical circles as late as 1968.
and/or councils of Elders became important voices or agents in the life of the tribe, since they voted to elect chieftains and military leaders.”

Two years earlier, on the opposite side of the Berlin Wall, the German historian Theodor Fuchs in 1972 also wrote that the Swiss had retained, “nearly all the characteristics of the ancient Germans, from the Gau cooperative to its regular assemblies, [and military system] which are still in use today.”

In the early 1990s Daniel J. Elazar headed a study on the foundations of the Swiss federal system of government, which concluded that the earliest Confederates were *conjuratio* (a community of polities with a shared law). So based on over one hundred years of intensive study of the topic, we can conclude that at the time of Morgarten the Swiss were an independent body of mostly free peasants who retained a democratic system of government, and whose tactics reflected those of the ancient German tribes. But what Germans—and what tactics?

During Roman times, the cantons of Uri, Schwyz, and Unterwalden were part of the province of Marseilles, although they sat on the border between Marseilles and Helvetia. At this time the peoples living in the forests were likely Marseilles—an Italic tribe—and Celtic. Any Germanic influence would have come from the Alemanni. The Alemannians “invaded” Helvetia during the period of the *Volkerwanderung* (third to

---

385 See Förster, *Kurzer Abriss*, 12 on ancient Germans; and 117 on Forest Cantons as retaining the ancient democracy.


sixth centuries A.D.), and after some romanization became settled in Helvetia and Alsace during the fifth century. Apparently some of them wandered into the Central Swiss Forests and settled there as well. But the designation “Alemanni” is misleading. They were not a tribe but a confederacy (German alle Männer, “all men”) of southwestern German peoples who had been living between the Danube, Rhine and Main, so close to the Swiss Celts, in fact, that Tacitus argues they likely mixed with them in ancient times.389

While they “first came into contact with the Romans” during the reign of Caracalla (214 A.D.), as the Confederation of Alemanni, they were actually tribes that occupied a border with those that had been influenced by both Greeks and Romans. In other words, these were not the Germans of the Teutoburger Wald who destroyed Varus’ legions and were never defeated by the Romans; nor were they the “untamed” tribes of northern Germany known among the Romans for human sacrifice and mother-earth worship. So, we know that, like their brothers in the “outer cantons,” members of the “inner cantons” were much less “barbarian” than the northern and eastern Germanic tribes.390

From Roman times throughout the early and high Middle Ages, the peoples who settled these central Swiss forests had a unique approach to the outside world: it was to maintain an independent existence within the various legal and administrative systems that developed and shifted as various powers conquered the territories surrounding them. Yet as they strove for autonomy, the Forest peoples who were relatively poor, also contracted out their military services to each new authority, beginning with the

389 Tacitus describes these tribes of Western Germany are described in Germania, 28-35.

390 On the barbarity of the northern German tribes see Tacitus, Germania, 39-40.
Alemannians. Participation in conflicts of expansion was quite profitable for the Forest Cantons: booty could be captured and brought back to the sheltered forests, keeping battles away from their homes while gaining from the profits of war. Both fearless and independent, they were well-suited for battle. Indeed, military service, as early as the time of the Alemannians, became a primary occupation of the inhabitants of central Switzerland. But exactly where, and with whom, is a blank in the historical record. Yet something about the nature of society and politics in the inner cantons at the outbreak of the war with the Habsburgs coalesced to create a “special” community of “special” peasants, unlike any others elsewhere in Europe, who were capable of defending claims to autonomy.

**THE DEVELOPMENT OF PASTORAL AND EGALITARIAN SOCIETY AMONG THE FOREST CANTONS IN THE LATE-MIDDLE AGES**

Before 1200 Switzerland was covered in forest. Cultivated areas were islands in seas of trees. Thus, it is no wonder that as castles began to appear aiding noblemen in securing their territories, farmers were bidden to clear forests on the noblemen’s lands. In return for this service, farmers were allowed to settle and cultivate the land they had cleared. Around 1200 smaller hamlets located near monasteries began to appear away from the castle walls. Monasteries supported these little hamlets, and, likely for similar reasons, also allowed a number of farmers to settle on their lands. Thanks to a temperate

---

391 Von Elgger, *Kriegswesen*, 5; Wieland, *Kriegsgeschichte*, 1-3. The Zahringens were an old influential German family originally centered in Freiburg im Breisgau and related to the Hohenstaufens. From 1127 they were often referred to as the “dukes of Burgundy” when the Zahringen duke Conrad was given the title of rector of the kingdom of Burgundy (or Aries) by the German King Lothair. They became very powerful in the districts now known as Switzerland: the Zahringen duke Bertold IV founded the city of Bern. On Bertold’s death in February 1218 the main line of the Zahringen family became extinct and their territories—including Switzerland—were divided between the counts of Kyburg. Finally, the Habsburgs acquired these.
climate, years of peace, and plenty of land to farm, the population grew in number. Little villages also appeared along trade routes.

In the Central Lowlands and elsewhere, farmers cultivated grain and grass for their cattle. In the higher regions a mild climate meant that people could settle and live year-round as high as 2000 m above sea level. Here, people lived mainly from rearing small cattle and working barren fields. There were also summer settlements, where the valley farmers grazed their cattle. Before 1350 further developments had taken place. Large areas of forest had been cut down and turned into fields. By 1450 lakeside towns had developed. Castles on hilltops were beginning to disappear; their inhabitants most often moved to the city, or found work as farm laborers beneath the ruins of their former residences. Villages beside monasteries began to merge into larger communities. Large cattle farming had also become firmly established. Less grain was planted, but farmers grew more grass as winter fodder for their livestock. It was now possible to export cattle to the towns. Increasingly larger areas of forest were cleared to create more pasture for livestock. In the upper regions permanent settlements had been abandoned. Cows grazed between 1500 and 2000 m. Sheep and goats grazed at higher altitudes.392

During the period of the early Confederacy, then, the populace of the central cantons was involved mostly in cattle farming. In central Switzerland—a valley surrounded by high mountains at the source of the St. Gotthard Pass—farmers were both isolated and prone to receive travelers and information from distant places.393


393 For similarities to the Marseillesn geographical situation see, Randolph C. Head, Early Modern Democracy in the Grisons: Social order and Political Language in a Swiss Mountain Canton 1470-1620 (Cambridge: Cambridge University Press, 1995), 36-47.
Linguistically, the central Swiss cantons were German-speaking and all three places, Schwyz, Uri, and Unterwalden, had a common historical past. Unlike the Rhaeto-Romansch, they were at the center of the Alemannian conquests, and spoke dialects of German, while conducting serious written business in Latin. Their central geographical position within the Empire and similar language made the mountain cantons an ideal spot for recruiting soldiers, resting visiting scholars on their way to and from Italy, and obtaining experienced shepherds to guide armies over the steep mountain passes.

Their culture was that of the isolated, but informed, peasant shepherd and farmer. This meant that the mountain and forest communities of Unterwalden, Uri, and Schwyz would develop different communal structures than peasant cultures elsewhere, in towns, cities and other rural areas of Western Europe. Additionally, each of these mountain communities (cantons) developed differently. See William Bross Lloyd Jr., *Waging Peace: The Swiss Experience* (Washington, D.C.: Public Affairs Press, 1958), 7-8; Lena Hug and Richard Stead, *Switzerland*, (London: T. Fischer Unwin Paternoster Square New York: G.P. Putnam’s Sons, 1890), 125-27; and esp. William McCrackan, *The Rise of the Swiss Republic* (Boston: Arena Publishing Company, 1892), 69-84, for the individual developments of the three cantons, which eventually led to their unification.

During the early history of these more isolated pastoral peoples, a far better sense of community and social organization had developed among the Swiss peasants who had always been forced to work together to organize their rural communities. In addition to being called to arms against anything that could endanger the community, not only foreign enemies, but outlaws, wolves or those who carried diseases--not untypical of peasant duties throughout Renaissance Europe—the Swiss of the mountain cantons were also required to organize community systems for the sharing of pasture and making necessary repairs such as mending fences.
to keep the flocks within proper boundaries.\textsuperscript{396} Potential conflicts\textsuperscript{397} were a matter for group discussion. Thus each spring a general assembly met, bringing together all people who owned cattle. Wealthy peasants who, especially in Uri, had gained some financial security due to commerce from the St. Gotthard Pass, dominated the consensual assembly. The oldest account of we have of a similar process under the auspices of the local monastery is described in the \textit{Acta Murensia} written around AD 1150:

From the time of our ancestors it was determined that the Provost of Muri comes there to Gersau in the middle of May and takes the wool of the sheep in account, which are then sheared, and he sees and arranges how the cattle are to be driven on the Alps…. But in September he is to come there again and observe, as the cattle comes down from the Alps, and is to pass the winter, part of the time in the Waldstätten [\textit{inter silvas}] and partly at other towns which we have throughout the Forest. Around the time of St. Andreas Day [30. November] he should come to receive tithes which are given partly here and partly at other places, namely: Cheese, she-goats, meat, fish, slaughter cattle, cloth, wool, felt, hides, leather, skins, pennies, nuts and apples.

And after the provisions for the taxes are laid out, the agreement goes on to practical matters decided by common consent between members of the various agrarian communities:

\textsuperscript{396} Gilliard, \textit{History}, 13. See also Head, \textit{Early Modern Democracy}, 1-24 (esp. 12-13) who compares the Swiss forest cantons to the communes of late medieval Europe. Such associations were characterized by having mainly political objectives and whose membership was defined territorially. Additionally, participation in communes depended upon the voluntary acts of free men who decisively influenced the commune’s over all development. Such communes (cantons), then, exhibited principles closely akin to democratic values. Admittedly, though, Grison history, (Grison is equivalent to the one "Romansh-speaking" Canton of Switzerland (i.e. the Graubünden) only loosely helps to explain the egalitarian nature of the early Swiss Pacts of Confederation, since it was the German-speaking cantons of Uri, Schwyz, and Unterwalden that created the "Everlasting Pact." However, the communes of the Grisons do point to the "communal spirit" that permeated throughout the Swiss agricultural communities. The communities of Uri, Schwyz, and Unterwalden were populated by a large number of free peasants. Although the origin of their freedom is not exactly known, it can be attributed in part to their need to cooperate in order to maintain an agrarian economy in the severe environmental conditions of the Alpine valleys. Problems relating to the use of pasturelands, overgrazing, cutting of forests, and natural disasters such as landslides, floods, and avalanches were too complex for any one person or family to solve. A loyalty to the community, (still evident in the high valleys of the Alps) rather than to a distant overlord was nurtured by the peasants.

\textsuperscript{397} Conflicts arising over the sharing of pasturelands were very antagonistic, as they still are today.
When the cattle are gathered by twelve people this is called a Sennte, because it is entrusted to a Senn [or Alpine Herdsman]. And whenever someone’s cattle grazes on the mountain of another, then the first is to give to the latter [a part] of the milk that comes from the said cattle, that is the milk, or the products that are made from it. At the beginning of July all come together who have cattle in the mountains together, and each one inspects his cattle and thus knows what he can expect to receive from the shepherds in Autumn and how much milk he will get. Another habit among us is that, he who has the kennel, so long as the cattle farmers are able to use this kennel, every year will be given a Ziger\textsuperscript{398} and eight cheeses. So that the greatest profit can be made from the cattle, all the inhabitants of this monastery are urged to look after the Alps and the cattle-farmers of the Forest Cantons for all our own interests. And all are reminded and motivated to see to these obligations.\textsuperscript{399}

As this document makes clear, the pastoral peoples of the Forest Cantons, were key to the economic strength of the region. For this reason, although taxed, they were given a place of importance among the concerns of the aristocratic and clerical classes.

Further within the cantonal administration itself, Germanic tribal government survived the centuries of change in the central cantons of Switzerland in the popular assembly. Instead of weakening, as it had in other places, the inner cantonal assemblies only became stronger through military organization that would eventually serve as the back-bone of the Swiss Confederacy.\textsuperscript{400} Here active popular assemblies formed the basis of the later Swiss democracy, even as the Hohenstaufens and other Germanic rulers

\textsuperscript{398} In Switzerland a Ziger was a special fresh cheese produced by heating and curing whey. Lowfat and high in protein, it is still made today and internationally exported.

\textsuperscript{399} Both this quote and the one above: Abbot Chuono, “Acta Murensia”, in Quellenbuch für Schweizer Geschichte, 34. The Acta Murensia is a history of the establishment of the monastery at Muri written c. 1150 by the Abbot Chuono. See also Aus Bäuerliche und städtische Kultur 12. bis 17. Jahrhundert 4, ed. Albert Renner (Aarau, H.R. Sauerländer & Co., 1961), 1 where Renner tells us that: in former times the chronicle was strongly doubted, but by the 1960s was proven to be a highly reliable source. It contains a detailed description of the goods produced in Gersau and Unterwalden and interesting remarks concerning alpine dairy farming throughout.

undermined the networks of local government elsewhere by tying peasants to the local lord’s demesnes. Large numbers of peasants in Uri, Schwyz and Unterwalden, also held their own private farms, which formed the basis of solidarity against aristocratic pressures. It was the alliance between Swiss communes (Markgenossenschaften), the village hundreds and later the commercial centers of Bern and Basel that created the strength of Confederate constitutionalism. But it was the small free farmers in Schwyz, Uri and Unterwalden who both pushed for consensual government in their own cantons and those of their neighbors. The same free farmers also organized and led the armies at Morgarten. Egalitarianism in each canton evolved differently, but by the time of Morgarten, the idea of being “free” was more than just figurative.

The Schwyzers

Conventionally, the people of Schwyz are thought to have Swedish roots. A Swiss tradition handed down from father to son runs:

Toward the North; in the land of the Swedes and Frisians, there was an ancient kingdom, and hunger came upon the people and they gathered together, and it was resolved that every tenth man should depart. And so they went forth from among their friends, in three bands under three leaders, six thousand fighting men, great like unto giants, with their wives and children and all their worldly goods….They besought of God a land like that of their ancestors, where they might pasture their cattle in peace; and God led them into the country of Brochenburg, and they built there Schwyz; and the people increased, and there was no more room for them

---


403 Durrer, “Freiheitskämpfer,” 33. During Carolingian times the people of the Forest Cantons had remained free. This freedom began to evaporate under the German Empire, as counts and lords struggled for overlordship against the immune monastic authorities. It was at this time that the free peasants of the valleys stood in danger of serfdom.
in the valley. Some went forth, therefore, into the country round about, even as far as the Weissland; and it is still in the memory of old men how the people went from mountain to mountain, from valley to valley, to Frutigen, Obersibenthal, Sanen, Afflentsch, and Jaun;--and beyond Jaun dwell other races.  

This tradition possibly explains both their name and, perhaps, also, the Swedish-lilt to the regional German dialects. It may also help account for the strong communal and agrarian social parallels among the Swiss and Swedish peoples. In any case, the ancient territory of Schwyz has a special importance for the development of Swiss political freedom. Here a solid class of middling farmers formed based on the old Germanic community of the Hundertschaft, extant since Frankish times. As medieval German rulers took over the Holy Roman Empire, the people of Schwyz came into the possession of the Lenzburg dukes, as part of the Gau (or territory) of Zürich. In 1173, through imperial enfeoffment, they became a protectorate of the Habsburg Duke Rudolf the Old. His bailiffs ruled from the land adjacent to the main Zürich church. However, the real leaders of the community of Schwyz were freemen, who, up until the beginning of the thirteenth century, were still called Zentrichters (“Judges of the Hundred”) or Hunni, and afterward were called Ammanns. Though the position seems to have been long-held in

---

404 “The Men of Schwyz,” Atlantic Monthly 7, no. 41 (March, 1861): 149-51. The tradition may simply be based on a confusion of terms: often several different and unrelated names come from a single “point” source, and can be misconstrued over time. Take for instance, the word “sweat” (transpiration). Sweat in Germanic languages can be either Schwed (Dutch, Danish) or Schweiß (high-german), depending on the region, but has nothing to do with the Swedish or the Swiss. In common German a Swede (ein Swed) is sometimes also written Schweiss, for instance by the Brothers’ Grimm; and die Schweiz means die Schweiz. There is a great deal of controversy, too, based on similar spellings, concerning whether or not Switzerland (die Schweiz) draws its name from the canton of Schwyz (pronounced “Schweets.”) There seems to be no consensus on this issue.

405 On the isolated character of Swedish social development and links to the Swiss see, Downing, “Constitutional Government,” 541-6.

406 Von Elgger, Kriegswesen, 6.
some families—the title became part of the surname—the office was not hereditary. Leaders were chosen by a show of hands. Further, the old position of the Hunno or Amman, in Schwyz, soon was superseded by a council of four elected elders who were appointed as Mitammaners (coministri) who took turns as heads of the community on a rotating basis.  

There were some unfree elements in Schwyzer society: these were subjects of Einsiedeln, Engelburg and other cloisters. Other unfree peasants also worked the manorial estates of the counts of Kiburg and Froburg, which were united at the end of the thirteenth century under the proprietary lordship of Eberhard von Habsburg-Laufenburg.

However, although the unfree Schwyzers were officially under the civil jurisdiction of their lords, they were allowed to participate as equal members with the Freemen in the creation of a unique rural agrarian cooperative, including an Assembly at which decisions concerning the use of common lands and other economic policies were made. In this way, both free and unfree farmers felt a common bond, as they worked out practical rural issues, and began to see themselves as both territorially and geographically unified. Likewise, the peasant-stock felt both a sense of community and tradition in their Ammans, who were leaders both of the free and unfree in that the heads of the free communes were also the leaders of the rural cooperative.  

---


408 M. Kiem, Quellen III, 3.4; Walther Merz, Genealogisches Handbuch der Schweiz, Geschichte (Zürich: Schulthes, 1900), 1. 57 ff; George von Wyss, A.D.B. 2.534ff, 16.635; Zürich Stadtbibliothek, Mss. L.47f, 71.

409 Oechsli, Quellenbuch, 185.54.
In any case, the free farmers were a majority in Schwyz; both qualitatively and quantitatively the predominant social element. Tax lists from the year 1281 give 1,530 families as owning their own private farms. According to von Wyß, this meant that approximately one-half of the population in Schwyz was free farmers.\footnote{Friedrich von Wyß, \textit{Die freien Bauern, Freiämter, Freigerichte und Vogteien der Ostschweiz im späten Mittelalter} 18 (Zürich: Füssli, 1892), 97.} By 1289 tax lists give the population of free peasants as over 3,000, or two-thirds of the population.\footnote{Verbruggen, \textit{The Art of War}, 100-1.} Clearly, the numbers of free peasants were rising in the quarter decade before Morgarten, giving the majority a sense of entitlement and confidence, which their earliest push for expansion reveals.

According to tradition, overpopulation at the beginning twelfth century led Schwyzers to attempt to expand their territories.\footnote{On overpopulation in Schwyz as stimulus for expansion during the twelfth century see, Durrer, “Freiheitskampfer,” 36 and Ulrich Im Hof, \textit{Mythos Schweiz: Identität, Nation, Geschichte}, 1291-1991 (Zürich: Verl. Neue Züricher Zeitung, 1991), 19.} Through hard work they hoped to clear for agricultural use the wilderness extending up the watershed of the Mythen mountain chain. However, the monastery at Einsiedeln on the basis of imperial privilege, as an immune territory, claimed this land and Einsiedeln resisted development there. Understanding the importance of opening new land for agriculture, which would help support the growing population, the counts of Lenzburg made common cause with the freemen of Schwyz, and together they petitioned the imperial authorities to force Einsiedeln to permit the needed development. In 1114 the crown responded by upholding Einsiedeln’s claim. But the confident Schwyzers, having no respect for this decision, continued to clear the land for cultivation. Finally in 1143 the monastery
obtained a new official document of claim: still the freemen of Schwyz refused to submit, and rejected the royal decision.

Around 1213 a new quarrel began. This time the Schwyzers united with the regional duke in Zürich, Rudolf the Old of Habsburg. His influence and the Schwyzers’ persistence finally settled the issue in favor of the farmers. The Schwyzers were now secured in their possession of Ober-Iberg and the Alpine valleys beyond. As Oechsli notes: “Through the sweat of their brow, pushing to cultivate the wild area, they had won a stronger claim to the land than the monastery had with its little piece of paper.” With these successes the Schwyzer thirst to expand was hardly quenched.

The Abbot at Einsiedeln wrote complaints against these encroachments to both emperor and king, who both took his side. But the Schwyzers refused to leave. In 1217, they found a champion in count Rudolf the Elder von Habsburg. This prince, far from being an enemy, protected the Schwyzers as they advanced, because, unlike the monks, they were creating fruitful fields out of the forests.

Later, after the Habsburgs had become guardians and protectors of the monastery at Einsiedeln, they could no longer stand by quiescently ignoring the activities of the Schwyzers, as the discord with the monastery worsened. They wrote threatening letters to the Schwyzers, but took no physical action.

---

413 For the full account see, Abt Johannes I. von Schwanden, Geschichtsfr. 43, 331 ff, “Graf Rudolf der Alte von Habsburg schlichtet den Marchenstreit zwischen Schwiz und Einsiedeln Juni 1217,” in Oechsli, Quellenbuch, 185.54.

414 Wilhelm Oechsli, Anfänge der schweizerischen Eidgenossenschaft (Zürich: Ulrich, 1891), 117.

415 During this time of unrest the Schwyzer Landesamman, also, was quarrelling with the Cistercian sisters of Steinen as well, concerning common land rights, which the Schwyzers decided the sisters had no right to, since the sisters paid no taxes, having been released by them, of course, by imperial decree. The Schwyzers could care less who had released them, the simple fact was that the Schwyzers paid taxes, the sisters did not, so according the law of the communal assembly the sisters had no right to the
Finally, in 1314 a disorganized band of Schwyzers attacked the Abbey. This incident became known as "The Breaking of Einsiedeln"—a harsh breach of the peace. Leopold as protector of the abbey was obliged to march out on a punitive expedition against the Schwyzers who had shown both irreverence to a holy place and also a “destructive rage.” This expedition to check the Confederates led directly to Morgarten. According to medieval law, Leopold clearly had the moral imperative. The Confederates, after all, had attacked a house of worship. According to the poet and chronicler Rudolf von Radegg, in fact, the Schwyzers ransacked the abbey, tearing apart prayer books, breaking pews and stealing valuable gold and silver pieces, including crucifixes and communion goblets.416

These territorial disputes profoundly challenged the political thought of the day, as the Schwyzers thumbed their noses at the territorial and imperial powers, and created a collective rural cooperative, preparatory to the later democratic assembly of equally entitled inhabitants.

But it was the same belligerence and displays of military prowess against their local lords, when channeled into the service of the Emperor that had won the Swiss their independence. After the siege of Faenza, in which the Schwyzers helped Friedrich to win a victory, the community asked the Emperor to be put directly under the jurisdiction of the Empire. Friedrich was more than willing. His response, The Schwyzer’s Letter of Freedom from Kaiser Friedrich II Dec. 1240, reads in part:

land. Likewise, the Urners (people of Uri) were in similar conflicts with the Engelberg Benedictines over rights to the Surenenpass and pasture rights. For these and other incidents surrounding Einsiedeln and Morgarten see Im Hof, Mythos Schweiz, 224-5.

After we received the letters and messengers you sent…aware of your devotion we grant your request. We\textsuperscript{417} return your sincere loyalty with favorable and benevolent affection, and highly praise your devotion, for you have always shown your eager loyalty to us and the Empire, and have shown it by your actions. We wish you to remain under our and the Empire’s wing, and take refuge there as a free people…. Because you, of your own free will, have chosen us and the rule of the Empire, we receive your loyalty with open arms and reciprocate your sincere affection with our favor….We and the Empire take you under special protection, so that we will allow at no time for you to be extracted from our or the Empire’s rule, to be alienated, or taken back. By our giving you this security, we hope you are pleased with this overflowing of the grace and favor, which a benevolent Lord is to pour on his subjects and faithful ones. In all things you will have our reciprocated faithfulness for so long as you remain true to our service. Given at the siege of Faenza in the 1240\textsuperscript{th} year of our Lord, in the month of December.\textsuperscript{418}

By the second half of the thirteenth century, Eberhard von Habsburg’s serfs had already bought their freedom and promptly merged with the freemen—a move that in 1310 would be confirmed by Emperor Heinrich VII. So in terms of Medieval law, real “freedom” was about to be born, and would never have been born otherwise. The old freemen secured for themselves provisions against the continuation of injurious claims and the protection of their free position in 1291 by means of a title from King Rudolf giving the Freemen continued jurisdiction over the rest of the unfree. Thus, the Hunno, Stauffacher now had leadership over both the free and the old unfree, meaning essentially that the unfree had been freed. These new freemen were absorbed into the cantonal assembly and given the rights of freemen. The self-sufficient, republican Swiss political system had been conceived.\textsuperscript{419} At least in Schwyz, then, autonomous, free landholders,

\textsuperscript{417} This is the “royal We”.

\textsuperscript{418} Oechsli ed., \textit{Freiheitsbrief der Schwyzer vom Kaiser Friedrich II Dec. 1240 in Quellenbuch}, 63-4.19. The Latin original is at the Bundesbriefmuseen, Schwyz. For the full German version see Appendix E.1.

\textsuperscript{419} Durrer, “Freiheitskämpfer,” 38.
had established themselves as leaders of the community, in positions chosen by consensual vote to protect a proto-democratic society, which leaders hoped to enlarge. The Schwyzers demanded political autonomy, if not complete freedom, even at the expense of offending their own religious leaders.420

Unterwalden

A consensual society with freeholders in leadership positions also existed in the Forest Canton of Unterwalden: they, too, rallied to establish a free society. The peoples who first settled in Unterwalden seem to have been the most Romanized of the three Forest Cantons, given the artifacts found by archeologists in the area.421 In Unterwalden the freemen were not in the majority, so the development of political freedom there is all the more impressive. Although they were in the minority, freemen in Unterwalden, as they had in Schwyz, led the movement for autonomy in their region. The process began around 1150 when freemen scattered throughout Unterwalden united together, creating a rural community assembly in the inner parts of the forests (“Inter silvas”).422 Next, although the records of the communal assembly fail to explain how and when it happened, the Unterwalden assembly of freemen managed to separate their common lands from church lands.423 Finally, these private free farmers, defying official

---

420 Perhaps odd, given the circumstances surrounding the first Swiss Battle for independence at Morgarten, the Forest Cantons, even today, are staunchly Catholic. Yet, from the time of the Attack at Einsiedeln the Forest Cantons have inherently understood and, to some extent practiced, the dictate of a “separation of church and state.” For the first military law enacted in this vein, see this chapter, p. 229.


422 In thirteenth-century documents these people were referred to as the “Waldleute” (“Intra montani”) or the people of the inner forests.

423 The original border was at Niwalden, and later Obwalden.
authorities, obtained the majority of arable land in Unterwalden, all of which had previously been subject to the monasteries. 424

Although they were in the minority, the freemen of Unterwalden won these territories through their own determination, but their efforts were facilitated by the territorial competition of the local lords. The original landlords, who from ancient times held title to most of the land in Unterwalden, were from the monastery of Murbach-Luzern, which by 1120 included the local monastery of Engelsberg. It also held possessions in Muri and St. Blasien. But these scattered holdings were never consolidated into one integrated unit; they remained separate entities, and without centralized control the landlords of Murbach-Luzern, already faced with increasing pressure from the freemen in the twelfth century, became increasingly vulnerable to the claims of the local Habsburg lords in the thirteenth century.

In response to the growing threat, Engelsberg launched an effort to increase their landed rural property, and to gain from Kaiser Heinrich II continued immunity and territorial lordship. In opposition to this move, the Habsburg dukes supported the free peasants, and sought to increase their numbers. Freemen made better neighbors than the Church proprietors, since yeomen posed little threat to the more powerful dukes, and meanwhile helped weaken the power of the monastery lords who lost both manpower and land to the freemen.

In the end, this Habsburg policy paid off, both for the Habsburgs and for the peasants of Unterwalden. The treaty of 1210, concluded between Rudolf the Old of Habsburg and the monastery sealed the success of the Habsburgs and freemen. It withdrew immunity of the monastery from lands just outside of the monastery proper.

424 Von Elgger, Kriegswesen, 38.
Secular dukes were to be given these lands, and surrounding them, there were never to be less than fifty small, independent, peasant landowners. As a result a number of Unterwalden peasants gained a share of the land, and social mobility.

The freemen of Unterwalden had their hub on the ducal lands at Wisserlen am Rande at the spot in the central forest which separated the two parts of the rural area. Here the assembly of free peasants was held, similar to the one in Schwyz, with the ancient free judge, or Amman—of common, free, peasant stock—as leader. The peasants here also appointed a Mitammaner, who was mostly a magistrate or foreman. These freemen, hardly one-third of the inhabitants, like the Schwyzers, helped lay the foundation of a constitutional, autonomous, non-aristocratic government in their canton.

**Uri**

As in Schwyz and Unterwalden, the freemen’s political-military efforts led to their independence. However, oddly enough, Uri, which was the first of the three rural cantons to achieve political freedom, had even fewer freemen than Unterwalden. Nevertheless these few fought hard for autonomy.

During the fifth century Uri came under the extensive domains of the Alemannians and later in 748, after its confiscation by the Frankish kings, became a crown-holding. In 853 Ludwig the German gifted the “small district of Uri” (pagelleum Uroniae) “with its churches, villages, buildings, vassals of every kind and elders, cultivated and uncultivated land, forests, pasturelands and meadows, standing and flowing waters, roads, outlets and inlets, acquisitions and incomes” to the newly founded monastery over which his daughter the Abbotess Hildeguard presided. He forbade both

---

425 The people of Uri are thought to be descendants of Gothic and Langobardic peoples.
dukes and public officials; freemen or serfs to challenge or, in any way avoid demands for produce, fines or taxes, from the bailiffs of the monastery, which itself was immune.\textsuperscript{426} The document suggests that most peasants were under the lordship of the monastery.

However, the scope of the endowment is controversial among scholars. First, some believe that not all the grounds and lands passed directly into the private ownership of the Zürich monastery. Further, given the reference to “free vassals” in the document, some scholars argue that some areas in Uri remained in the hands of free landowners. In any event, peasants certainly existed in the countryside on their own farms. These free peasants, though few, became the driving force in improving the plight of the unfree peasant majority who, from the time of the Alemannians, were serfs of the monastery.

By the year 917 discretionary control over the Zürich monastery, passed to various Alemannian dukes. Later in 1097 Emperor Heinrich IV gave the area to the Dukes of Zahringen. During their overlordship, the well-established freemen united with the serfs in a common assembly. Here, as in Schwyz, the assembly played a major role in the assimilation and emancipation of the serfs. It offered a refuge of common interests, and jurisdictional unity, the substantial cornerstones on which political autonomy could be built. Free or unfree, all had a common bond: from time immemorial both free and serf had similar rights of usage and worked together to create their own system, which governed common lands. In fact, by the year 955 the inhabitants of Uri, as a “free and

independent people,” concluded a treaty concerning taxes with their governors. In the year 1196 they made an independent alliance with the serfs of the Glarus monastery, who had a similar mixed jurisdictional assembly, under the protection of a bailiff. Further, like the Schwyzer peasants, the Uri assembly took up arms against the monastery at Engelburg in order to expand their common lands.427

A great victory for the assembly was its eventual success in gaining for the peasants of the convent rights not much different from those of freemen. So although a majority of the peasants in Uri were “serfs;” in practice they enjoyed a popular freedom similar to that of the Schwyzer free peasants. Finally, the freedom of the peasants of Uri was officially obtained on May 28, 1231 when the young German king Heinrich, heir to the throne, and imperial administrator of the empire on the Swiss side of the Alps, announced to his loyal followers, the “common people of the valley of Uri”, that he had “bought and redeemed them from the Dukes of Habsburg and that they would nevermore through award, or mortgage be alienated from the Empire, but would always be under imperial service and protection.”428

With this decree Uri became an imperial land comparable to the elevated position of a free imperial city. This new standing within the empire meant autonomy for the entire peasant community: they had been emancipated from the monastery; the king was far away; and the officials appointed by him did not reside in the land, and only from time to time appeared to collect imperial taxes. Now the assembly had full liberty of


428 *Der Freiheitsbrief der Urner von König Heinrich II 25 Mai 1231 in Quellenbuch für Schweizergeschichte*, ed. Wilhelm Oeschli (Zürich: Schultheiß & Co., 1901), 63. The original has been lost, but a Latin copy can be found in Aegidius Tschudi, Peter Stadler, and Bernhard Stettler, *Chronicon Helveticum* (Bern: Gesellschaft der schweiz Stadt und Universitätsbibliothek, 1968-), 1.125.
action under an Amman who since 1291 was called Landamman and who, as in Schwyz, a number of elected officials helped with judicial and administrative matters. The registers of these officials show that they were fully entitled peasants, who owned successful ancestral farms. Already in 1243, as an expression of their autonomous position, the assembly possessed a unique seal, which was symbolic of their preservation as a protected rural district of free farmer under the jurisdiction of the Dukes of Attinghausen.429

The Forest Cantons, then, had established a good deal of autonomy for themselves by the time of Morgarten in 1315, but this was nothing unique; other communes had done the same. But, the Swiss communes also formed a number of important alliances that strengthened their military position as most other European communes could, or did, not. The first of these was the signing of the Bundesbrief in 1291.

THE BUNDESBRIEF

The Confederate élan, so often credited as the source of Swiss successes, was partly due to their early pacts of alliance. The most important was entered into twenty-four years before Morgarten, when the three valley communities of Uri, Schwyz, and Unterwalden signed the Bundesbrief of 1291—an oath of allegiance that was to be everlasting. With it the “League of the Three communities” created the Swiss Confederacy—a league of common protection against outside oppression.430 The Bundesbrief reads in part:

429 Ibid, 46.
430 Hans Kohn, Nationalism and Liberty: The Swiss Example (London: George Allen and Unwin, Ltd., 1956), 18. Here Kohn points out that, originally, the purpose of the pact of Confederation was not the constitution of a new state or of a nation but the creation of a league of nations whose duty was to preserve and protect—through the combined forces of their militias—the independence of the individual and fully sovereign member states or cantons.
In God’s name. Amen. Our public reputation and well-being require that arrangements for the peace be given continued recognition. Therefore, in view of the evil times the men of the valley of Uri, the Landsgemeinde of Schwyz and the community of the lower valley of Unterwalden, in order to preserve themselves and their possessions swear to provide each other with assistance, advice and support for their better protection and preservation of body and property both in and out of their valleys including all their holdings, assuring against everyone and all, who might do anything to them, or force on them any injustice to body or property…. And in this instance each canton has sworn upon oath in this forever-sworn alliance to provide to the others [military] assistance, each at their own costs for the protection and retaliation from malicious attacks and injustice. In common council we have with one voice sworn, agreed and determined that in the above named valleys we shall accept no judge or recognize him in any way if he exercise his office for any reward or for money or if he is not one of our own and an inhabitant of the valleys…. If controversy among the Confederates develops, then the judicious among them is to mediate and whatever decision is made the others shall accept…. These laws are to have, God willing, perpetual existence….431

“Any and all” and “Not one of our own” are, of course, references to any outside oppressor, and at the beginning of the fourteenth century became targeted towards especially the bailiffs who oversaw Habsburg claims in Confederate territory.432 The pact was not meant as a break from Imperial power, so it was not exactly a “Declaration of Independence.” However, it boldly defended and asserted old rights under the Empire, which each of the cantons had separately contracted with the Emperor.

The guidelines of the pact were as following: Under solemn oath, the three communities; Uri, Schwyz, and Unterwalden promised to help any member threatened with loss or damage, by providing, without limit or reserve, men and materials for

431 “Ewiger Bund der Landleute von Uri, Schwyz, und Unterwalden, 1291, 1 August”, in Anton Philipp Segesser, Die Eidgenossischen Abschiede aus dem Zeitalter von 1245 bis 1420, Der amtlichen Abschiedesammlung, Band I, Urk. 1 (Luzern: Meyer’sche Buchdruckerei, 1874), 31. See Appendix E.2 for the full Latin text. Latin original is housed at the Bundesbrief Museen, Schwyz (See Figure 6.1).

defense or aggression. Immediately upon the request of any of the three communities, the others were to provide assistance at their own expense. They promised to fulfill the obligation to all those having rights in their country, but refused to receive any tax-farmers in their valleys, or any representatives of a higher authority, against whose decisions they could not appeal to leaders of their own community. But the most important and characteristic part of the agreement was the clause that set the guidelines of the confederation. It reflected a strong inclination towards egalitarianism among members of the confederation. As Gilliard points out:

[This clause] expressed what those who drew upon it considered to be their fundamental right: that in the last resort they should be judged only by an equal, a man in circumstances similar to their own, one familiar with their customs and requirements and not by the officer of some new system, financially interested in his own decisions and of inferior social, as were the Hapsburg bailiffs...They wanted self-government.433

In describing just what the Älten Eidgenossenschaft (or Early Confederacy) was, or how is should be defined, Head explains, “The Swiss Confederacy was not only a defensive alliance like many of the leagues erected in Italy, they produced a, though admittedly limited, federal jurisdiction with all enforcements in the hands of the confederated units.”434 While this early Confederate system cannot be considered a modern radical democracy, still it struggled to define a policy of early self-government during the late-thirteenth to early-fourteenth centuries. As Adams and Cunningham argue:

433 Gilliard, A History of Switzerland, 18-19. The “inferiority” of the Habsburg bailiffs here means in relationship to the Emperor. By Imperial Decree the Forest Cantons had won autonomy under the direct protection of the Emperor. An attempt at rule by local aristocrats was for the Forest Cantons a breach of the direct protection promised by decree—which the Forest Cantons believed they had won through the excellence of their service and loyalty during Imperial military campaigns. On these decrees see p. 211 and 216 above.

434 Head, Early Modern Democracy, 112. This is reflected in the still today weak federal government where power lays in the hands of the cantons.
The Communes have certainly played a very important part in Swiss history, and by their resistance to the feudal system they contributed largely to the foundation of public liberty. The independence which they achieved is justly considered to be the school and cradle of the political liberties of the people. Swiss legislation has its starting-point from the principle that institutions are only really free and popular when the Communes are free, and a Swiss citizen will contend that the normal development of political liberty is only possible when it is based upon that of the communes, when it ascends from the lowest organization to the highest, progressing from the simple to the composite.\footnote{Sir Francis Ottiwell Adams and C.D. Cunningham, \textit{The Swiss Confederation} (London: Macmillian & Co., 1889), 98-99.}

More modern historians have labored over the issue of how to define the entity created by the Bundesbrief of 1291, which can only be considered a proto-democracy of some sort. Randolph C. Head struggles with this issue as he rightly argues that the area called the Grisons—developed separately from the Confederates—\textit{did} actually forge a democracy on the modern model during the sixteenth century. Head goes on to argue that the democratic Marseillesens took the formation of their government a step further than the Forest Cantons in their own Bundesbrief of 1524, which bound all Confederates to majority rule. This gave their Confederation the Three Leagues the right to enforce laws since the citizens bound themselves to the League in the oaths they swore to uphold the “Marseillesen” Bundesbrief.

Yet, while the Forest Canton’s Bundesbrief of 1291 makes no reference to majority decision-making, in practice, we know that the Confederate political system operated by majority rule as well. As we shall see, it also spilled over into the way in which Swiss wars were conducted, even once the Confederates sold themselves out as mercenaries. In addition, it is quite probable that the Marseilles, taking their clue from the earlier Swiss Confederacy, perfected those original ideas in a constitutional effort to
politically implement them through their own Bundesbrief in the sixteenth century. Head’s own history of the Grisons suggests that the people of Graubünden hardly originated the egalitarian process in central Europe. Indeed, just as the Athenians were not the inventors of democracy in ancient Greece, so democracy in the Grisons had its roots in earlier experiments in the creation of egalitarian government by the Swiss, whose government, though it cannot be considered a modern, radical democracy, still struggled to define a policy of early self-government during the late-thirteenth to early-fourteenth centuries.436

The Bundesbrief, then, is important for several reasons. First, it constituted the germ of the Swiss Constitution.437 Secondly, it promised mutual militia assistance in the event of conflict, and provided that the Forest Cantons would conclude only agreements—whether among themselves or with others—which best served the common Confederate interests.438

Third, an important declaration of this newly formed alliance was the promise that the pact was to be everlasting. Although pacts concluded elsewhere in the Middle Ages promised the same, as Steinberg points out, the Swiss oath of alliance contrasts with many confederations established at the time (and many pacts concluded since), in that no time limit was imposed on its existence, not even clauses of exemption, alteration, or

---

436 See Chapter 7 for a more complete discussion of the Swiss government c. 1390.

437 See Zaccaria Giacometti, *Das Öffentliche Recht der Schweizerischen Eidgenossenschaft; sammlung der wichtigeren bundesgesetze, bundesbeschüsse und bundesverordnungen staatsrechtlichen und verwaltungsrechtlichen inhaltis; system altish zusammengestellt, mit verweisungen und sachregister versehen* (Zürich: Polygraphischer Verlag, a.g., 1930), 132.

renewal. More importantly, unlike pacts made elsewhere, the Confederates never broke the agreement made to each other in 1291. Their commitment to the new alliance remained steadfast even in periods of political controversy. The reason for this confident pose probably was that the interests the first confederates sought to defend were fundamental social and economic questions of survival, not narrowly political—and therefore not likely to change with the passage of time. This provision for perpetual validity became the hallmark of all subsequent Swiss federal alliances; the Swiss coupled it with a democratic spirit of equality, and a unique army that reflected this inclination towards egalitarianism.

Fourth, the document is significant given who crafted it—mere commoners, serfs and freemen—without any aristocratic influence. The pact, at first purely defensive, is a written record of the spirit of independence among the early Confederates, which rapidly grew until dependence on the Empire, after 1312 ruled by the Habsburgs, was gradually shaken off. This provision for perpetual validity became the hallmark of all subsequent Swiss federal alliances; the Swiss coupled it with a democratic spirit of equality, and a unique army that reflected this inclination towards egalitarianism. The pact of confederation, then, suggested that each of the three communities were to have armed bodies of common men, ready to unite with other like militias, to protect each other, at any given time, against any power that might try to abrogate their fundamental right to self-government. The call for self-defense was not an abstraction: rural and civic militias, too, were already in place. Separated by the mountains into small valleys, these peoples had previously formed armies of ordinary citizens much like the small city-states

---

of ancient Greece and Italy. Now such corps would be brought into the machinery of proto-democratic government. And the Confederates soon would need them.

As the promises of self-autonomy provided the fervor for the Swiss revolutionary armies, the smashing successes of the peasants at Morgarten (1315) strengthened and expanded Confederation ties. But perhaps the most important outcome of this battle was that the confederation now gained the confidence of other Swiss communities, several of which in fact had fought against them at Morgarten. Among these new members to the alliance were the cantons of Zürich, Zug, Glarus, Luzern and Bern.\footnote{Von Elgger, Kriegswesen, 189.} Although each new member of the federation jealously guarded their own local independence, and there were frequent and fierce quarrels between the confederate units,\footnote{Oman, A History of the Art, 242.} when they fought together, the coherence that the Swiss brought to the medieval battlefield could not be rivaled.

Finally, the Swiss had developed a relationship of trust with the Hohenstaufens, which gave them the reputation of being as loyal politically as they were on the battlefield. This reputation was only increased during the final days of the Hohenstaufen reign. As the Church cursed them, the Forest Cantons remained true to Friedrich II, even as his own princes were treacherous, and one of his own sons betrayed him. After the tragic end of the Hohenstaufen line and the subsequent Interregnum, the Forest Cantons began to loosen their ties to the Empire. King Adolf, for example, whom the Forest Cantons supported against the opposing King Albrecht, was smashed at the Battle of Göllheim, leading to Albrecht’s rise to the Imperial German throne. The men of Uri,
Schwyz, and Unterwalden then renewed an ancient alliance of collective defense to protect their freedom against King Albrecht, who was well-known and feared.

Thus the attempt by King Albrecht to bring the three cantons over to the Habsburgs was frustrated. The Austrian governors in 1308 were driven out and their castles torn down. They refused the imperial call to arms; they no longer appealed to the Emperor or the imperial courts; they no longer respected even the resolutions of the Reichstag. Finally, they refused to pay the Imperial “Common Pfennig”—a mixture of property tax, income tax, and poll tax to be used for the needs of the Empire and controlled by the Reichstag. Oechsli compares this act of defiance to the colonial American Boston Tea Party, which stemmed from the Stamp Act and Boston Harbor Bill levied on the North American colonists. It was the proverbial straw that broke the camel’s back. Now for the Swiss:

The Confederation had become a fatherland, whose greatness they celebrated in song and chronicle. The combined ideology of hostility to the imperial house, the difference in political and social ideals, the consequent enmity, no less than the impossibility of taking the place within the Empire to which their strength entitled them, impelled the Swiss to separate from the Empire.442

Here began, with multiple intermissions throughout, nearly two hundred years of continuous conflict between the Swiss Confederates and the house of Habsburg. At the struggle’s climax the martial renown of the Swiss would spread into the remotest territories. The conflict ended with the separation of the Swiss Confederacy from the German Empire.

Swiss citizens believed that military service was not only a duty, but a right, a prerogative of citizenship, of which no one could deprive them, unless they were

442 Oechsli, History of Switzerland, 7.
unwilling to fight for themselves.\footnote{Colonel F. Feyler, \textit{A Citizens’ Army: The Swiss Military System} (New York: Robert M. McBride and Company, 1916), xxv.} This attitude was a threat to the nobility. As Oechsli writes:

Their example became a threat to aristocratic society. Owing to the special characteristics of their political and social institutions the aristocrats in Germany saw these “lordless peasants,” whose halberds crashed down even on princely heads, as constituting a permanent social danger, for the example of the Swiss might spread by contagion to the peasantry elsewhere.\footnote{Oechsli, \textit{History of Switzerland}, 6.} And it did. “They want to become Swiss,” spat aristocrats in Germany when their own lower-classes revolted against their lawful lords. So it was not just halberds and pikes that struck fear in the hearts of the dominant aristocrats, but also the Swiss example of self-government. Frustrated aristocrats across Europe whined that the “self-government of these ‘rude cow-milkers’ was an abomination.” For aristocrats it was. But they had to tolerate it because “the combined and élan-driven formations of pikes and halberds were too strong. Indeed, after the Burgundian wars, the Swiss, too, had become conscious of their own strength. They had the proud feeling that they needed no other protection than that of God and their weapons.”\footnote{Ibid, 7.}

Thus, in the three central cantons of Schwyz, Uri and Unterwalden, free peasants worked together, during the twelfth-fourteenth centuries, to expand their ranks and increase their common holdings. It was during this period of contention with their religious lords, that the central Swiss gained further political and military experience that would guide them at Morgarten. They had learned that if they united together, they
could, as a group, defeat both politically and militarily the more powerful local lords. Likewise, the common desire for autonomy solidified their élan. So, the initial efforts of the Forest Cantons to gain local autonomy explain, to some extent, their courage and high morale at Morgarten. The newfound autonomy among the Forest Cantons only deepened their long-established independent worldview, which included the belief that military knowledge and prowess among the peasants had to be preserved.

Unlike peasants elsewhere, the Forest Cantons did not consider the “knightly class” as their personal protectors. They refused to give up what can only be called a civic spirit that placed responsibility for fighting on the backs of the peasants themselves. Further they had not allowed the knightly class to take away that right in order to gain political control. The Swiss inherently understood the classical ideal that those who vote together should fight together—and that the roles were mutually supporting. This was a very peculiar worldview for peasants in the late Middle Ages, but it was the underlying foundation for the conflicts for local autonomy.

With the opening of the Gotthard, the central cantons were thrust into larger, world conflicts. They heard more about world events, as the Gotthard brought merchants, pilgrims, military and other traveling people into the central valleys. Likewise, the people of the central Swiss valleys crossed the Alps into Italy both as

---

guides and as mercenaries. As discussed earlier, they were eyewitnesses to the Italian communes’ wars of independence.447

As time went on, the Swiss peasants, who believed they should never allow someone else to fight for them, realized that they could better their lots in life by hiring themselves out to fight for others. Many a simple peasant’s son left his home for Italy in the employment of the Hohenstaufens. These belligerent youths from the three cantons of Uri, Schwyz and Unterwalden poured into the German ranks, joyously rallying to the imperial standard. Their martial virtues won them many freedoms under the Empire, and they built a reputation as a “Heroic-stock” of foot soldiers that, unlike others, would not flee the battlefield in times of danger or misfortune.448

They also gained military knowledge—perhaps the most important of which was a realization of how expensive the knightly lifestyle was. It was their inability to meet such expenses that often brought them back to their father’s farms. However, this knowledge of the system of knighthood also led to an understanding that as peasant fighters, the people of the cantons would have to create a democratic military system, equalizing class positions, and banding together in common defense in order to protect themselves against the wealthy, skilled knights. Further, in Italy, they had seen similar communal efforts, and gained confidence that such a defensive system was possible.449

Further, the Swiss drew up early pacts of alliance providing for mutual military support. But, unlike allied communes elsewhere, the Swiss took the process a step further. As the cities were added to the Confederation political issues began to arise

447 Ibid, 30. This topic is covered in Chapter Two.

448 Von Elgger, Kriegwesen, 6.

among members of the League. These problems centered on the fact that the institutions of the rural states were quite different from those of the cities. In the three original rural cantons—Uri, Schwyz, and Unterwalden, and also in Appenzell and Glarus, all male citizens were free and had equal rights. The entire community of each canton met together in general assemblies (Landsgemeinden or Landesgemeinde), and there decided important decisions by majority vote. But in the territories of the sovereign cities there were no popular assemblies, and the burghers ruled without consulting the opinions of rural folk in their cantons. However, it was only later that the Confederacy came to be dominated by cities.

 Indeed, in forming the major documents of the first Swiss constitution, the farmers led the way; refusing to give up their own clearly defined egalitarian system, rural leaders demanded that matters should be settled on the model set by the original Confederates: that pacts should be concluded only by common consent and by the allies in common. With this democratic system in place the Confederates added to the Bundesbrief of 1291 (the pact against outside political influence) and The Oath of the Three Forest Cantons 1315, the product of the famous “meeting on the Rütli” of 1307, (the pact to raise a military force to ensure claims to autonomy) three important laws: The Priest’s Charter (1390); The Sempach Charter (1393); and the Convention of Stanz (1481). These together with the pacts of 1291 and 1315, formed the basis of Swiss constitutional law up to the close of the eighteenth century.450

In 1370 the *Pfaffenzbrief*, or Priest’s charter, added the amendment to the Confederate proto-Constitution that each canton would protect the others against *any* non-Confederate influence be it political or spiritual. As we know from the story surrounding the first Confederate battle at Morgarten (1315), Swiss communities often quarreled with clerical powers, who we can assume were some of the “oppressors” mentioned by the Landesamman in their earliest meeting. Yet, although the pretext to Morgarten was the Schwyzer attack on the abbey at Einsiedeln, the original Confederate agreement had been to raise forces against a *political*, not religious, authority. But, after a group of priests attempted to turn one of the cantons against the Confederacy: the Provost of the Grand-Moûtier, or collegial church of Zürich, and his supporters took the Avoyer of Luzern prisoner due to a personal quarrel, a new agreement had to be made. The actions of the Provost of Grand-Moûtier were an affront to the sovereignty of Luzern. In response the Priest’s Charter was concluded between the Confederates,\(^{451}\) which, in essence, put the Church firmly under Confederate political control.

The Charter promoted Confederate autonomy by specifically laying out provisions for protecting all members of the Confederacy against anyone—ecclesiastical or lay—who might try to threaten any one of their members. It was here that the principle of majority rule was officially implemented as members of the Confederation voted for the adoption of the new articles.

The Sempach Charter of 1393 was drafted in response to the unpreparedness, or

\(^{451}\) Bern and Glarus stayed out of the conflict.
unwillingness, of all the members of the Confederacy to fight with the Luzerners and Forest Cantons at Sempach in 1386. The new charter stipulated that all cantons, as members of the *Eidgenossenschaft*, must be ready to mobilize at any time asked by the larger proto-federal Confederacy. To alleviate any excuses of unpreparedness, each canton was to set up specific places of assembly, and drill their men to assemble under unit flags in a quick and orderly fashion. In this way, each larger cantonal unit could meet up quickly with the entire Confederate force and together they would march out to the battlefield. The Sempach Charter was effectively a prelude to the federalization of the Swiss army.

The Convention of Stanz, ratified in 1481, increased the sovereignty of the Federal Confederation, while further promoting egalitarianism among its military. It regulated the partition of booty into equal allotments to each canton involved in the fighting. But more importantly, it prohibited all separate alliances between confederate cantons or their militias, effectively putting the militia of all the cantons under the civilian control of the larger Confederate assembly.

In Switzerland, then, the oaths for perpetual support, which can be found elsewhere among European communes, are coupled with other early laws that cannot. Egalitarian laws; a disregard for both secular and religious leaders; complete freedom from both local aristocrats\(^{452}\) and imperial rulers; federalized, firm control over the militias at home, while allowing for unit/cantonal independence on the battlefield—a

\(^{452}\) Once the cities joined the Confederacy they gradually attempted to take over leadership of the *Eidgenossenschaft*. The rural cantons often complained that the city oligarchic counsils were no better than the old petty aristocrats had been, and often led rebellions against them when the burghers retained too much power. However, in Switzerland, peasant rebellion (for instance, the rebellions of the seventeenth century) had a different quality than elsewhere in Europe. In Switzerland peasants were resisting the attempt by the cities to *change* the already democratic nature of the *Eidgenossenschaft*, which the rural peasants had crafted and fought to attain. Elsewhere, peasants fought to *gain* egalitarian rights; in Switzerland peasants fought to *keep* them.
system unmatched by any other in Europe—gave the Swiss Confederacy, and its militias, a singular character that can, in fact, be regarded as “special.”

Yet, this special egalitarian quality does not tell us anything about how the Swiss formed up their militias. It only hints at the nature of military organization in Switzerland: it was egalitarian and closely associated with military practice. Confederate troops feared neither secular, nor religious powers, and units were expected to obey their cantonal councils, not their priests. Early on the Swiss fought for what they perceived to be their old rights, good land, and freedom from local aristocrats. But, “a peculiar spirit of freedom among the Swiss” is certainly not the only, or even the best, explanation for exactly why the Swiss formed up as they did and succeeded where others failed.
Figure 6.1: The Bundesbrief—1291. Original Document of Confederation Sealing Agreement between Uri, Schwyz and Unterwalden. Bundesbrief Museum, Canton Schwyz.
Map 3: Switzerland, 1291-1797. The colored key shows when each canton joined the Confederacy.
CHAPTER 7:
THE PRODUCT OF BATTLEFIELD EXPERIENCE AND AUTONOMOUS GROWTH: DEVELOPMENT OF THE SWISS FORMATION (1315-1544)

The early history of the “inner” cantons, especially as it relates to the events leading up to Morgarten, has always been controversial among Swiss scholars. Given a deficiency in hard evidence—the history surrounding the Battle of Morgarten is a classic case of “history from the bottom up”—this period has been left open to interpretation, and from the late-eighteenth century to the present has been “revised many times,” more often for ideological reasons than because of any new piece of hard evidence that surfaces. Of course, this is often the case with historical interpretations—they naturally change over time. But in the Swiss case the problem is exacerbated: no history of the Forest Cantons, in their own words, exists; and for most Swiss, this period marks the beginnings of their nation.

Imagine the problems for U. S. Revolutionary War historians if all they knew is that “some man,” maybe named George Washington, might have existed (but probably did not, and if he did, George Washington was certainly not his real name), and maybe led revolutionary militias in early rebel efforts against English control; that it is said three

---

of the most important men to sign a document, which we call the “Declaration of 1776” for lack of a better term, might have been obscure men by the name of Thomas Jefferson, Benjamin Franklin, and John Adams. And although the document is still extant, we cannot be sure that this 1776 document (if that was, in fact, the actual year of the signing) was really meant as a formal ‘break’ from England. We call ourselves a democracy now, but back then what would a peasant British colonist know about ‘democracy’? And don’t forget that even if these “Revolutionaries” had some notion of democracy, it was not long before elites in the United States took control of the country, and all those “ideals” of fighting for “freedom” against the British were lost anyway. Of course, we would have no idea how educated our “Founding Fathers” were, what they believed, what they intended, or why they fought.

Now imagine that nothing of colonial warfare was known leading up to the battle of Yorktown, and that even the events that transpired there were chronicled by official English historians, and that American scholars began to write down in scientific fashion what they knew of the United States’ founding nearly two hundred years after the fact. We would have no idea, for instance, who trained the Americans to fight—even if we had a nineteenth-century military manual said to be based on a Prussian military system by a Prussian army officer named Friedrich Wilhelm von Steuben. But, then, we would know little about him either. This is the situation faced by historians studying Morgarten. We have documents signed by Swiss military leaders, rumors, suppositions, attempts to place various people, such as Stauffacher, at the head of the Swiss forces, but, again, little hard evidence to prove any of it. All we know for certain is that at Morgarten a huge unit of
tightly packed peasant footsoldiers, using mostly halberds as the main arm in battle defeated an Imperial army led by knights.

We also know that between 1315 and 1476, as the Confederates struggled for autonomy from Habsburg and Burgundian lords, young Swiss boys grew up in an atmosphere of war. At home, their fathers’ war stories and their father’s weapons kept the realities of war close in their minds. Confederate men were required to arm themselves, and kept their weapons at home.

The Swiss levy was egalitarian: it was not based on wealth, or property qualifications, as was, for instance, service in a hoplite phalanx; nor were elite soldiers given a prominent role in warfare, as had been medieval knights. Cantons furnished the poor with equipment at the expense of wealthier citizens—literally—although the wealthy who provided funds to buy equipment for the poor were often given tax relief. As long as soldiers used these weapons for their intended use, they were for all intents and purposes theirs and were kept at home.454 At the age of sixteen, young Swiss men were drafted into the militia system.

Given this military culture we can imagine that Swiss soldiers learned tactical lessons quickly and would have been able to devise swift solutions to tactical flaws as a natural outgrowth of their familiarity with battle. Scholars since Delbrück and Oman have assumed this was the case, and give “battlefield experience,” beginning at Laupen (1339), as the stimulus for the change from halberd to long-pike formations.

454 Bruno Hübscher von Hochdorf, Die Entwicklung und Struktur des Luzernischen Heerwesens von 1291-1500, Inaugural-Dissertation Universität Bern, 1943 (Hochdorf: Duchdruckerei Hochdorf AG, 1943), 22. “Misuse” of the weapons would be to sell them, or to put them up as collateral for loans. Apparently, some Swiss soldiers did this, since at the beginning of the fourteenth century Luzern issued strict regulations on pain of punishment that no citizen was allowed to sell his armor or use it as collateral on a loan.
Certainly, many battles and the experience gained from them lay between Morgarten and Sempach where the Habsburg threat was decisively defeated, and Sempach and Nancy when the Burgundian threat was eliminated. During these two conflicts the Confederates developed a tight discipline achieved through constant training, enabling them to maneuver swiftly and to assume a rapid offensive. More importantly, between these conflicts, the Confederates gained a great deal of practical battlefield skill over a half-century of conflict in which the gentry families were overthrown, and local peasant communities and city oligarchies took over their lands. Peasant and burgher societies also claimed the right to levy their own tolls and hold their own courts.455

This does not mean that aristocrats were excluded from participation in the new farmer and burgher-led society, only that they no longer held control in Confederate lands. In fact, a number of former knights, like the veteran Rudolf von Erlach, served in the Confederate militias and offered their professional expertise.456

Delbrück and Oman are right to emphasize both the egalitarian nature of the Swiss militias system and its "bottom up" command structure, with its accompanying absence of strategic planning. However, it is important to keep in mind that after Morgarten, Swiss units included more than simple peasants. At key battles in the development of Swiss tactics, professional soldiers were among the Confederate troops, as they were democratically chosen to be Commanders. At other times, they were


present at war councils and would have lent their own knowledge and expertise to leaders and city councilmen as tactical plans were devised.

It should also be emphasized that not all decisions in this age of proto-democracy in Switzerland were made democratically. Particularly, in the larger cities, burgher politicians—in essence, oligarchic counsels—made decisions affecting Confederate weapons and tactics that were sometimes unpopular with their troops. The idea that simple peasants formulated tactical developments during the wars for independence is, at best, only part of the story. At worst it is a common fallacy.

RELATIONSHIP OF TACTICS AT MORGARTEN TO LATER DEVELOPMENTS

Oman is correct that Swiss militias were the first corps since ancient times to use formations of spearmen as deadly autonomous offensive units. But they did not use them at Morgarten in 1315. This first battle for Swiss independence was exemplary neither of "western tactics," nor a progression in the art of war.

Delbrück, Fuchs, Förster and others have argued that the Swiss system at Morgarten reflects the tactics of free Germanic peasants, with limited funds. At Morgarten the Confederates wore neither skullcaps nor iron hats, and had no plate-nor chain-mail, except when it was a trophy they had won in battle. Otherwise, they wore only long pants and jackets made from linen or wool. Wooden shoes with iron spikes attached provided a sure footing on steep land. At Morgarten the Confederates threw


stones—an old Germanic tactic—but added to this the “log roll.” Both were used against bodies of horsemen to trigger disorder among the enemy ranks just before the infantry attacked. Shortly before, or during, an assault, hailstorms of stones—as big as fists—were thrown down on a surprised army. The target was the legs of the horses, which caused panic among the poor animals followed by shying and mad attempts to run away. Many of the horses threw off their riders as they tried to escape. In the confusion the ranks of horsemen became entangled.

However, at Morgarten the main Confederate weapon was the halberd, not the pike. In the thirteenth to fourteenth centuries the halberd was developed as a pole weapon that could be used for both hacking and sticking. The name halberd does have German origins, and transferred as a loaned word into other languages; in French, hallebarde; English, halberd; Italian, allabarda, and Latin hellemparta. This in the sixteenth century it was re-translated into “Hellebarde.” The term is formed from two words—HALM or (stange, or pole) and BARTE (beil, or hatchet/ax/cleaver) and simply means a pole with an ax attached. At the time of Morgarten, the halberd was formed like a long heavy ax from which protruded a heavy sticking iron. Von Elgger believed that, although the halberd was long considered to be a “Swiss-made weapon”—likely because the Swiss used them in large numbers and in effective compact formations—these were

---


460 John Winterthur, 25, in Oman, History of the Art, 239, n.2. See also Verbruggen, Art of Warfare, 285, and Delbrück, Medieval, 552.

461 See Figures 7.1-7.2 and Map 4.

462 Schmidtchen, Kriegswesen im spatter Mittelalter, 188.
actually the weapons used by the Franks all the way back to the time of Clovis. They are also similar to the Germanic war-ax—although in earlier times they were utilized just as often as throwing weapons, as they were sticking and slashing weapons.463

According to Schmidtchen’s controversial thesis, the halberd was first created in the Middle Ages as a response to the development of plate armor. But this is simply inaccurate. Some sort of prehistoric halberd existed as early as the Bronze Age in South-East Spain,464 and it is not exclusive to the West. In 1969 figurines holding halberds were found in a Chinese military commander’s tomb at Lei-t’ai, Wu-wei District, Kansu, dated to the end of the Eastern Han, circa 200 A.D. While mounted warriors utilized those found in this instance, it is traditionally believed that footsoldiers in China had used them since ancient times for thrusting, hacking or hooking.465 So, we know that halberds were neither created first in the Middle Ages nor by the Swiss, and we cannot know precisely why the men of the Forest Cantons preferred them, but we can “guesstimate.”

What made the halberd so crucial were the various possibilities for its use. They were ambidextrously driven, and used not only for slashing, but also for thrusting.466 John of Winterthur described the appeal of the halbard when he explained what Duke Leopold was up against at Morgarten. He writes: “Also the Swiss have in their hands death weapons, which have been called in popular speech ‘Helnbarten,’ and are very

463 Von Elgger, Kriegwesen, 91.


466 Schmidtchen, Kriegwesen im späten Mittelalter, 189-90.
frightful. These slice like a razor and slash into pieces such strongly armed
opponents.“

So, the iron halberd was the first versatile pole-weapon that put the foot soldier at
a distinct advantage over the knight: it could crack through armor. An expressly
offensive weapon, its value, then, was that it significantly decreased the protective appeal
of plate armor. While it also left the halberdier vulnerable—it had to be carried with both
hands, so those who wielded it had to give up the shield—its effectiveness was
apparently worth it, especially for footsoldiers like the Swiss, who were lightly armed
anyway. Another drawback of this weapon was that on the open field, while it could
repel a cavalry charge, it was too short to repel the longer lances of dismounted knights
without significant losses, as we saw in Chapter Two.

But on the other hand, it was a much more versatile weapon than the long pike—
though both weapons required the use of both hands—and necessary to the success of the
latter, since after the initial collision with the enemy the long pike basically became
useless. The halberd was more functional in hand-to-hand combat once the enemy front
had been broken. This is why, post-Sempach, the halberdiers were usually covered by
the pikemen who surrounded them on the outsides of the pike square. Because the long
pike was too unwieldy in hand-to-hand fighting, and the lightly armored halberdier was
vulnerable, Confederates combined the two weapons: one weapon relied on the other on
the open field.

467 Chronik des Minoriten Johann von Winterthur, in Mittheilungen des Historischen Vereins des
Kantons Schwyz, Heft 3, (Einsiedeln, New York, Cincinnati and St. Louis: Druck und Verlag Karl and
Nikolaus Benziger, 1884), 39-40.26. See also von Elgger, Kriegswesen, 93

468 This is also discussed in detail on p. 248; 252-4; and 256-60 below.

469 Schmidtchen, Kriegswesen im späten Mittelalter, 188-90.
The halberd was not an originally Swiss invention: they were already in use in the early 1200s in the Middle Rhine. They were, however, favored by the men of the Forest Cantons. Their resistance giving them up for the long pike suggests the halberd had been in use long before Morgarten. Likely mercenaries carried them in foreign wars. But at Morgarten, halberdiers were, for the first time, mustered into a large tactical unit, and combined with well-chosen terrain for an offensive guerilla war technique that made the Swiss equipment even more effective.

This was guerilla war, but not the guerilla war of the Alemannians, or other earlier Germanic tribes. The Swiss were not hiding in the woods, waiting for an opportunity to strike and run—just the opposite. As Volker Schmidtchen points out, tactics at Morgarten were well planned and tactically sound. The contingents from Uri, Schwyz and Unterwalden could draw from a rich pool of experience as mercenaries in Italian and Burgundian military service. Their reason for taking up a position in the woods was that the Confederates needed the advantage of surprise since they were outnumbered. Given the numerical superiority of the Austrian army, Schmidtchen argues, the choice of a battle location was “tactically intelligent.” By choosing this position, the Swiss columns forced battle on the enemy at a place where it could not use its specific superiority—the

---

470 Ibid, 188-90. After Morgarten, in the fourteenth to fifteenth centuries a variety of forms appeared. One resembled a cutting blade, similar to the “Glefe,” others were more like the sickle (Grundtyp). The axeson these “Grundtyps” at the time of Morgarten were sharpened on both sides and had a spear blade that was placed opposite the shaft in alignment with the spear blade. The axe was set and anchored into two sockets forged on the back of the round shaft, usually made out of ash-wood. The halbard was a product of smith technology of the highest quality. The halberd had to be able to cleave armor and helmet, which meant that the axe- and thrusting blades had to be hard, as well as shatter resistant. For this purpose they were tempered at the tips with the rest of the blade made of a more pliable metal that kept it from shattering on impact. The local halbard-smiths understood their craft well.

471 It is interesting to note, that the militias of commoners in the American Revolutionary War, of course, by then armed with muskets, would make similar use of such guerilla tactics in the thick Forests of eastern North America. See Figs. 7.1 and 7.2.
cavalry charge—to advantage. See Figure 7.3. This was exactly why the letzi were created—to funnel the knights into bottleneck where they would be trapped without mobility. Stauffacher, the Swiss commander, was fully aware that the halberd formation would be vulnerable to cavalry charges. So his choice of tactics and location were the one way for the Swiss to keep the upper hand. But the shrewd choice of terrain and the use of letzi would have been useless without strict discipline and coordination of the troops. To be successful, Stauffacher had to convince his men, who were furious that their old rights under the empire were being attacked, that they could not run wildly and independently at the enemy on first sight. They had to wait patiently and quietly from the woods, until the Austrians were in the perfect position for the assault, and they had to march from the woods as a solid unit.472

Further, these tactics were also part of a larger strategy. The destruction of Duke Leopold’s army had to be completed in order to achieve the heavy psychological blow that would make the Habsburgs think twice about attacking the Swiss again. The Confederates knew that their old rights under the Empire were in jeopardy, and to assure that the Austrian attempts to suppress their claims to autonomy were stopped, they would have to do more than just defend themselves. They would have to annihilate the enemy. Schmidtchen called this strategy an “active defense, in which the goal was to utterly destroy the attackers.”473 For this reason, and not some “wild Germanic warlike spirit,” the Swiss took no prisoners.

472 Schmidtchen, Kriegwesen im späten Mittelalter, 229.
473 Ibid, 229.
Leadership at Morgarten was very different from the leadership that would appear later. Werner Stauffacher, the *Landesamman*, a free and middling farmer from Schwyz, led the forces at Morgarten. There were no knights to lead the Swiss as there had been, for example, to lead the Flemings at Courtrai.

Admittedly, the Swiss victory there was achieved through careful planning and well-chosen terrain, but Confederate tactics remained primitive. They certainly did not reflect a revitalization of classical infantry tactics: the Swiss did not openly declare war on the Habsburgs; they did not march out onto an open plain with spears and heavy armor; and they did not attack their enemy head on. Eventually the Swiss would form tight formations of pikemen, but it did not happen at Morgarten. Instead, there, the Confederates hid in their forests and waited for their enemy to march into an *ambush* the Schwyzers had carefully laid for them.\(^{474}\) These were not purely “western” tactics: they were, in part, guerilla tactics. According to Gérard Chaliand, insurgent tactics enable the weak to avoid direct decisive confrontations with the strong, by relying on harassment and surprise to achieve their goals. This is what Clausewitz called the “popular warfare of peasant resistance to a foreign aggressor.”\(^{475}\) Swiss tactics at Morgarten were representative of this style of battle, which was nothing new in the history of warfare.

Nevertheless, politically speaking, Morgarten was a water-shed moment. Three little democratically governed peasant communities—Schwyz, Uri and Unterwalden—in the heart of Switzerland's central valleys, had demanded independence from foreign...
governors, establishing it by defeating their imperial army. These “inner” or Forest Cantons laid the foundation for the Confederate militia system when they signed the Bundesbrief of 1291, and renewed it in 1314, swearing oaths of loyalty for mutual protection against any aggressor. With this agreement they created the original Confederacy. In 1315 the “Oath Brothers” were put to the test and their united efforts succeeded against a powerful enemy—an Austrian Habsburg army. Their success won the confidence of other Swiss communities, several of which had fought against them at Morgarten. Among these new members to the alliance were the “outer” cantons of Zürich, Zug, Glarus, Luzern, Zürich, Fribourg, Graubünden, Bern, and others, which either joined or, in the case of Graubünden, allied with the Confederates after Morgarten.

The larger cities strengthened the Confederacy both politically and militarily. Not only were Confederate ranks increased, but "outer cantonal" commanders with military expertise made the Confederates confident enough to abandon guerilla tactics and to meet their opponents on the open battlefield. The fact that the Swiss had a few elite leaders in no way diminishes the egalitarian nature of the Swiss forces. The knights who assisted the Swiss had abandoned their own feudal obligations in order to join the insurgency to expel foreign rulers from Switzerland. Further, the command positions they held at few Swiss battles were not theirs by title or by right, but by merit. They offered their expertise to the Swiss and the Confederates accepted. Their command gave them no


special privileges. But Confederate acceptance of their leadership at battles like Laupen and Murten suggests they had something important to contribute to Swiss tactics.

Although only a few of these commanders appear in the historical record, their influence was significant. During and after certain key battles where Swiss tactics evolved, leaders, not common peasants, made decisions that led to the final long pike formation for which the Swiss became so envied. One such leader appeared at Laupen where the Confederates for the first time left the protection of their forest and stepped onto the open battlefield.

Laupen (1339)

Twenty-four years after Morgarten the Confederates faced their next major conflict with a foreign power. Now allied with the cities of Luzern and Bern, the Forest Cantons were called to assist the Bernese who fought Burgundian nobles for territory to the east of Bern.478

While the allies brought two units of footsoldiers to aide the Bernese, Bern provided only one unit. But they also supplied an able commander, the knight Rudolf von Erlach. The Confederates needed to know how to fight on the open battlefield and von Erlach, who had sided with the Confederacy against the foreign nobility, had such expertise. The Confederates trusted him to teach them for several reasons. First, his father had commanded the Bernese at Dornbühl in 1298 where Bern had won its independence from Fribourg and the Habsburgs. Rudolf's family had a history of loyalty to Bern, and the Bernese trusted him. Second, Rudolf himself had served as a knight in six successful battles, so he understood knightly tactics and how to counter them.

478 See Map 4.
Finally, the chronicler Justinger wrote that the Bernese chose von Erlach to be their commander at Laupen since he “would show and teach them how they should start and end their affairs, since in war wisdom is better than strength.”

Justinger’s account, admittedly, was written eighty years after Laupen, when legend had already overtaken fact. It makes it difficult to know what parts of Justinger’s account are accurate, and what are legend. However, we do know that von Erlach existed, that he was a skilled knight, and that he was loyal to Bern. There is no reason to believe that von Erlach was not just as influential as Justinger suggests he was in training the Confederate army before Laupen. Likewise, Justinger’s point that the Swiss recognized the need for “wisdom” in battle, rather than “brute strength” implies that they were aware of the need for new tactics as they left the hilly, heavily forested countryside of the central Cantons and fought on the flat, level Bernese plains.

Although several knights fought for the Confederates at Laupen, it was von Erlach who is credited with the next development in Swiss warfare--the training of an army that combined a halberd and two pike units, working together as a cohesive whole. According to Oman, von Erlach in essence, created an infantry. Oman writes: “At Laupen for the first time almost since the days of the Romans, infantry, entirely

---


480 Delbrück, Medieval, 562, 564. The Conflictus Laupensis, written by the secular priest Diebold Baselwind, was Justinger’s primary source for the Bernese Chronicle written eighty years after the Battle at Laupen.

481 Justinger mentions as Confederate leaders at Laupen: Herr Johannes von Bubenberg, Sr., knight; Herr Anton von Blankenburg, vogt in Laupen and knight; and Johannes von Bubenberg, Jr., knight. See "Der Laupener Streit," 127.37.
unsupported by horsemen, ranged on a fair field in the plains, withstood an army complete in all arms and superior in numbers." 482

Von Erlach’s use of three units became the standard battle order of the Swiss from Laupen forward, although different combinations of weapons and tactics were used in later battles. 483 For instance, Rüstow in *Geschichte der Infanterie*, based on Justinger’s account speaks of von Erlach’s ability to maneuver his troops in advanced movements. In fact, at the onset of the battle, he noticed that his army had deployed on a slope over the ridge of a hill. Desiring the momentum of advance from the top of the hill he had his phalanx turn about and move one hundred paces up the slope, in order to have the attack start from the top of the hill. 484 Delbrück doubts the ability of a "popular levy" to achieve this complicated maneuver. 485 However, he forgets that Swiss militias had been practicing since Morgarten; and they had made Erlach their commander, specifically to teach them how to maneuver. This Swiss ability to backpedal in formation later became a hallmark of Swiss tactics. At Marignano in 1515, for example, the Confederates, backed into a corner by German pikemen (*landsknechts*), backed themselves out of the corner and made a full retreat while maintaining "good order." 486 There is no reason to believe that drills for this kind of maneuver had not begun before Laupen.

At Laupen the center column was made up of Bernese pikemen. Halberdiers from the Forest Cantons made up the column to the left and rear. On the right was a pike

---

482 Oman, *Art of War*, 89. Throughout I have used infantry more or less interchangeably with foot soldier. Dismounted combatant might be a better term.


square composed of Bern’s allies that, like the halberdier unit, were deployed in echelon to the right and rear of the Bernese. Von Erlach positioned these units on a slope. The center or Gewaltshaufen would lead the advance and open the battle followed by the wings. All were ordered to wait patiently for the enemy’s ascent.\textsuperscript{487} As the Burgundians trudged uphill, Erlach gave the order and all three Confederate columns advanced swiftly towards the enemy. The Bernese and their allies trampled the enemy’s front ranks on the Swiss center and right, and drove the rest off the battlefield. Meanwhile the Forest Cantons with their halberds rushed towards the Burgundian cavalry on the left and held them.\textsuperscript{488}

But surrounded by the Burgundian horse, the Forest Cantons struggled to hold off the charges of the knights. Armed with mostly halberds, they slashed and hacked, doing substantial damage to horse and rider; but in the end, it was the pikemen of Bern and their allies who decided the battle. Resisting the temptation to pursue the fleeing enemy, the Swiss center and right joined in one massive column and wheeled to the left, positioning themselves on the enemy’s right flank and rear. The knights made only one attempt to charge the pikemen, but it failed, and the exhausted knights fled; but only after their rear guard was intercepted and driven into the Sense River.\textsuperscript{489}

Laupen was a decisive Confederate victory. However, the halberdiers took heavy losses. This taught the Swiss two important lessons. First, on the open battlefield halberds were effective against cavalry only if their charge could be slowed long enough

\begin{flushright}
\textsuperscript{487} Wieland, \textit{Kriegsgeschichte}, 59. See Map 3. \\
\textsuperscript{488} Oman, \textit{Art of War}, 89-90. \\
\textsuperscript{489} Ibid, 91.
\end{flushright}
to bring the halberds into play. Given the chance, the heavy head of a halberd could slice through helmets, shields and mailcoats like an ax through dry wall: it could also chop horses’ legs from under them and remove heavily armed limbs in one tremendous blow.\footnote{Oman, \textit{Art of War}, 77-9.}

But the eight-foot-long halberd was too short to hold off repeated cavalry charges for very long. So, the Swiss needed a formation that could repulse cavalry while using their dreadful halberds to the best advantage. With the victory of their pikemen over the Burgundian knights the Swiss learned their second lesson: massed pike squares that held steady against cavalry charges, could break them—and the morale of those who watched. Under von Erlach’s leadership the Swiss learned how to defeat mounted knights in the open field decisively.

THE SWISS MILITIA SYSTEM

Between Morgarten and Sempach the Swiss also developed a militia system that made military service compulsory. During the period of the Confederate war against the Habsburgs, or the \textit{Freiheitskämpfen} (1315-1388), all “able-bodied” Swiss men (from ages 16 to about 45) were immersed in a culture of war. Military service was compulsory, as it would be again during the Burgundian War (1474-1476). But the service was only compulsory whenever a foreign power posed a major threat to the Confederacy; otherwise, it was voluntary. Yet, even in years when the Confederacy was not threatened, cantonal citizens were required to keep themselves ready to assemble at any time in the event of an emergency. If they were not ready to mobilize at the
specified time, they could be charged a fine of ten Schillings or one years’ exile from the canton.⁴⁹¹

Even those too young for military service were not entirely exempt. Training in the exercise of weapons began for boys when they were very young. Their drill instructors were experienced veterans who had an enthusiasm for war and enjoyed teaching youngsters the Swiss tactics. Fathers also filled the role of military instructors, encouraging a martial spirit at home, by telling their sons the deeds of heroes and their own war experiences; meanwhile boys both strengthened their bodies and practiced their skills through drills and sporting matches between neighboring cantons.⁴⁹²

During the fourteenth century, a great percentage of the population became professional soldiers. Individual Swiss units sold themselves out to the highest bidding prince, and for this reason often Swiss stood against Swiss in combat.⁴⁹³ When boys turned sixteen—the age at which they were liable for military service—fathers took them along to mercenary battles to initiate them into military life. This was a rite of passage: a time for boys to bond more closely with their father and with the men of their unit, which helps to explain the cohesion of Swiss units. At this stage, the new recruits were given light responsibilities such as cleaning weapons and preparing meals.

Meanwhile, as they observed the veterans, the new recruits learned the realities of war. There were also parades and weapon’s exhibitions to thrill young boys and inspire

---

⁴⁹¹ Hübscher von Hochdorf, Luzernischen Heerwesens, 18.


⁴⁹³ Hübscher von Hochdorf, Luzernischen Heerwesens, 18. In 1401 it was agreed among the Confederate leaders that this had to stop and legislated against it. Now, Swiss mercenaries fought only for princes who were given permission by the Confederate leaders to use Swiss units in their wars.
them to become soldiers. Often youngsters would follow behind parades dressed up like their fathers in full armor, and carrying pikes and halberds.\footnote{Ibid, 21.} So, among the Swiss, mercenary service functioned as a practical school of war for the young.

**Sempach (1386)**

Meanwhile, as Oman rightly points out, Confederate enemies pondered how the Swiss might be tamed and brought back under aristocratic control. By Sempach in 1386 Habsburg commanders had had forty-seven years to ponder the defeat of the Burgundian nobles at Laupen, and to devise tactical solutions to the problems posed by the Confederates. Leopold the Proud, who like his uncle and namesake at Morgarten, would march out to face the rebels at Sempach, probably knew what had happened to the Burgundian knights at Laupen. He probably also was acquainted with Poitiers, where in 1356 Edward III of England had dismounted his knights forming them into two to three units against the French. Leopold (the younger's) ancestor, the emperor Albert I, had also dismounted his men-at-arms in the battle of Hasenbühl in 1298, when he fought against the German king Adolf. History had shown that dismounted knights could be very successful against peasant levies.

But the Swiss also had professionals among their ranks who had similar experience and knowledge of war. Members of the knightly family of Winkelreid also fought at Sempach.\footnote{Delbrück, *Medieval*, 577.} While there is no evidence that any of the Winkelreids held a command position at Sempach they likely fought there as they had at Laupen, and lent a professional expertise to the Uri units.
After Laupen, the Confederates knew that the older Germanic ax-weapons with their short pikes worked well when defending only narrow roads and mountain passes. However, on the flat and open battlefield, the spear, when used in disciplined formation, was much more effective at holding off the shock of the knights. But they never changed. At Sempach the lesson was taught again. The shorter weapons of the Confederates put them at a distinct disadvantage against the long lances of the knights.\footnote{Wieland, \textit{Kriegsgeschichte}, 34.}

In 1386, at the small Swiss town of Sempach, Swiss militias permanently broke the hold of the Habsburgs over the Confederate communities.\footnote{See Map 4.} Leopold III had taken it upon himself to teach the rebels a lesson and to gain back the territories that his family had lost since Morgarten. Gaining an initial victory at the siege of Sempach, Leopold turned east with his army of about 4,000 men and marched to meet the Swiss levies who had gathered by a bridge crossing nearby the Reuss River at Gislikon.

Neither army knew the exact location of their opponent. But less than halfway to the Reuss, the Austrians spotted a steep rise to the east, and there in formation waited a mass of Swiss troops. The Swiss \textit{Vorhut}, made up of units from Luzern, had taken position on a narrow, level slope in front of Hildisrieden. Surveying the terrain, the Duke mistakenly believed that the enemy standing before him was the entire Swiss army. He ordered his first unit of knights—nearly five hundred men-at-arms—to dismount, using their long lances in tight formation. They formed a massive deep rectangle whose lances protruded from four rows, creating an impenetrable deadly front.\footnote{Ibid, 82.} These were sent
against the Luzerners, halberdiers drawn up in a wedge, or Keil, a column of more than
ordinary depth in proportion to its front. Its object was to break an unusually firm hostile
front by a concentrated shock delivered against the center.\textsuperscript{499} Meanwhile, two more units
of mounted men-at-arms were held back to allow the dismounted knights to wear the
Confederates down, as the Austrian archers were directed to open fire on the enemy.

After the barrage of arrows hit home, the dismounted knights were ordered to
storm the hill on foot. The Duke watched as the Habsburg knights repelled the Luzerner
unit, slipping into gaps opened in the Confederate lines as Austrian arrows successfully
hit their marks. Leading mounted charges into the tears provided by missiles was the
classic method of collapsing a phalanx, but Leopold's army now attempted the maneuver
on foot.

The Luzerners, only the advance guard of the Confederate army, were over-
powered. Pierced by lance and arrow, they fell rapidly, but fought hard, hoping for
reinforcements. The long lances of the knights outreached the shorter Swiss halberds; the
Luzerners took heavy casualties, and still the reinforcements had not come. The
Austrians nearly won. See Figure 7.4.

But, just when it seemed the Luzerners were about to be broken, the
Gewaltshaufen, or main Swiss body—some 5,000 pikemen from Uri, Schwyz and
Unterwalden—stormed in from the North, hurling stones on the Austrians.\textsuperscript{500} When they

\textsuperscript{499} Oman, \textit{Art of War}, 86.

\textsuperscript{500} "Bericht einer Züricherchronik. Um 1438? Aus G. v. Wyß, 'Über ein Züricher chronik aus dem
15. Jahrhundert'," in Oechsli, \textit{Quellenbuch}, 159.47.d. The chronicle, discovered by Wyß, was written by
an unknown inhabitant of Zürich. According to Wyß the handwriting seems to be from about 1438. The
chronicle which was deposited in the Zürich Municipal Library sometime in the second half of the fifteenth
century covered the time of Rudolf of Habsburg, Zürich's ruler's period of influence up to 1420. It is
thought to be the only extant copy.
saw what was happening to their Vorhut, the men of the Gewaltshaufen with a great battle-cry charged the front, and vulnerable flanks of Leopold's forces, allowing the Luzerners to retire to the rear.

The knights by this time were so exhausted from the struggle with the Luzerners that they could no longer resist the fresh Swiss troops. The Habsburg Duke watching his first unit suddenly disintegrate, flung himself from his horse, ordered his second unit of knights to dismount and led them forward. But before Leopold and the rest of the army could relieve their first corps, the Swiss Gewaltshaufen had already broken through. Survivors began to retreat, throwing the Duke and his advancing units into disorder.

Taking advantage of the Austrian chaos—only exacerbated by the weight of the knightly armor—the disciplined and lightly-armored Swiss units began to slaughter their enemy. The Austrian men at arms became the victims of the new Swiss formation, which combined halberd with pike. Duke Leopold and six hundred and seventy six of his elite knights were hacked apart by halberds and impaled on Swiss pikes. The Duke's mounted reserve deserted him. Many also fled the battle and were discovered later in the nearby forest apparently suffocated inside their armor.501 The Confederates collected a great deal of booty from the Habsburgs that day: silver and gold, as well as armor and weapons.502 They also now could brag that at Laupen they defeated a mounted knightly army and at Sempach they showed their skill against dismounted men-at-arms as well.

Although the Swiss were victorious, the heavy losses suffered by the Vorhut were terrible. Oman suggested that the Vorhut went into action without waiting for the larger

---

501 "Züricherchronik," 139.47.d.
502 Some of the booty is still extant and is on display at the Forum der Schweizer Geschichte in Canton Schwyz. See Figures 7.1 & 7.2.
Gewaltshaufen because Swiss units had a "wild and undisciplined" propensity to rush into battle as soon as an enemy was encountered. However, one modern Swiss military historian has offered an alternative explanation for the Vorhut's confidence.

Müller explains that after Laupen Swiss units were drilled not to break open or be rolled back when face-to-face with the speed and lances of the cavalry charge in closed formation, so they might have believed they also could stand up against a formation of knights on foot. Further, according to the chronicler Königshofen, a number of young Austrian nobles, who wanted to become knights, made up the enemy front lines. In order to prove their bravery, these novices had unwisely hurried forward taking their place among the first ranks. Königshofen, if he was correct, gives us insight into the Luzern units' attitude towards the new recruits when he writes that they, "cried across at [Leopold's knights], 'we're gonna gore those lads!'" In addition, the Vorhut may have believed that that the knights and their new recruits, on account of their own heavy armor and long lances, would not be able to easily retreat, since they would be overcome by the maneuvers of the Confederation who had prepared for just such an engagement. Another possibility is that the Vorhut understood that their retreat would be fatal.

The Confederates also believed their light protective arms to be an advantage. In a preliminary engagement, the knights could be worn down due to their heavy arms, and then attacked by fresh troops. Indeed, we find this is just what took place. Of the battle at


Sempach the contemporary chronicler Johann Viler writes, “Now it was due to the stifling heat of that time of year and from the fever of battle that in combat the Lords were so overcome with fatigue they began to suffocate in their armor, an oppressiveness from which they were unable to recover.”

The Swiss would have known that such heavy armor on a hot day could produce just such an affect. Knight’s armor covered its wearer from head to foot, and the head was stuck into a tight and padded visor-helmet. We can vividly imagine how the intense heat of the sun would have intensified the physical demands of the battle, and no doubt quite a few of the knights smothered because of it.

In the initial encounter between the Habsburgs and Luzerners, the heat was already exhausting some of the knights and a few completely collapsed under the strain. For awhile the Luzerners put up a strong resistance, the shorter halberds sliced through the inferior lances and their swiftly moving formation fought hard against the knights who were weighted down by their heavy armor. Müller believes that the Luzerners knew exactly what they were doing—wearing down the knights to make the follow up by the hidden Gewaltshaufen easy work. But this interpretation holds little weight in light of the heavy losses taken by the Vorhut. The unit was so badly beaten that after the battle Luzern authorities demanded a weapons' shift in their canton.

POST-SEMPACH

---


City burghers were horrified by the losses taken by the Luzern Vorhut. One Confederate to every nine Habsburgs killed was not a bad ratio. But the city burghers did not see it this way. Luzern and Bernese officials began pushing for a complete overhaul of the military system, decreasing the number of halberds and increasing the number of pikes. They wanted to create pike phalanxes. While the Confederates may have learned the need for longer weapons through actual battle experience, it is interesting, and likely significant, that it was not the isolated Forest Cantons, but the cantons outside them—the better of the two through whom classical traditions might be traced—that recognized the problem and devised a solution to fix it.

Already in 1422 Luzern issued a decree—the Raths-Protocol—demanding that less of the ancient halberds should be issued. Instead the militias were to be armed with pikes. The latter weapon was to compliment the new system created by the Bernese in the Military Ordinances of May 26, 1410 and April 4, 1415, in which men were ordered to exercise discipline, keeping a close eye on their unit banners, watching for signals and responding instantaneously to commands. Those who fled the battlefield, missed a banner signal causing the formation to move the wrong way, or shrieked during battle causing their unit to retreat, would be exiled from the city-state. Further, at Bern citizens swore an oath to keep their carefully constructed pikes out of enemy hands—emphasizing the importance of the weapon—and to obey the elected mayors or captains in all conflicts that might endanger the city of Bern and its allies. Infractions of these oaths were

---

508 Luzern Rathsprotocol, 1422, Staatsarchiv Luzern, Urkunden 3, Staatsverwaltung Militärwesen (Rep. 21/2), Allgemeine 82, 1422.

509 On the “outer cantons” as best possibility for transmission of classical traditions, see Chapter 3.

510 Von Elgger, Kriegswesens, 104; Raths-Protocol. These were the shorter version.
punishable by fines and even exile. In this way, very tight discipline was enforced, as it had been in both Greek hoplite forces and Roman legions, though in different ways.

But the veterans did not want to give up their halberds. Indeed, for awhile the egalitarian nature of the Swiss armies—an élan which contributed to its cohesion—was a real hindrance to Confederate lawmakers who wanted to try something new. In particular the free peasants of the Forest Cantons—the original confederates—and their comrades in Luzern who wielded the *Luzernerhammer* were adamantly about retaining their old, tried and true weapons. Halberds for the free peasants were symbolic of freedom won from the Habsburgs, of rights earned earlier in the Empire, and of deep-rooted ancient Germanic traditions. The pride of swinging the halberd was a part of family tradition—likely halberds had been handed down from father to son. But new-fangled weapons also meant personal expenditure for something most did not want.

At Luzern city officials tried to coax their citizens into switching over to the pike by offering greater pay and special advantages to spear-carriers. But even this did not work. Finally the Luzern Rat had to pass a law stipulating that larger numbers of fighters were required to carry the spear. However, especially among the Forest Cantons veterans held fast to their halberds, even after the lesson of Sempach. So, neither Laupen nor Sempach was the direct and automatic stimulus for the introduction of the long pike formations Oman and Delbrück have led us to believe.

It took some time but, in the end, the Confederate officials in some cities got their way. By the year 1437 the regular uniform of the Luzerner and Bernese soldiers were a


leather cuirass (Lederrock), which was placed under a breastplate, leather arm and leg protectors, with an iron helmet, a short pike and a short sword. But it would be another fifty years before the Confederates introduced the long pike. They could certainly outreach the lances of knights, but they have no real relevance to Sempach.

However, another defeat, the slaughter at Arbedo in 1444 would finally provide the major impetus for a joint Confederate decision to make the long-pike the main weapon of Swiss battle. It is with these that Hübscher von Hochdorf argues, “the Swiss would achieve their iron discipline.”

Arbedo (June 30, 1422)

Although Swiss veterans were resistant to change, the Confederates desperately needed a new system by the mid-fifteenth century. Their original halberd “phalanxes” were successful throughout the fourteenth century, “clumping,” as the sources say, halberdiers and pikemen into tight formations, which held together through cohesion and unit élan. Defeating skilled knights in this manner was quite a coup for the Confederates. Nevertheless, with some experience, foreign armies learned how to deal with this formation. In battles of the early fifteenth century, the Swiss found that their formations of halberds and short pikes were still vulnerable.

The main incident that led to a re-thinking of the Swiss formation was the Swiss defeat at Arbedo (near Bellinzona) on June 30, 1422. Thirty-seven years after Sempach
the Duke of Milan’s men-at-arms broke the troops of Uri, still with too many halberdiers, and too few pikemen in their front line.\textsuperscript{517}

The first Confederate mistake at Arbedo was that they allowed the Milanese to catch them by surprise, in camp and unformed for battle. The Milanese immediately charged. The mounted-men-at-arms got in among the Swiss, which would—should—have meant disaster. But the Swiss refused to break and went for the Milanese horses. According to one source, “they even grabbed the horses’ tails!”\textsuperscript{518} Appalled by their equine losses, the Italians withdrew and main battle ensued.

Filippo Maria Visconti with his commander Francesco Bussone, better known as Duke Carmagnola, faced the Confederates, 4,000 men from Uri, Unterwalden, Zug, and Luzern, with six thousand mercenary horse and several thousand footsoldiers. Visconti opened the battle with a cavalry charge: four hundred horses were impaled in the first assault. When this failed, the Count sent his infantry to harass the Swiss on the flanks, and to annoy them with crossbow shots. Next, he dismounted his knights and formed them up in deep columns to charge the Confederate front. Thus, an infantry formation of lances—used as long pikes—and swords faced off against another made up of one-third pikes and two-thirds halberds.

The impetus of the larger force with longer lances was able to push with such force against the Swiss column that it left no room for the halberdiers to slash.

Meanwhile, the knight’s lances out-distanced the shorter pikes and halberds. Luckily for


the Swiss, a group of Confederate foragers heard the sounds of battle, marched to the scene and formed up in a wood opposite the flank of the dismounted men-at-arms. Fearing that they were confronting a major Swiss force, the Milanese withdrew.

From this battle Confederate leaders learned two important lessons. First, the Luzerner and Bernese push for a multiplication of pikes and a diminution of halberds after Sempach had been valid and important. This policy was now implemented throughout the Confederate militias. Secondly, by mid-century, as a direct result of their experience with the lances at Arbedo, the Confederates took up longer pikes—the eighteen foot, sarissa-size, monsters that bedeviled European for another hundred years.519

DEVELOPMENT OF THE MACEDONIAN-LIKE PIKE FORMATION 1474-1600

Beginning just after the Arbedo defeat, Swiss pikes were lengthened to just over fifteen feet but by 1474 their standard length was eighteen feet with a ten-inch steel head.520 By the beginning of the sixteenth century, the long pike now became the Confederates’ main weapon—a development understood by scholars to be the "final stage in Swiss tactical development."521 But, the Confederates also accepted the refusal of the Forest Cantons to give up their favorite weapon. So, they created units suitable to their combined forces. These new sarissa-like pike formations were usually rectangular,


520 See Fig 7.5.

and hid in their center the dreaded halberdiers. Archers, armed with the longbow and crossbow, protected the flanks and rear of the formation, and these were later augmented with musketeers.\textsuperscript{522} The column could thus defeat dismounted men-at-arms, or pikemen while putting the halberdiers to good use.

But the principle of this pike formation was as simple as that of the earlier formations. With pikes extended, the entire driving mass of 10,000 to 15,000 men in closed formation charged the enemy at a run breaking open their formation. If the Confederates happened to be on the defensive, the barbs of their spears were set down towards the enemy who met an impenetrable wall of pikes. This new formation meant the Swiss could contend with the heavily armed knights on the open field--and they nearly always won. What made the new formation particularly lethal was its maneuverability: the formation could support at any time two to three units, which could be placed by the captain into numerous battle arrangements.

\textit{THE BURGUNDIAN WARS}

The Campaign against the Burgundians, at the battles of Grandson, Morat, and Nancy during the fifteenth century, freed the Swiss from all opposition. By the time of the Burgundian Wars, the Swiss had learned these lessons and accepted the refusal by the Forest Cantons to give up their beloved weapon. So they created a formation suitable to their needs. It could defeat both mounted or dismounted men-at-arms, and pikemen, while at the same time putting the halberdiers to good use.

\textit{Grandson (1476)}

\footnote{Fire-weapons were already available in Europe by the first half of the fourteenth century. But they were preliminary weapons. The heavy “Steinbücksen—a kind of Howitzer, and the lighter Bochbüsen could be used only in secure positions on the battlefield. A use was found for them for the first time in the fifteenth century on the battlefield, but because of the long loading process, the inaccuracy of fire and their trifling range they were largely ineffective.}
At Grandson the Swiss proved that their newly formed units were in themselves so tactically sound that even when the enemy had the tactical advantage Confederate units could be victorious. Here, the Swiss gave Duke Charles the Rash the tactical advantage when the Swiss advance guard made up of troops from Bern, Freiburg, Basle and Schwyz marched too far ahead of their main forces in their eagerness to get to the fight. As they rolled over the top of a hill in deep column they saw the entire Burgundian force spread out in the plain below.

Instead of halting and waiting for their main body to arrive, the Swiss advance guard kept right on marching. When they reached the bottom of the hill they saw that Charles’ knights were preparing for a cavalry charge. Calmly the Swiss Vorhut moved into hedgehog formation with their pikes pointing outward. The first knightly charge was easily repulsed and the “gallant lord of Châteauguyon” who forced his horse into the pikes, was catapulted and thrown into the center of the Swiss square. He landed next to the standard of Schwyz and was killed. Next Duke Charles charged the Swiss pikes with his royal elite guard and they too were repulsed.523

Having humiliated Charles’ cavalry, the Vorhut then advanced into the plain to “try the affect of the impact of their phalanx’ on the Burgundian center. In order to meet the advance Charles planned to outflank the Vorhut. This likely seemed feasible since the main Swiss body had not yet appeared. The Burgundian infantry and artillery directly in front of the approaching column were ordered to pedal backward in a faint of retreat, while his cavalry reserve strengthened the left wing, from where the main blow would be launched. But before the Duke’s center could be fully pulled back and his wings engaged, the heads of two more Swiss columns appeared and took their place in echelon to the left and to the rear of the Vorhut. Now a Burgundian encirclement was impossible.

But before Charles had time to react to this new circumstance, his footsoldiers panicked. Believing the feint of their center to be a sign of retreat before a unified Swiss advance, the Burgundian wings broke and fled. The Confederate squares had not even yet made contact. Just one unit of Swiss pikes had held off an entire Burgundian army because of its tactical effectiveness.

**Murten (Morat)**

At Murten, where the Swiss army did engage, another knight led the Confederates. Tactics were carefully planned for days by "all the captains, ensigns and councils from cities and territories and also other allies and associates." But a former vassal of the Habsburgs, the Austrian knight Wilhelm Herter, held the high command. Here at Murten we see once again that at a crucial moment in Swiss tactical developments a knight—a professional warrior—was chosen to lead the Swiss into battle. Together with the war counsel he decided to avoid the Burgundian forces besieging the town of Murten. Instead, they would attack the center of the Burgundian position on open terrain—the Wyler Field. A large part of the Burgundian army would be destroyed in one massive attack.

Catching the surprised Burgundian army unprepared, the Swiss had the discipline to keep marching as cannonballs depleted their ranks. They stormed the enemy palisades and with "bristling pikes and waving banners" they drove the fleeing enemy towards the Murten's lake where they were slaughtered or drowned. The Swiss onslaught was so overwhelming, that after a few disorganized cavalry attacks, the Burgundian warriors, "overcome by despair had fallen down, crossed their hands and allowed themselves to be slain without offering any defense." Canton Zug's *Battles Record* reports that 22,055

---

524 Ibid, 2.267.
526 Ibid, 622.
Burgundians lay dead on the battlefield and 30,000 were killed in the post-battle pursuit. Only twenty Eidgenossen were listed as killed. Although the numbers may have been exaggerated, it provides insight into the Swiss position concerning this crushing defeat.

AFTER THE BURGUNDIAN WARS

These last battles for Swiss independence in the 1470s, in which the Confederate massed infantry crushed the Burgundian heavily armed cavalry, caught the attention of the powers of Europe. Without national enemies, from this time forward, they began to hire themselves out as mercenaries, serving in most of the European Wars of the late fifteenth century. At around the same time, between, 1482-6 Maximillian I created his own version of the Swiss formation, the Landsknechts. It was at this time argued Oman, that the Swiss lost their effectiveness. The Swiss had been effective only against knightly armies, but with the creation of units of professional pikemen, like the Landsknechts, the Swiss levies began to reveal their weaknesses. But Oman is probably mistaken.

When the Swiss faced the landsknechts repeatedly during the Swabian Wars, the former always won. At the decisive battle at Dornach in 1499 the Confederates smashed the Landsknechts in one massive blow. During the Italian Wars, the Swiss serving as mercenaries in the French army, suffered two losses against the Landsknechts, mostly as the result of a failure to follow orders. By Ceresole in 1544, they had learned to stick to a


528 Terence Wise, Medieval Warfare, 128.


battle plan, and proved again that they were masters of the Early Modern battlefield. Pike for pike they were still the best.

**Ceresole (1544)**

At Ceresole, a main body of 4,000 Swiss veteran pikemen served in a French army of about 15,000. Their primary opponents were 7,000 landsknechts employed by the Spanish. For the battleline and exact breakdown of the units and numbers on both sides, see Figure 7.6. Both Swiss and landsknechts were positioned in the center of their respective armies in three units flanked by cavalry. On the Swiss side, the center unit was made up of Swiss veterans, to their right were new Swiss recruits combined with Italian mercenaries. On their left was a column of Frenchmen. The Spanish placed their Landsknechts in the center column flanked by the Spanish’s Italian mercenaries on their left, and another of landsknechts and Spanish on the right. This was the classic battle between two long pike phalanxes.

When the battle opened, the French cavalry ran off most of the Imperial cavalry. The German and Italian Imperial infantry drove the Swiss Gruyères infantry, which was made up of new recruits back. But they withdrew in good order.

But the main force of landsknechts in the Spanish center was no match for the veteran column of Swiss who faced them. The veterans smashed into the Landsknechts forcing them back and holding them, as a unit of French men-at-arms first attacked their flank and then wheeled right and overpowered the Italian column who had only just entered the fray. After taking a beating from the French cavalry the Italian Infantry on the Imperial right withdrew as soon as they learned that the Imperial Troops of the center had been defeated. This had meanwhile occurred as the Swiss center, with their right
flank protected had wheeled to the left slaughtering the unit of Imperial landsknechts and Spanish who had opened the battle. Likewise, the French infantry, after taking some licks from the Landsknechts held. On the left the French infantry collapsed and the Imperial cavalry under Enghien led a series of charges against them. But, these were ineffectual; as the victorious Swiss and French infantry arrived from the center, the Imperial cavalry were forced to surrender.\footnote{Charles Oman, \textit{A History of the Art of War in the Sixteenth Century}, 231-43; Thomas F. Arnold, \textit{The Renaissance at War}, Smithsonian History of War, ed. John Keegan (New York: Smithsonian Books/Collins, 2006), 180; Jeremy Black, “Dynasty Forged by Fire,” \textit{MHQ: The Quarterly Journal of Military History} 18, no. 3 (Spring 2006): 43; Wim Blockmans, \textit{Emperor Charles V. 1500-1558} (London: Arnold, 2001), 72-3; Francis Hackett, \textit{Francis the First} (Garden City, New York: Doubleday, Doran & Co., 1937), 421-3; Robert J. Knecht, \textit{Renaissance Warrior and Patron: The Reign of Francis I} (Cambridge: Cambridge University Press, 1994), 230 and 490.}

The Swiss main body of veterans was so overwhelmingly superior to the landsknechts that when the battle was over they had lost only forty men, but had killed close to five thousand landsknechts.\footnote{Delbrück, \textit{Modern}, 96.}

By learning from battlefield experiences, the Swiss units, by the mid-sixteenth century had developed into a formidable force that the armies of Europe would seek to emulate and surpass. The Swiss were, in fact, so advanced even by the time of Grandson (1476) that Duke Galeazzo Maria Sforza of Milan ordered his ambassador with Duke Charles of Burgundy to follow Charles around on campaign throughout 1475-6. The Duke of Milan was so fervent about monitoring the Swiss struggle to stop Charles that he wrote to his ambassador: “I require and expressly command you to write me every day,\footnote{Francesco Senatore, “Uno mondo de carta.” \textit{Forma e strutture della diplomazia sforzesca} (Naples: Liguori, 1998), 267. The ambassador did not write everyday, but we have 53 letters from February to December 1475-6, almost all on military developments.} or I will cut your head off.”\footnote{Delbrück, \textit{Modern}, 96.}
Figure 7.1: The Swiss Halberd of the Thirteenth to Fourteenth Centuries. See Hans Rudolph Kurz, Hermann Lei, and Hugo Schneider, Das Schweizer Heer (Zürich: Verlag Stocker-Schmid, 1969), 35.
Figure 7.2: Halberds, weapons and armor employed in the "Swiss Halberd System" at Morgarten. At the left: a goedendag and a morning star. In center: crossbow and arrows, a battle halberd and two ceremonial halberds. At right: Confederate shields and iron breastplate. Forum der Schweizer Geschichte, Schwyz. Picture author's own.
Figure 7.3: The Battlefield at Morgarten. At the top and center are the woods out of which the Swiss Halberdiers descended onto the Habsburg army. To the right center is a stone monument of the Battle at Morgarten. Tradition gives this as the point at which the Habsburg knights stopped, caught in the bottleneck created by the letzi, and at which the Confederates and the Habsburg horse first clashed. To the left is Lake Aegeri into which the Habsburg army were thrown and drowned. Unseen is the road, winding between the hillside at top and the lake at bottom, onto which the Habsburg army was funneled.
Figure 7.4: Contemporary sketch of the Battle at Sempach. The Swiss Vorhut clashes with Leopold’s dismounted knights as the main Swiss column awaits their surprise attack from the forest (to the left).
Figure 7.5: The Swiss Long-Pike. Forum der Schweizer Geschichte. Picture author’s own.
Figure 7.6: The Battle Line at Ceresole: as described in Charles Oman, *A History of the Art of War in the Sixteenth Century*, 231. The approximate strengths of the French listed from north to south along the battlefield were: Light Cavalry 400; Italian Infantry 2,000; Gruyères infantry 3,000; Heavy cavalry 450; Swiss 4,000; Heavy cavalry 80; French (Gascon) infantry 4,000 and Light Cavalry 450-500. The approximate Spanish-Imperial force strengths listed from North to South were: The Neapolitan light cavalry 300; Spanish and German Infantry 5,000; Heavy cavalry 200; Landsknechts 7,000; Italian infantry 6,000 and Florentine light cavalry 300.
Map 4: General Topography of the Early Swiss Battles: Morgarten (November 15, 1315), Laupen (June 21, 1339) and Sempach (July 9, 1386).
As we have seen, there is plenty of archeological and literary evidence to suggest early Switzerland arose out of, and carried on Roman culture in some form. Also, in some instances, elites had knowledge of classical texts whose lessons sometimes filtered more directly down to the battlefield. But despite a rich popular military tradition that had its roots in Rome, and a direct literary inheritance of a classical military nature, the fully-formed Swiss phalanxes evolved out of the battlefield experience of the fourteenth to sixteenth centuries.

These developments are in some ways no different than the phalanx-style formations created in other non-Western societies, such as the Babylonian and the Zulu. The earliest known close-packed shield wall with spears leveled for the charge was masterminded by Sumerian king Eannatum of Lagash,¹ (c. 2460-2305 BC) and implies a high degree of organization in the ancient army of Lagash. In fact, he used his well-organized fighting force to forge an empire from his city-state of Lagesh. We know that his military machine included the phalanx due to the well-known fragment from the so-called “Vulture Stele,” which clearly shows a phalanx of interlocking shields and spears projecting between the shields.² Likewise, the Zulus of the nineteenth century A.D. fought

¹ Lagash was a city-state in southern Babylonia.

in densely packed formations that approximated phalanxes. The creation of the Zulu spear formation is, in fact, a perfect example of just how such formations can evolve spontaneously, through simple battlefield experience, in the Zulu case, through the experience of just one man. It also shows that the personal experiences of just one man can also drive experiment and change. In Shaka, the founder of the Zulu “phalanxes” or iziCwe, we have an ideal example.

Shaka had a rough beginning in life. Born from a relationship verging on incestuous between his Zulu Chieftain Father Senzangakona, and mother Nandi, of the closely related eLangei clan, Shaka was disowned by both his father and mother’s tribe. Both tribes had been disgraced by his illegitimate birth. So, Shaka grew up fatherless among his mother’s people. Both he and his mother were reviled, insulted and abused on a continuous basis. Shaka grew up lonely and bitter, but strong. His strength came to be admired by both tribes who had cast him aside as a boy: now they wished him to become a great warrior for the Zulus. But Shaka, now 6’3, heavily muscled, highly intelligent and an excellent leader would have his revenge. He offered his services to the Zulu’s greatest adversary, the Mtetwa tribe.³

At twenty-three years old Shaka became a Mtetwa warrior in the iziCwe regiment. Battle became an outlet for the pent-up frustration of his youth. As he fought for Mtetwa Chieftain Cingiswayo, he saw a flaw in his policy of leniency. Once a clan submitted, Cingiswayo ordered his armies to back off and the now tributary tribe was left in peace. Shaka learned through the experience that an undefeated clan, temporarily left in peace could easily rally and strike against their new Chieftain at a more opportune moment. Shaka preferred to smash each clan that was to be conquered, and developed his own take-no-prisoners policy, as the Swiss had. When he fought, it was for total annihilation.⁴

⁴ Ibid, 46-7.
More importantly, this man who had no friends except those he led in battle and no love except for battle (Morris has suggested he was homosexual), learned through experience that the light throwing assegai of the Zulu and Mmetwa was little better than a toy. It was too flimsy for the thrusting weapon Shaka had in mind. So, on his own, he created a new sort of assegai. It had a heavy broad blade and a solid shortened handle. It was carried underhand and used as a thrusting weapon. See Figure 8.2. Shaka named it iKlwa a term whose pronunciation imitated the sucking sound made as the blade was withdrawn from the enemy’s flesh.

Through battlefield experience Shaka also learned to use his shield as an offensive weapon. See Figure 8.2. He hooked the left edge of his three-foot-in diameter, concave shield over the left edge of his opponent’s shield, making it possible to spin the foe to the right with a powerful backhand sweep. The beauty of the move was that Shaka’s left was now covered, while his foe was left off balance, his shield askew, and with no opening for his own flimsy assegai. The enemy’s shield was now, in fact, a hindrance: as it was dragged across his body it took his left arm with it, exposing his left armpit. Now it took only one quick thrust for Shaka to finish the enemy with his iKlua.

Shaka’s independent experiments were effective and won him command of his own regiment. On subsequent expeditions he then began to experiment with his formations. He divided the regiment into three parts and drilled them. The central group would pin an opposing regiment down as the flanking positions moved to surround the enemy. Once this was proven to be effective, Shaka made the use of the iKlwa mandatory and taught his own methods of fighting. As Morris describes it:

[Shaka] refined his charge, teaching his men how to advance with their shields at the proper angle, covering their bodies and poised to send thrown assegais glancing off. In this crouched position they still had free vision beneath the raised brim of their shields and knew just when to strike hand-to-hand against the enemy.5

5 Ibid, 50.
At twenty-nine years old Shaka had the Zulu Chieftain killed and assumed the throne with plans of creating an Empire. He created a military machine to achieve it. Refining his earlier experiments into a standardized formation made up of four groups, Shaka himself drilled the Zulus day after day until they collapsed from exhaustion. The main body of the formation was the “chest, which closed with the enemy and held it. The two “horns’ raced out and surrounded the enemy until the tips met. The both horns turned in and worked back to the center. The fourth unit was a reserve called the “loins.” These reserves were placed behind the chest and remained seated with their backs to the fight to keep calm. The commander, having stationed himself, on an area above the battlefield were he could observe, would send runners down to the loins ordering parts of the reserve in wherever the enemy threatened to breach the $iKlwa$ formation. Like classical phalanxes and legions and the Swiss pike formations the Zulu $iKlwa$ formation depended on several mass movements, which had to be carried out frequently over broken ground and at top speed while maintaining perfect alignment.

This kind of formation took practice. Shaka drilled the Zulus until they dropped from exhaustion. Shaka also understood the importance of unit élan. He encouraged the natural loyalty of the men towards their own iziCwe: other Chieftains encouraged loyalty to themselves.

Clearly, neither Shaka, nor Eannatum, had Asklepiodotus to read, or Romans to train them. We cannot know exactly who invented the Babylonian phalanx, exactly how it operated, or exactly why it was created, so the best we can say is that the ancient formation was the product of spontaneous combustion. In the case of the Zulu phalanx, we find that it was the personal experience of just one man with a vested interest in improving his army’s tactics that led to the novel formation. The Swiss, too, simply could have invented their formation. Likewise, even if we discovered scores of late-fifteenth century classical military manuscripts in Switzerland, this still does not prove that the Swiss used them. Again, the Swiss might have created them on their own. But
there is no proof, either, that this was the case, so we have to work back to Machiavelli’s observation about the Macedonians.

While there are some similarities between the Zulus and Swiss—at least on the surface they both resemble phalanxes—there are a number of important differences between the two styles of fighting. First, Zulu spear formations were primitive. As Figure 8.2 illustrates, while Zulu warriors held huge, likely cumbersome shields, they had little other protective clothing. In fact, Shaka forced them to fight without shoes, even though the grasslands on which the Zulu’s fought were covered in thorns. Also, even though the Zulu’s were successful against neighboring tribes and held their own even against “western” forces, eventually, in 1879 they were defeated by the technologically superior British. The fully formed Swiss formations of the fifteenth century, on the other hand, were advanced like the Macedonian/Hellenistic system that combined drill and discipline with armor and the long pike. The Swiss formation was the advanced technology of its day.

Second, while there is no serious possibility of transmission of Hellenistic ideas to the Zulus at any time, or any place, (the Zulus, in fact, shortened their assegais to make them thrusting weapons) there is a serious possibility of transmission to the Swiss at certain times and in certain places, for instance, the late fifteenth century in Bern.

Finally, not only are the Swiss formations advanced like the Hellenistic system, but they actually resemble them (the Swiss elongated their spears to make them more powerful thrusting weapons) as no other group in the west, or elsewhere, in the late-fifteenth century did. So, how do we get there?

First, there had to have been some element of predisposition in Swiss society for a formation that practiced, if not required, egalitarian tendencies. The birthplace of Swiss formations in the central valleys of the Alps where proto-democratic cantonal societies

---

6 Ibid, 48
thrived is emblematic of the types of formations fostered by the Swiss. Units fought together under cantonal flags, and fought more for the men beside them, than they did for their cantonal leaders or the ideals they espoused. Regardless whether Swiss pikemen hailed from the democratic forest cantons or the oligarchic “outer” cantons, they fought for the men standing beside them, for unit pride.

Further, the Swiss way of war must be seen as part of some larger “western tradition.” Whatever it is, there is something to the notion of a Western Way of War, that is exclusive to the West and has roots in the ancient Greco-Roman world, and the Swiss were certainly part of that. As a Lithuanian noble, who had served with Maurice of Nassau, reminded his king in 1622, “Antiquity has its virtues…. [but] every century teaches soldiers some new trick, every campaign has its won discoveries; each school of war seeks its own remedies.” Geoffrey Parker points out that, “He follows this statement by recommending that the army of the Polish commonwealth increase its infantry component according to the Dutch model.” The irony in the Lithuanian noble’s prelude to the suggestion is that while battlefield experience is likely the best teacher of what formations work, and which do not, the Lithuanian was proposing the diffusion of a Dutch army model that we know was closely modeled on classical precedents.

Additionally, the Dutch and the Swiss, like other Early Modern European armies, and unlike the ancient Assyrians or Zulus, were part of a western tradition that was open to written and/or oral knowledge. Both military research and technology, readily crossed frontiers in the West, as it did no where else. The Swiss for instance, freely shared their pike tactics with both the Germans and French after the new Confederacy had been safely

---

established. The transmission of ideas through direct and indirect transmission was a pattern in Europe until relatively recently. As Geoffrey Parker has argued:

[A distinctive], probably unique, Western tradition is that research and technology has been remarkably broadbased. It depends upon understanding, controlling, and exploiting perceived regularities and irregularities throughout nature in order to create a broad background knowledge that expands in a path-dependent, sequential way. This enables individuals to formulate questions, and eventually to come up with answers, in many different fields of inquiry....The shared background knowledge among practitioners in many different fields often meant that discoveries occurred in clusters and therefore became self-reinforcing. Sometimes the clusters occurred through competition, when several warring states all sought a technological edge; at other times practitioners in different places reached the same conclusion almost simultaneously simply because they started from similar premises.8

Those “similar premises,” in the West, from the time of the Renaissance, beginning in c. 1400 AD, forward, have been based in classical knowledge/thought which have laid the foundations of a Western tradition of empirical thought and secular humanism that differentiates it from other cultures. As Parker further recognizes:

Cultures that lack this broadbase (empirical, secular thought)—for example, those endorsing “Fundamentalist” beliefs that seek truth in revelation or instinct, rather than experiment; or those where the state micromanages all research—can still make scientific advances (as did Shaka), but those advances will tend to be...discovered by chance...limited...and soon run into limited returns.9

An additional cornerstone of western military success, also first recognized by Geoffrey Parker, has been the series of revolutions in thought and/or practice, and thus, in the western way of war, that have resulted from the western empirical, unlimited, free-thinking, freely sharing tradition. We cannot forget that one of those Revolutions, the

---

8 Ibid, 56-7.

9 Ibid, 58. Parentheses mine.
Infantry Revolution, was led on the European Continent by the Swiss pikemen. The success of the Swiss pike formations against aristocratic cavalry created a wave that rippled throughout Europe. The novel Swiss tactics were incorporated by virtually every other western European state in some form or another—the very reason, of course, that Machiavelli was so interested in the Swiss. With the consecutive outbreak of the Gunpowder Revolution, Gonsalvo de Córdova advanced the pike formation created by the Swiss, successfully incorporating larger units of arquebusiers into the square. But it was the élan, drill and discipline that lay at the heart of the old Swiss square, which defined the Spaniard armies, and differentiated them from the non-Western forces they would encounter in the New World.

As John F. Guilmartin has shown in his technological and tactical analysis of the Spanish army during its overthrow of the Incan Empire, Spanish steel and horses were key elements of Spanish tactical superiority. The Andeans, of course, had never learned to form up in ordered masses to repel cavalry. But what gave the Spanish the real edge, according to Guilmartin, was the “high levels of initiative that came from among the fighting men themselves. They all considered themselves to be knights. They fought as integrated units, sword, pike and shot acting in seemingly automatic concert with

10 We know for certain that the Spanish acknowledged the superiority of the Swiss footsoldiers at least as early as the late-fifteenth century, since Hernan del Pulgar, named court historian by Queen Isabella of Castile in 1482 says as much in his 1492 Chronicle of the Reign of Ferdinand and Isabella to the time of Granada. See Crónica de los Reyes Católicos (Valencia 1780), 209 in Oechsli, Quellenbuch zur Schweizergeschichte, 378-9g. The battle of Ravenna on April 11, 1512 was the watershed moment that demonstrated the proficiency of the Spanish infantry.

horse.” It was the cohesion of these units of common soldiers and their sense of “initiative” and “knighthood” that are the hallmarks of the Infantry Revolution led by the Swiss.  

So, the Swiss way of war, like the Western way of war, is likely more about experimentation then it is about following any particular set of rules, classical or otherwise. It is more about unit cohesion and the pride of the common soldier in himself and his unit, so much so, in fact, that he sees himself on par with the knight, or general, or commander under whose leadership he fights. The same kind of egalitarian élan that we see among the Spanish columns has direct links back to the Swiss revolution in infantry tactics, in which group cohesion and élan sprang from the democratic elements that defined Swiss society. The Swiss and Western way of war is also defined by an exclusively Western openness and ability to absorb and experiment: the willingness to change a formation, weapon, policy or technology in order to get the job done on the battlefield.

Yet, none of this alone, is enough to solve the original problem. Why did the Swiss fight in the peculiar style in which they did? The explanation is a layered one.

First, in 1315 at Morgarten, three freedom loving communal armies joined to defeat a common enemy. Like the Athenians at Marathon or the Spartans at Thermopylae, the Swiss were willing to fight to the death in order to protect their freedom from foreign control.

But also like the Greeks of the various city-states during the Persian wars, the Swiss found that it would take a number of battles, tactical changes, and working

---

12 Guilmartin, “Cutting Edge,” 55-56.

13 The Swiss, too, often thought of themselves as Junior Knights, see Chapter 7.
cohesively with surrounding cantons in order to succeed. Oligarchic cities such as Bern and Zürich joined with the democratic Forest Cantons, as the Spartans had joined with the fledgling democracy Athenians in order to ensure their independence. By Sempach in 1386 battlefield experience clearly caused the Swiss to alter their formations in order to meet cavalry charges on the open battlefield. By the late-fifteenth century the Swiss might have discovered the Macedonian texts, which could explain why the Swiss formations evolved towards a long-pike, like Alexander’s armies had, and not a shortening of the pike as had Shaka’s Zulus.

But, finally, the Greeks learned to fight in phalanxes on their own—no one taught them, so the Swiss may have done the same. In fact, the Swiss learning curve closely resembles that from the original Greek formation to the Hellenistic. Rather than suggesting a Greek influence of some kind, this suggests the opposite: that the development from shorter spear of defensive formation, to the longer spear of an offensive formation is part of a natural progression: even though it was not for the Zulus.

However, for this development to occur their society had to be predisposed to a certain type of fighting: egalitarian, a bottom up command, a willingness to learn. The society must be programmed to receive. For instance, the Zulus could never have created the ideal fighting shoe because Shaka would not allow the use of shoes.

In some ways the Swiss resemble earlier hoplites in the sense that they fought for the honor of their cantonal units, as Greeks did for their city-state militias. They also valued freedom from foreign rule, and hated the Habsburg armies every bit as much as the Greeks despised the Persians. Neither Greek nor Swiss would have believed success against a feared Imperial army was possible without an underlying social structure that

14 See Figure 1.1.
promoted egalitarian ideals. Spartans, Athenians, and Schwyzers all refused to submit to fears, real or perceived, that their small city-state militias could never defeat Emperors with seemingly unlimited resources.

In the final analysis, the Swiss way of war, like the western way of war, rests on the Western ability to learn and adapt to battlefield circumstances, without interference from kings or priests. Further, the rapidity with which military lessons can be learned and applied in the West are due to, as Guilmartin puts it, “the high levels of initiative” which come from among fighting men, who are not intimidated by titles or wealth. In the West, regardless of rhetoric, units fight for the men standing next to them.

Finally, discovering just what the Swiss way of war entails is valuable since it points out the limitations and problems of tracing the transmission of ideas over vast periods of time. This study has also attempted to define more clearly what the “Western way of War” really is: it is not so much about a “continuous tradition” of phalanxes, but about an openness to experimentation and adaptation exclusive to the West. In doing so, the study has contributed to the discussion of why Western warfare has been so insidious, yet so successful. As Rose Mary Sheldon has so aptly acknowledged:

Some disturbing conclusions arise from observing the differences between eastern and western warfare. In general, states that divorce war from particular aristocracies and religious bodies and are pluralistic in nature, like Republican Rome and classical Greece, field more dynamic and better-led armies. They are far more successful in mobilizing the general population for the business of killing people. They make themselves a nation at arms and become more successful forces of destruction. The logical evolution of these trends coalesces into the military practices of the modern West and its ability to annihilate.15

Figure. 8.1. Fragment from the Stele of the Vultures erected by Eannatum of Lagash. Early Dynastic III B. Louvre Museum. See George A. Barton, “Inscription of Entemena #7” in The Royal Inscriptions of Sumer and Akkad (New Haven, Conn.: Yale Uni., 1929), 61-3.
Fig. 8.2. Lieutenant James King’s sketch of King Shaka (1781-1828) from 1824. Shaka stands with the Zulu assegai (or thrusting/throwing spear) and heavy concave shield. King was a port Natal merchant and his sketch is the only contemporary visual record of Shaka holding his arms extant.
BIBLIOGRAPHY

Manuscript Sources


Staatsarchiv Luzern, *Urkunden* 236/3546.


Staatsarchiv Zürich. A 159.

_______________. A 159. 2 Mai 1499.

_______________. A 159. 30 April 1499.

Stadtbibliothek Zürich. Mss. L.47f, 71.

Printed Sources


Barton, George A. “Inscription of Entemena #7.” In *The Royal Inscriptions of Sumer and Akkad, 61-3.* New Haven, Conn.: Yale Uni., 1929.


*Chants historiques de la Flandre*, 400-1650. Edited by Louis de Baecker. Lille: E. Vanackere, 1855.

1963.


*Colonia Raurica* in Paul Bürgin, “Über die Limitation der Colonia Raurica.” See Wyss, Rene.


_____________. *Die Perserkriege und die Burgunderkriege, zwei kombinierte kriegsgeschichtliche studien, nebst einem anhang über die römische manipulartaktik*. Berlin: Walther & Apolant, 1887.


Erben, W. Zur Geschichte des karolingischen Kriegswesens. [S. I.], 1908.


Fehr, Hans. *Das Waffenrecht der Bauern im Mittelalter.* 1917.


Frei, Benedikt. “Der gallorömische Tempel auf der Ufenau im Zürichsee. See Wyss, Rene.

*Freiheitsbrief der Schwyzher vom Kaiser Friedrich II Dec. 1240.* See Oeschli, Wilhelm, ed. *Quellenbuch.*


2000.


Giacometti, Zaccaria. Das Oeffentliche Recht der Schweizerischen Eidgenossenschaft; sammlung der wichtigeren bundesgesetze, bundesbeschüsse und bundesverordnungen staatsrechtlichen und verwaltungsrechtlichen inhalten; system altish zusammengestellt, mit verweisungen und sachregister versehen. Zürich: Polygraphischer Verlag, a.g., 1930.


Herkömmer, Prof. Dr. H. Lecture: Einführung in die germanistische Mediavistik, Sommersemester 2003. Universität Berne.


_________. *Der Wanderzug der Kimbern, Teutonen und Wandalen*. See Mannus.


Justinger, "Der Laupener Streit. 21 Juni 1339 aus dem Conflictus Laupensis.” See Oeschli, Wilhelm. *Quellenbuch*.


Kagan, Donald. “Athenian strategy in the Peloponnesian War.” In *The Making of*


Laur-Belart, Rudolf. “Betrachtungen über das Alemannische Gräberfeld am Bernerring

Lavater, Hans Conrad. *Kriegsbüchlein. Das ist, Gründliche Anleitung zum Kriegwesen, namlich wie ein Vestung...angerichtet...und verwahret werden solle.* Zürich, 1651.


Marchal, Guy P. *Die frommen Schweden in Schwyz: das "Herkomen der Schwyzer...*


____________. “The Limits to Revolutions in Military Affairs: Maurice of Nassau, the Battle of Nieuwpoort (1600) and Their Legacy.” *The Journal of Military History* 71 (April 2007): 331-72.


____________. *Bellum Helveticum*. See Historischer Verein des Kantons Schwyz.


Rosenstein, Nathan. “Phalanges in Rome?” (The Ohio State University, 2009) [forthcoming]


Santosuosso, Antonio. *Soldiers, Citizens and the Symbols of War: From Classical Greece*
“Schlacht bei Granson.” See Oeschsli, Wilhelm. *Quellenbuch*.


APPENDIX A:

CLASSICAL SOURCES IN MEDIEVAL SWITZERLAND AND SURROUNDING AREAS TO 1500
Classical Sources In Medieval Switzerland and Surrounding Areas to 1500

SWITZERLAND

Bern

Bern Bürgerbibliothek

MS 97: Saec. XV-XVI: *Scriptores rei militaris Graeci: Praemittitur hic titulus: sequuntur authores de re militari nondum traducti*

Asclepiodoti liber unus de acie instruenda
Arriani de acie instruenda libri tres
Apollodori
Leonis imperatoris, epitome rei militaris
Possidoni Rhodii, liber unus
Aelianii, libri duo de obsidione urbium
Pyrrhi, epitomatum regis de perita eius qui est imperator exercitus lib. Unus
Problemata militarum de re militari lib.
Concionum sive exhortationum ad fortitudinem lib. Unus
Constantini lib. 1, de variis gentibus et ut unaqueque pugnat, utque sit eis resistendum.
Polyeni ad imperatorem Antonium, stratagematum libri tres October
Clearchi, stratagematum lib. Tres, quorum omnium autorum in summa sunt libri septuaginta quator.
Maxime digni convertantur in linguam latinam, quorum capita crassa Minerva, non tamen omnium infra scripta sunt.
Rhetorica militaris
Rufi lex militaris

MS 135: Saec. XV.

Aristotelica:
- De anima, mul.
- De somno et vigilia, cum scholiis
- De memoria et memorando, cum scholiis
- De argumentis sophisticis

MS 280: saec. X.

Vergili etii libri IV, *de re militari*

MS 297: saec. XV.

1 This list is incomplete and documents only the existence of those sources directly relevant to this work. For more complete references see: Gustav Becker, *Catalogi Bibliothecarum Antiqui* (Hildesheim & New York: Georg Olms Verlag, 1973); Berschin, Walter, *Griechisch-Lateinisches Mittelalter* von Hieronymus zu Nikolaus von Kues (Bern & Münich, 1980).


3 Ibid, 143.

4 Ibid, 305

5 Ibid, 315.
Plutarchi: quomodo quis posit adulatorem discerere, ab amico, Graece.
Orationes ex opere Thucydides excerptae, Graece
Thuc, I, cap. 68-86; 120-124; 140-144; II. 11; III 35-39

*MS 436:* saec. XI-XII. 6
Macrobi; commentum in Ciceronis de somno Scipionis librum

*MS 438:* saec. XIV-XV: 7
Frontinus, stratagemata
Ciceronis	Tusculanae quaestiones

*MS 363:* Saec. VIII: School level authors:
Horace
Ovid
Servius on Virgil

*MS 439:* Saec. XIII-XIV: 8
Tebaldo’s Regulae
Ars Grammatica
Ars grammatica Gallice

*MS 576:* saec XV. 9
Plinii, natural history, lib. I
Excerptus ex Herodoto
Excerptus ex Pomponio Mela
Excerptus ex libro Dionysii
Alexandri de situ orbis
Excerpta ex Diodoro Siculo
Excerpta ex Taciti Germania
Su etonii
Cu rtio
Ovi dio
Qu intiliano
C laudiano
Ciceronis, *Philippics*
Virg il
Ovi d

*MS 579:* Saec. XIV-XVI: 10
Plutarchus de amicorum multitudine
Excerpta ex Plutarchi Ciceronis vita (saec. XIV)
Epistulae variorum, Graece (saec. XIV):
Aristoteles, olympiadi; Artaxexes Hystani, hellesponit praefecto; Hystanes

---

6 Ibid, 383.
7 Ibid, 383.
8 Ibid, 347.
9 Ibid, 462.
10 Hagen, 468-9.
Hippocrati; Hippocratis, demetrio; Deocritus hippocriti; Pythagoras, hieroni, chion
Matridi; Apollonius Tyaneus Euphrati
Leonardi Aretini de Florentinorum re publica, Graece (saec. XV).

MS 690: saec. XVI.11
Dem osthenes:
Oration es aliquot
Contra Phil. I
De Pace
C ontra Phil. II
De Haloneso
De rebus Chersonesi
Contra Phil. III., IV.
De
Excerpta ex Platonis Phaedro
X enophon, Xenophontis symposis
Excerpta, de mensibus Graecis (Graece et Latine)12

BIBLIOTHECA INCognita (SAEC. X).13

Virgilius
Boetius
Sichemachia
Terentius
Sedulius
Alcimus
Arator
Terentius 9-12. tres [III] auiani
Catonem
Prosperum
Auianum
Waltarium
Esopum
Albinum
Hamaradum
Lib. Prognosticorum
Prudentium sichemachie
Epistole magni Alexandr regis
Liber Prosperi
Frontinus, de iuncturis et compaginibus membrorum

11 Ibid, 502.
13 Becker, 62-3; H. Hagen, Jahrbuch für Philologie 99, 511. e cod. Bernensi IIIb. qui partem alteram sacrae scripturae Hieronymi continet, saec. VIII vel VIII in pagina vacua relica manu saeculi X.
INCIGNITA BIBLIOTHECA (saec. 10 vel. XI):¹⁴

Wincerus Iohannes Warembaldus Bernacer letaldus azelinus wincerus bauo dominicus Constantinus erinardus Hubertus warnerus oda bezela liezenna emma.

Rethorica ciceronis
Timeus plato
Simphosius lib.
Regulae astrologius. Lib I de astronomia
Lib. De utilitatis astrolapuis
Exceptions de prisciano
Corpus dialecticae
Priscianus maior cum minore de constructione
Item de constructione [in margine 11. Priscianus de XII versibus
Virgilius
Terentius
Horatius
Salustius
Boetius
Iuuenalis cum persio in uno vol.
Excidium troiae
Prudentius maior
Item Prudentius minor cum Aratore
Item Prudentius minor.
Item Arator
Sedulii II
Avianus I
Cato I & II
Donatus minor cum maiore et barbarismo et coniugationibus
Serviolus I cum esopo. 31-33. tres libelli declinationum
Euticius
Priscianus de formatione I
Macrobius
Commentum boetii in cathegorias aristotelis
Periermenia apulei cum periermeniis aristotelis
Rethorica ciceronis ad herennium
Commentum super iuenalem.

BIBLIOTHECA INCIGNITA (saec. XI):¹⁵

Fabule gentilii Fulgenci
Lib. Anticoru [nonii vel Fulgentii susp. Hagen.]
Lib. Ciceronis
Lib cum Sedulio [suprascr. Parte Sedulii]
Boetii viri Maetillii
Lib. Virgilii
II commenta super ysagogas
Commentum super categorias I


¹⁵ Becker, 147-48; H. Hagen in Jahrbücher für Philologie 115 (1877) 871 e cod. Genev. 84 saec XI, qui continet Nonii caput quorum manu saec. X conscriptum
Periermenias Boetii et duo desuper commenta
Periermenias Apulegii
Topica Ciceronis que Boetius commentatus est.
Boetium de arithmetica
Somnium Scipionis cum commento Macrobii
Rethoricam Ciceronis
Quintillianum de rethorica
De amicitia Ciceronis librum
De senectute Ciceronis
Sallustium
Ciceronem de invectives Catalline
Commentum secundum super Platonem
Phylippicarum libros
Frontiniarum de iuncturis et compaginibus membriorum
Dionisiam Ariopagitam de celesti hierarchia
Oratii librum
Commentum Donati super Virgilium
Commentum Eugraphii super Terentium
Vitrivium de architecturis
Analitica super cathedrias Aristotelis
Commentum Remigii super Juvenalis
Plinium de natrus rerum
Plinium epistoarum
Librum Ciceronis de officiis
Librum de Tusculanis
Libros Titi Libii ab urbe condita C decades

ENGELEBERG: (ABBOT FROWIN 1142-1178)16

   Cato
   Roman rules of rhetoric
   Roman rules of grammar
   Major rules of declension
   Achilles
   Homer
   Fables of the poets Juvenal

ENGELEBERG (ante 1175). 17

   Boetii consolationum liber. Regule de declinatione
   Fabularius glosse super Theodulum
   Glosse super Priscianum
   Dialogus Tulii
   Topica Boetii. Sub uno vol. Introductiones dialectice. Glosse super rhetoricam Tullii regule de
   rhetorica
   Regula de grammatica
   Regule maior de declinationibus
   Avianus


17 Becker, 223; Versuch einer urkundlichen Darstellung des reichsfreien Stiftes (Engelberg, Luzern 1846 ), p. 31-33; e codice omeliarum S. Gregorii magni Catal. MS, .43.
Statius Achilleidos
Omerus
Omerus
Avianus novus
Sedulius
Sedulis
Rethorica Tull ad Erennium
Fabule poetarum
Regule de retorica
Novus Cato
Prosper
Tatius Tebaidos
Glosse super Iuvenalem
Expositio fabularum
Cato
Glosse super Ovidium
Tullius de amicitia

**MURI**

Bibliothekskatalog vom 12 Jahrhundert

Two books of Homer
Ovidius epistolarum
Sallust
Vegetius, de re militari
Gestis Romanorum imperatorum ab Augusto usque Theodosium

Aus dem Klosterbibliothek vom 13. Jahrhunderts

Sedulius in uno vol.
Cato et Avianus in uno libello
Homer (Two books)
Ovidius epistolarum
Sallust
Stacius Achilles: Dialectia
Liber divisionum
Liber questionum

Esopus
Duo Libri Homeri
Maximianus
Persius
Helpricus
Donatus
Martialis
Statius Achilles
Dyalectica
Theodolus
Glose super Priscianum
Priscianus
Duo libri Prudentii, et in uno ex his psichomachia
Tres libri Arartoris

---

The monastery was founded in 730 by the Abbot Etto (727-734), and its archive held the Codex Fabrensis, especially famous of its collection of inscriptions and its Roman itineraries. It appears to be derived from a Reichenau script of Reginbert, which appeared around the 9-10th c. It is very probable that Pfävers which for some time during the 10th c. was a possession of Allemannic territories like St. Gallen, had received early books and writers from such places, and from the Roman south. The inventories and codices available to us today, seem to suggest that up to the end of the 11th c. Pfävers held only liturgical and other strictly ecclesiastical texts. But, by 1155, a surprising number of secular, classical books were on hand there. Such works had been donated to the monastery, which in turn exchanged many works with the monastery at Einsielden. (See Lehman, Mittelalterliche Bibliothekskataloge, 479.)

20 Lehman, Mittel. Biblio., 486.

21 Becker, 208-209.
ST. GALLEN: BENEDICTINE CLOISTER

Classical Texts

Virgil, Georgics: Glasgow, Hunterian Ms. 29 SAEC. IX ex.
Daretis Phrygii, historia Trojanorum, München, lat 601 SAEC. IX/X
Justini, epitomia historiarum Pompei, Trogi. München, lat. 601 SAEC. IX/X
Pseudo-Dositheana, Vocabularium gaelatinum, hermeneumata SAEC. IX/X
Hermeneumata Pseudo/Dositheana, fabulae aesopicae, Glossen, etc.: London, Harley 5642 SA EC. IX/X
Ovid, de vetula
Seneca, de 4 virtutibus

Works based on Classical Texts

Alcuin, dialecta et rhetorrica SAEC. IX ex.
Distributio omnium specierum nominis inter

Cathegoias Aristotelis et alia quaedam rhetorica et Dialectia SAEC IX ex.

Bibliothekskatalog aus der Mitte des 9. Jahrhunderts

Libri Scottice Scripti

Juvenci, Item metrum in volumine I.
Metrum Virgili in volumine I

De Libris Cassiodori

Doriti atque Socrates, libri XII in codice

De Libris Diuersorum Auctorum

Item Chronica Eusebii et Hieronimi in volumine I.

De Metris

Metrum Juvenci presbiteri et Seduli

---

22 Lehman., 63-64. The Benedictine Cloister in St. Gallen was founded in 614.
23 Ibid., 71.
24 Ibid., 76.
25 Lehman, Mittelalterliche Bibliothekskataloge, 76.
26 Ibid, 81.
De Libris Grammatae Artis: Libri Prisciani De Octo

In Descripto octo principalium:
Alexander of Macedon, Vol. I

Verzeichnis der Privatbibliothek des Abtes Grimwald/ Städtliche Privatbibliothek (841-877)

Vegetii Renati: de re militari in Vol. I
De regibus Merovingorum et epistola Alexandri de situ Indiae
De sex aetatibus mundi et chronica Julii Cesaris, Ebonis
Volumen Virgilii poeta XVIL.

Katalog der Stiftsbibliothek von Jahre 1461

Boecius:
Edicio Boecii in topica Jullii Ciceronis, VI libri

Notkerum noster Balbulus:
Translacio Notkeri in periermenias Aristotilis

Justinus:
Jusinus abbreviator Trogi Pompeii XLIII libri
Gesta Alexandri Magni
Gesta Romanorum pontificum et imperatorum [unus] liber
Gesta Francorum

Libri liberalium artium

Sex libri, periermeniarum Boetius
In topius, in topicam Cicero

Libri in poesi

Stacius in Thebaide; in alio libello idem Achileidos
Martialis
Tullius de somnno Scipionis
Item Ovidus de Pontho

Catalogue bibliothecae Constantiensis, ut putat posseor Iosephus de Lassberg, Sangallensis, ut suspicious Idelfonsus de Arx, e fine saeculi IX in Sacramentario Gregorii Magni, vulgavit Gust Haenel in Serapei I 81-84

27 Ibid, 89. The Abbot Grimwald was probably already since 847 Arch-Chaplain of the Carolingian kings. So, that he would have literary aides at hand he created for himself a government private library. After his death it became a part of the seminary library.
De historia nabuthae I in quo et uegecius de re militari et qestiones albini in genesim et gesta alexandri magni.
Historia romanorum I
Gesta anglorum voumen I
Solinus

SCHAFFHAUSEN: Benediktinerkloster

Item libellus de ortu Alexandri Magni et epistola eiusdem
Liber I, qui vocatur Seneca

ZÜRICH

Homer
Ovidius, epistolarum
Troyana istoria
Alexander the Great
Statius Achileis
Troyana istoria
Expositions fabularum
Cato

WONNENSTEIN (KT APPENZELL: TERTIARIERINNENKLOSTER (1501)

Item das vestbuch und der armutt buch
Den schatzbehalter
Item II buchly, wie Rom gebuwen ist

SOUTH GERMANY and Germany

28 Becker, 33. See also Barack, Katalog der Hanscriften der Hofbibliothek zu Donaueschingen; Freiburger Diöcesanarchiv IV 268; Orelli in editione Ciceronis Oratoris (Turiei 1880), p XX.

29 Lehman, 454. The following list was written by the Abbot Siegfried (1083-1096). See also Becker, 156.

30 Ibid, 455. The following list was written in the mid-thirteenth century. According to Lehman it is traditionally believed that many valuable books such as those listed, were given to the Great Cathedral in Zürich by Charlemagne and other Carolingian kings. He believes that story is probably true, although he is not certain.

31 Ibid, 456. The cloister at Wonnenstein was not established until 1501. However, in its archives are also included books on arms and armament and a history of Rome, providing a comparison with the earlier monastery archives on which is was based. In all we find an interest in both military matters and classical history.

32 The following lists come from archives today bordering Switzerland—just on the opposite side of lake Constan. Out of lists of twenty archives there ten hold classical texts, although clearly just on the opposite side of the Lake in Switzerland a greater number of lists mentioning classical texts are extant.
ALQUIN MENTIONS IN ALCIINI VERSAS DE SANCTIS EUBORICENSES ECCLESIAE VERSES 1535-1555 THE FOLLOWING:33

Cassiodorus
Victorinus scripsere Boetius
Historici veteres,
Pompeius, Plinius, ipse Acer Aristoteles, rhetor quoque Tullius ingens.
Quid quoque Sedulius vel quid canit ipse Iuvencus
Fortunatus
Maro Virgilius
Statius
Donatus Priscianusve
Servius
Eutcius
Commminianus
Clemens
Prosper

BIBERACH34

Bücherverkauf des Magisters Heinrich Jäck, Predigers zu Biberach 30 Mai 147735

Rhetorica Ciceronis cum aliis

BLAUBEUREN: BENEDIKTINERKLOSTER

Verzeichnisse der im und seit dem 11. Jahrhundert erwobenen Bücher36

Sallust mit Glossatus

Liste der unter Azelinus geschenkten Bücher (1085-1101)

Sallust glossatus
Tullius, de amicitia, idem de senectute
Sedulius
Cato
Avianus
Troiana historia
Pars glossarum Vergilii
Statii Achilleidos
Ovidius fastorum et notulae eiusdem
Sedulius de glossis
Homerus
Aesopus
Dares
Theodolus
Priciani excerpta

33 Becker, 2.
34 Biberach was founded before 1258, but was consecrated by the popeo in 1287.
35 Lehman, 9.
36 Ibid, 17-20; Becker 175-77.
Liste der von Bruder Hugo gestifteten Bücher (9th c.)

Priscianus in constructionibus
Boetii consolationum liber
Salustius cum suis glossis
Statii Thebaidos in dabus partibus
Eiusdem Achilleidos et glossae in eundem
Tullius de senectute idemque de amicitia
Ovidus fastorum et notulae eiusdem
Sedulius cum glossis
Homerus
Avianus
Cato
Aesopus
Dares
Salustium
Oswaldi regis vitam et Caroli regis gesta
Theodolus
Sententiae philosophiae maiores et minores
Bucolica

Katalog der Stiftsbibliothek unter Abt Azelinus (1085-1101)

Sallust
Eleymonis ac Oswald regis vitam et Caroli regis gesta, que in ono continentur volumine

ELSSLINGEN: KLOSTER DER AUGUSTINEREREMITEN

Stiftung de Novizen Johann Bräcklin aus Cannstatt, 5. Dezember 1488

Item liber in littera Gallica continens philosophiam naturalem Aristotilis
Sex libros metaphysice cum questionibus, sicut Parisius exercetur

FRISINGA—FREISING (saec. IX):

Virgilius
Prudentius
Poetius
Homer
Sedulius
Iuvencus
Terentius
Prosper
Arator Cato
Iosiephum
Marcianum

37 Lehman, 36.
38 Ibid, 41.
FRISINGA=FREISING (saec. XI):\textsuperscript{39}

Ovidium
Salustium, P. fig. Reth.

Froumundus coenobit Tegernseenisi (saec. X):\textsuperscript{40}

Librum Boetii
Librum Juvenalis et Perii pro commutatione arithmeticae Boetii, in qua ipse ob gratiam vestrii non modicum conscripsitis, pro libroque invectivarum Tulli Ciceronis in Salustium. Quos libros mihi praestitos cum remitto nostroque recipio, iussu vestro voluntarie satisfacio.

GODEFRIDUS I abbas ADMONTENSIS (saec. XII)\textsuperscript{41}

Iosephi opus, excidium Ierosolymorum et celebratum Romae Vespasianet et Titi triumphum

Gunzo ad Augienses fraters (10th c.):\textsuperscript{42}

Aristotelis in libro peri ermenias aut nostris vix temporibus tentata aut non perspecta obscuritas, Cicerois Aristotelisque non contemnenda topicorum dignitas.

IOHANNES MONACHUS BESU ENSIS (saec. XII):\textsuperscript{43}

Magnam partem Iosephi
Historiam Iustinianae

FULDA:\textsuperscript{44}

Works at Fulda:

\textit{Eiusdem Acuini dialectia ad Carol. Imp. Et altercatio Athanasii cum Arrio Probo iudice.}
\textit{Eiusdem de rhetorica lib. I. Eiusdem de musica lib. I. metrum eiusdem in cantica canticorum et versus illios as diversos in cod. I.}
\textit{Eiusdem de formulis arithmeticae artis.}
\textit{Eiusdem de grammatica in 1. vol.}

\textsuperscript{39} Becker, 148; Schmeller in \textit{Serapei} II p. 248 e cod. Mon. 6250 [Fris. 50] fol. 280.

\textsuperscript{40} Becker, 126; \textit{Pez. Thsaur. Anecdotorum} tom. VI (1729) part. 1 160-67. e cod. Monac. 19412 (Tegerns. 1412.) ce; Schmeller in \textit{Serapei} II 267.

\textsuperscript{41} Becker, 206; \textit{Pez thesaur anecd.} tom VI (1729) part. I 364.65.

\textsuperscript{42} Ibid, 64. \textit{Epistola Gunzonis ad Augienses fraters apud Martene et Durand veterum scriptorum amplissima} collectio I (Paris 1724) 304.

\textsuperscript{43} Ibid, 184-85.

\textsuperscript{44} Becker, 31.
Bücherverzeichnis vom Jahre 1457

Item das erst heist liber Gaii Julii Cesaris, belli gallici de narracione temporum

Listen der seit der Mitte des 15. Jahrhunderts erworbenen Bücher, angelegt zwischen 1450 & 1476

Item doctrinale trium parciu Alexandri et grecistam antiquam in uno minutissimo libello in pergamo, sed prius eciam signatum est.
Item Averross commentatio Aristotelis super octavo physisorum
Nonus, decimus liber: in primo volumine continetur subscripta scilicet auctoritates Aristotelis.

BIBLIOTHECA HIRSAUGIENSIS=HIRSCHAU (post 1165): 47

Libri Iosephi historiography Iudaici
Libri cassiodori Senatoris
Libri Alcuini

HÖHEN-HEWEN BURG 48
Vertrag über Bücherausleihe an den Freiherrn Degenhart von Gundelfingen, 21 Sept. 1467

Item Virgilius in Eneide

ISNY:PFARRKIRCHE

Bücherschenkung des Pfarrvikars Konrad Brenberg, 29 April 1482 49

KONSTANZ

45 Lehman, 152.
46 Ibid, 164.
48 Lehman, 178.
49 Ibid, 181.
Bibliothekskataloge vom Jahre 1343

Item Vegetius, *de re militari*
Gestis Romanorum imperatorum ab Augusto usque ad Theodosium
Item est ibi liber gestorum Alexandri Magni, primi regis Grecorum
Item est ibi liber Alquini de vera fide de litera antiqua
Item est ibi compotus Grecorum
Item est ibi libellus parvus intitulatus Incipiunt capitula legis Alamannorum
Item *ethicam* Catonis

**LORSCH** (saec V)

Livy (Fifth Decade)

**MONASTERIUM S. NAZARII LAURESHAMENSE = LORSCH (SAEC. X)**

Breviarium Codicum Monasterii S. Nazarii in Laurissa Seu Lareshamensis ad Rhenum (the following sources):

*Annaie Senecae libri VII, de beneficiis eiusdem de clementia lib. II in uno codice*
Liber epistolorum Senecae
Liber epistolorum Senatoris diaconi
Liber epistolorum Sidonii ad diversos
Item alius liber tertulliani
Liber epistolorum Gaii Plinii
Marci Tullii Ciceronis, de officiis
Epistolae Ciceronis lib. XVI in uno codice
Epistolae Ciceronis in quaternionibus
Item epistolae Ciceronis diversae
Item Ciceronis epistolarum libri IIII. In uno codice.
Liber differentiarum Ciceronis in tribus quaternionibus
Liber epistololarum Senecae in uno codice
Pars prima librorum Plinii Secundi, de natura rerum, in qua continentur libri XVII
Liber Prisciani, grammatici de nomine et de pronomine et verbo et de participiis
Donati grammatici de barbarismo et de ceteris vitis. Eiusdem de littera et syllaba, de pedibus, de tonis, de posituris, in uno codice.
Liber Honorati grammatici de finalibus litteris et commentarium Sergii de littera. Commentarium Maximi Victorini de ratione metrorum
Ars Metrorii de omnibus partibus orationis et de caesuris
Grammar integra Prisciani grammatici
Collectio de verbis inaequalibus. Ars Eutychii de verbo ad sicipulum suum Craterum in uno codice
Liber Pompeii, de grammatic in uno codice
Liber Eutychii de grammatici
Item ars Prisciani de nomine et pronomine et verbo in uno codie

---

50 Lehman, 192,196-198.

51 Ibid, 190.

Item minores et maiores partes Donati et Prisciani minores partes et Asperi grammatici in uno codice
Metrum Sedulii et Prudentii in uno codice
Metrum Porphyrii
Arithmetica Boethii
Metrum Iuvenci in duobus voluminibus
Item metrum Sedulii in alio volumine
Liber Iuvenalis poetæ
Annae Lucani belli civilis libri X in uno codice
Liber Horatti poetæ in uno codice
De interpretatione nominum Graecorum
Cuuiusdam super buculicon Virgillii in quaternionibus
Liber Frontini in quaternionibus
Flavii Vegeti Renati, viri inlustris epitoma rei militaris libri numero III in uno codice
Epistola Anthimi viri inlustris et legatiæ ad gloriosum Thiodoricum regem Francorum de observationibus ciborum
Liber Socratis, Timaei, Cretii, Hermocratis
Liber Einhardi de miraculis sanctorum Marcellini et Petri
Item metrum Aurelii Prudentii in quaternionibus
Historia Frechculfi libri VII in uno codice
Metrum Tulli ciceronis orationis pro Cluentio, pro Milone, in Pisonem, pro Cornelio
Epigrammata Prosperi
Virgillii, eclogæ decem eiusdem georgicon lib. IIII
Liber Virgillii
Prisciani grammatici partitiones versus duodecim Aeneido principialium in uno codice
Libri quinque Catonis. Epitaphium filii Catonis et de duodecim virtutibus Herculis. Et de Samsonæ fortissimo
Libri Plinii secundi, de natura rerum XXXVII in duobus voluminibus
Vita Caroli imperatoris
Historia iosephi lib. XI in uno codice
Tripartita historia libri XII socoratis sozomini
Theodoriti in uno codice
Gesta francorum gregorii toronensis lib V in uno codice
Fauii claudiæ gordiniæ de aetate mundæ et hominis reseruatæ singulis litteris per singu los libros ab a usque
z. sed desunt nobis libri XI in uno codice
Excidium troiae lib. I et historia daretis frigii de exitu romanorum in uno codice
Ennii floræ epitoma in libro romanæ historia in libris CXLII in uno codice
Item libri antiquitatum iosephi historiography a duodecimo usque in nonum decimum in uno cod.
Liber epistolæ plinii
Pars secunda librorum plinii secundi de natura rerum in qua continentur lib. XX (Libri plinii secundi de
natura rerum in duo. Uoluminib.
Lib. Prisciani grammatici
Annaei (lucani suprascr. Rec m. in A) belli civilis libri X in uno cod.
Flavii vegeti renati viri inlustris epitoma rei militaris libri numero IIII in uno co.
Lib. Socratis timei creciæ eromocretis (hermocratis in uno cod C
Lib. Einhardi de miraculis scorum marcellini et petri
Metrum tulli ciceronis orationis pro cluen proculentio A pro melone in pisonem pro corelio
De metris fabularum terenti et aliorum comicorum et cet
Liber virgillii

MONASTERIUM S. LAURENTII LEODIENSE=Lüttich. (saec. XI) ⁵³

⁵³ Becker 146; F.X. Kraus, e cod. Bruxell. 9668 in Jahrbücher des Vereins von Alththrumsfreuden im Rheinlande 50 (1871), 228.
Virgilius
Liber Magni Aurelii Cassiodori Senatoris de sede anime.

**MONASTERIUM PRUVININGENSE=Prüfening (1158)**

*Josephvs*
Scolastica historia
Oratius
Statius Thebaidos
Ovidius maior
Et totus Virgilius
Bucolica Aureliani
Glose Salustii et odarum Ovidii simul.
Glose Terentii: Cornutus super Persium simul.
*Diálectica. Topica Boetii*

Ysagoge Porfirii
III paria bucolica Calpurnii
Statius Achilleidos
Phisiologus
Cato in uno vol.
Topica Tullii
Tullius de senectute
Homerus

**MONASTERIUM RASTEDENSE=Rastede (12th c.)**

Aratorem, Iuvencum, Sedulium, et Prosperum in uno vol.
Platonem de anima, qui Graece dicitur Timaeus
Item Prosperum et regulas de versibus
Theodulm, Catonem, et Ivarum
Prudentium, Oratium, et Boethium

**RAVENSBURG: PFARRKIRCHE**

*Bücherverzeichnis von 1435 ff*

Item liber Aristotilis cum aliis materiis in pappiro

---

54 Becker, 212, 215-16.

55 Becker, 203; *Chronicon Rastedense apud Meibom script rer germ* II 96 Merzdorf. Biblioth. Unterhaltungen I.V.

56 Ibid, 221.
COENOBIUM S, EMMERAMMI RATISBONESE=REGENSBURG (10th c.):57

Topica ciceronis
Periermeniae Aristotelis
 Categoriae Aristotelis
Commentum super topica Ciceronis
Commentum periermenias Aristotelis
Commenta II super isagogas Boetii
Arithmetica Boetii
Rhetorica Ciceronis
Commentum super rhetoricam Ciceronis

REICHENAU58

Item Virgilii, Georgicorum libri III et Aeneidos libri VI in Codice I.
Lex Theodosiana de diversis Romanorum legibus; lex Rubuaria; lex Salica; et lex Alamannica et capitulo domni Karoli et domni Hludovici imperatorum addenda legibus necon et alia capitulo eius de nutriendis animalibus et laborandi cura in domestica agricultura in codice I.
Item lex Rubuaria et lex Alamannica et capitulo domni Karoli imperatoris addenda legibus et inventio sanctae crucis in codice I
Item lex Salica et Alemannica et computatio annorum per sex mundi aetates in codice I
Item lex Salica in codice I
Item lex Alamannica et capitulo domni Karoli in codice I.
Item lex Alemannica in codice I.
Item lex Longobardorum in codice I.

Listen der Unter Abbot Erlebald (822-838) geschrieben59

Liber, lex Alemannica et paenitentialis et cartularius in codicello I.

Verzeichnis von and für Reginbert geschriebener und von ihm sonstwie erorbener Bücher, zwischen 835-842 AD60

Libri duo Alcvini: de rhetorica et dialecta arte
Liber Julii Caesaris de mensione univeri orbis


58 Lehman, Mittelalterliche Bibliothekskatalogue, 247-8; 252; 254; 264-5. Notes left under Waldo, 786-806 and Under Rudhelmus 838-842 tell us that some books in the archive at Reichnau came from a church in Ticino, (then a part of southern Italy). King Pippin gave other works, especially an antiphonal, to the abbey. There was also a school founded here by the priest Buntwil who came from the Einsiedeln segment of the Irish missionary St. Gallen. He taught at the school and brought with him classical and modern historical books and used them to teach in the school he founded there, competing with the Cloister at St. Gallen, but through it, increased both the culture of the region and creating a strong bond between learning in Switzerland and in so. Germany. See Lehman, p. 236 and 238; Feldmann & Wirz, 17.

59 Erlebald’s list consists of works he personally brought to Reichnau.

60 Reginbert also composed this inventory of books he himself donated to the collection. Lehman, 258-266; Gustav Becker, Catalogi Bibliothecarum Antiqui (Hildesheim & N.Y : Georg Olms Verlag, 1973), 4-12.
Liber Aethici Hieronymi de cosmographica
Libri duo de architectura Faventini
Liber unus herbarius Apulei
Deinde rotarum Plinii Secundi liber I

In IV libro sunt libri grammatice artis;
de arte grammatica Alchvini libri
Declinations et metrum Juvenci et Sedulii,
Super alios quamplurimos libros et notae Julii Caesaris
Monogrammae diversae
Liber Plinii Secundi, de natura rerum

In XVII libro continetur leges diversae, id est:
Lex Alemannourm
Lex Ripuaria
Lex Salica
Lex Thodosiana
Diversi capitulares Pippini, Karoli et Hludovici regum.

In XVIII libello continetur lex Ripuaria et lex Alemannorum et capitularia Karoli regis addenda
legibus et de sex aetatis mundi et de inventionibus sanctae crucis, quem Engilram mihi dedit, et
capitulares tres, in quibus continentur capitularia Hludovici imperatoris.

In XXXVII libro continentur:
Sex a mundi princippo acetales usque hactenus
postea Karoli, maiorus domus Francorum, Pippini senioris ac filii eius Karoli et Pippini et Karle,
filiorum Karoli, deinde postquam Pippinus ad regem elevatus est, postea Karoli regis, deinceps
gesta Hludovici regis ac imperatoris; ad extremum quaedam decreta adversantia.
Vegetius, de re militari
Gesta Alexandri Magni
Ovid, Metamorphoses
Sallust
Seneca, naturalium questionum I
Persii et Juvenalis volumen I
Ovidius, de amatoria arte I
Cassiodorus de VII liberalibus artis I
Kalchidius in Thymeum Platonis I (?)
Libellus epistolarius Senecae et Pauli
Categorium Aristotelis vol. I
Aristotelis vol. I, de VII liberalis artibus
Catelinarum I
Hystoriarum Pompeii Trogi I
Boecii, geometrica

De opusculis S. Cypriani episcopi

Item eiusdem de bello Judaico lib. V excerpti de historia Iosephi

De vita patrum

Daretis Phrygii de origine Trojanorum et de excidio Troiae, Vol. I

---

61 Becker, 7.

62 Ibid, 8.

331
TEGERNSEE (saec. XI)\textsuperscript{63}

Libr. Virgilii
Libr. Ovidii
Libr. Platonis cum Calcidio
Commentum in Lucanum
Libr. Donati
Libr. Aratoris
Rhetoricam cum Vitorino et Grillio
Libr. Ovidii metamorph.
Libr. Ovidii de remedio et amore
Librum Virgilianae continentiae
Topica Tullii cum commentis Boetii et libr. Differentiarum et divisionum et multa de rhetorica et de
sillogismis in uno corpore.
Duas mappas mundi
Libr. Super Donatum
Daretis de excidio Troiae
Gest Alexandri Magni
Libr. fabularum

ULM

Katalog der Neithartschen Familienbibliothek, 1465\textsuperscript{64}

Questiones Byridani super libros politicorum Aristotelis
Item [7 tabul auctoritatum ex libris yconomorum: ethicorum, politicorum secundum ordinem
alphabeti.
Epistole Senece de clemencia, de paupertate, ad Lucillum, de beneficiis, repertorium et tabula ad
dicta
Cassidorus variarum et libri de anima eiusdem in pergameno.
Plutarcus de liberis

MONASTERIUM WEIHENSTEPHENENSE=WEIHENSTEPHAN (saec. XI)\textsuperscript{65}

Dialectica Aristotelis
Ovidius meta
Iugurthinus
Fabularius
Lib. Ius Plinii
Euticius de Arator
Duo Persii

\textsuperscript{63} Becker, 142-43; M. von Freyberg,, \textit{alteste Gesch. Von Tegernsee} (Munchen 1822) 178 e cod. Tegernseensi.

\textsuperscript{64} Ibid, 342, 347.

\textsuperscript{65} Ibid, 174.
WEISSNAU


Cronica Karoli regis.

MONASTERY HERBIPOLIS—WÜRZBURG, SALVATORSTIFT. (Saec. IX)

Cassiodori liber history

BIBLIOTHECA WESSOFONTANA=WESSOBRUNN (saec. XII)

Priscianus maior et minor
Donatii III
Donatus maior et minor cum commento Remigii I v.
Cathegoriae Aristotilis
Persii II
Oratius
Statius
Terentii II
Juvenalis
Alcimus
Maximianus
Homeri II
Virgilii II in IIII divisi
Iuvencus
Aratores II
Prosperii III
Sedulii
Salustii
Catilinarius I v.
Cato
Iosephus de Iudaico bello
Bucolica Virgilii
Ovidius epistolarum
Prosper
Fabularius
Virgilius Aeneidos
Porphyrius
Salustius
Statius Thebaidos
Secundus Prosper

---

66 Ibid, 412.
67 Becker, 38.
68 Ibid, 229; See also Schmeller in Serapei II 252 e cod. Mon. 22059 [Wessobr. 59]; 2205 [Wessobr. 25 f. 201. 
Admont

Katalog Peters von Arbon 1376

Apud Grecos primus Pissistratus, dehinc Alexander Magnus, hinc alii atque alii successores eorum instruendis omnium librorum bibliothecis animum intenderunt, Sed maxime Ptolemus cognomento Filadelphus, qui non solum gentium.

Apud Romanos vero Emilius Paulus victo Perse Macedonum rege, librorum copiam advexti, deinde bucullus e Pontica preda. Post hos Marcus Varro maxime bibliotheca construende a Caesare preceptum acceptit.

Item Solinus de origine urbis Rome
Item hystoria successorum Caroli Magni, incipit, “Regnante domino.”
Item hystoria Francorum, incipit “Pippinus”
Item hystoria Egesippi, incipit “Quatuor.”

Item super librum metherorum, incipit “Aristotiles” in eodem aliqua notabilia
“De generacione” in eodem libri Aristotilis quinque et medicinale septem in principio eius signati
Item super metaphysicam, incipit, “Quoniam disposicio”; in eodem genus et vita Aristotilis
Item liber metaphysice, incipit “Omnes homines”, in eodem liber politicorum
Item rethorica Aristotilis, incipit “Aristotiles” in eodem compendium libri sive legalium
institutorum Aristotilis
Secreta secretorum
De bonitate et bono et translacio nova ethice Aristotilis
De bona fortuna et summa Tulii de officiis.
Item rethorica Aristotilis, incipit “Rethorica”
Item rethorica de invencione Tullii, incipit “Sepe et multum
Item Ovidius magnus, incipit “ In nova”
Item Ovidus fastorum, incipit, “Tempora cum causis”

ST. LAMBRECHT BENEDIKTINERKLOSTER

Verzeichnis aus 2nd halfte des 12th Jahrhunder) 70

Liber somnium Ciceronis Scipionis
Cronica Karoli
Liber Catonis I
Avianus
Libri Seduli III
Theodolus
Phisiologues
Cato
Libri Boeci: duo in uno volumnine
Liber Tullius, de amicia
Ovidius


70 Ibid, 82.

334
Hystoria Romanorum
Cronica Ottonis
Gesta Anglorum

Bücher in den Besitzverzeichnissen einzelner Mönche von 1498: Unbekannt

Historiam Troyanam

Vorau: Augustiner Chorherrenstift

Die Bücherliste des Goppoldus, 12th c.

Donatus
Theodolus
Prosper
Statius Achilleidos
Invective Tullii
Tullius de amicia et de senectute in uno volumine
Partes Ovidii magni VII, Gose eiusdem
Persius
Prudentius psicomachie
Salustius, catilinarius
Bucolica Virgilli
Cato Avianus
Exigentie

SALZBURG: BIBLIOTHEK DES DOMKAPITELS

Bücher Perthars, vor 990

Liber Catonis
Liber Albini
Epistolae Alexandri magni ad Arestotelem

Kurzes Bücherverzeichnis des 13/14 Jahrhunderts

Secreta Aristotelis
Textus ethicorum Aristotiles

Katalog de Iohannes Holveld von 1433

Commentum Averrois super metaphysicam Aritstotilis
Quidam tractatus in geometrica eum certis libris Euclidis

---

71 Ibid, 86.
72 Ibid, 97.
74 Ibid, 23.
75 Ibid, 41-2.
Liber Aristotilis phylosophi de naturali, auditu, phisicorum libri octo
In fine tractatus de causis et proprietatibus elementorum
Aristotiles de generacione et corrupcione
Item de anima
Item de sensu et sensato
Item de somnno et vigilia
Item de causa longitudinio et brevitatis vite.
Item de inspiracione et respiracione de Greco translatus.
Item capitulum Aristotisis de bona fortuna translatus de secundo magnorum moralium ipsius.
Item aliud capitulum
Aristotilis de bona fortuna translatus ex Greco
Ethicorum Eudimiorum
Item Aristotiles de inundacione Nili
Idem de coloribus tam simplicibus quam composites
Item liber ipsius de causis
Item in fine pricipium libri politiorum
Abbreviacio cronice ab inicio mundi usque ad Karolum Magnum
Commentum Boecii super periarmenias Aristotilis
Item commentum eiusdem Alexandri de sensu et sensato Aristotilis
Virgilius Bucolicorum, Georgicorum, et Eneidorum
Servius super opera Virgillii.

D. SALZBURG: ST. PETER, BENEDIKTINERSTIFT

Katalog des 12. Jahrhunderts

Ovidius magnus
Ovidius epistoluarum
Salustius
Iuvenalis et commentum super ipsum in uno volumine
Priscianus constructionum (Fragmentum Prisciani grammatici de diversitate constructionum
Pergemenie Aristotilis et commentum supra, in uno vol.
Horatius et commentum super ipsam (Commentarius in Horatii artem poetica
Terentius
Prudentius ymnorum et historiarum et siccomachie et contra Symachum in uno vol.
Duo Persii (Gossae in Persii prologum et satire I)
Tres Lucani
Tres Virgilliani (St. Peter Fragm. 10 [Forstner, n. 38])
Duo Porphirii
Ovidius de remedio amoris
Tres Sedulios (a fragment from Sedulius
Geometrica Euclidis
Heremannus Contractus super astrolabium
Abecedarium
Ovidius de amore et de remedio amoris et sine titulo et de Ponto in uno vol.
Theodolus
Libellus de VII planetis
Tullius de amicitia et de senectute et invectivaris in uno vol.
Expositio super artem Euclidis
Servius (Servii grammatici opus super opus Virgilii
Ysiderus ethimologiarum
Homerus
Duo Aviani

76 Ibid, 72.
Plato
Metaphysica et topica Aristotelis
Fabularius
Donati VI
Erchenbertus magister super Donatum
Dialectica Augustini
Tragedia
Grammatica Euticetis
Scansiones metrorum
Alchonsmus
Dialogus super Priscianum

Fiedericus archiepiscopus Salisburgensis-Salzbur 10th c.:77

Glosarium super Sedulium egloga
Liber Catonis
Liber Albini
Peda de metrica arte
Epistole Alexandri Magni ad Aristotelem

MONATERIUM ad S. PETRUM SALISBURI=St. Peter bei Salzberg (saec. XII)78

Priscianus minor
Ovidius minor
Ovidius epistolarum
Salustius
Iuvenalis et commentum super ipsum in uno vol.
Horatius et commentum super ipsum
Terentius
Prudentius zmnorum et historiarum et siccomachie et contra Symmachum in uno vol.
Duo Persii
Tres Lucani
Tres Virgiliii
Expositio super Donatum et Alzimus in uno vol.
Ars Foci grammatici
Prosper
Galienus
Duo Porphii
Ovidius de remedio amoris
Tres Sedulios
Ovidius de remedio amoris
Ovidius de amore et de remdio amoris et sine titulo et de Ponto in uno vol.
Tullius de amicitia et de senedtute et invectivarum in uno vol.
Expositio super artem Euclidis
Servius
Ysidorus etymologiarum
Homerus
Duo, tres, Aviani
Plato metaphysica et topica Aristotelis
Fabularis


Donati VI
Erchenbertus magister super Donatum
Grammatica Euticetius [Eutychii?]
Plato
Scansions metrorum
Alchorismus
Dialogues super Priscianum
Iosephus de excidio Hierosolimorum
Leges Longobardorum
Synonima Ciceronis
Gesta Karoli

ITALY

Vatican

Gebertus = papa Silvester II. Ante 999: 79

Historiam Iulii Caesariis a domin Azone abbate Dervensi ad recrribendum nobis acquirite, ut vos penes quos
nos habemus habebatis et quod reperimus speretis, id est octo volumina Boetii de astrologia, praeclarissima
quoque figurarum geometriae aliaque non minus admiranda
De morbis ac remediis oculorum Demosthenes philosophus librum edidit, qui inscribitur ophalmicus, eius
principium si habetis habemus simulque finem Ciceronis pro rege Deiotaro. Valete
Victorinus, de rhetorica
Demosthenes, ophalmicus
Volumen Achilleidos Statii diligenter compositum nobis dirige, ut sphaeram, quam gratis propter
difficultatem sui non poteritis habere, tuo munere valeas extorquere.

MONTE CASSINO AND SO. ITALY (BENEVENTAN) 80

Varro, De Lingua latina (Two manuscripts: Florence Laur. 51.10 saec XI ex., and Paris lat. 7530 saec VIII
ex., both from Monte Cassino)
Tactius, Historiae (I-V) and Annales (XI-XVI) (We have only one copy: Laurentianus 68.2 saec. XI med.,
written at Monte Cassino)
Apuleius, Metamorphoses and Florida (The copy of the text which was made in the 13th c. (Florence Laur.
29.2) is also in Beneventan and comes most likely from Monte Cassino.
Seneca, Dialogues (The most important manuscript we have for it is Milan Ambros. C. 90 inf., saec. XI ex.,
from Monte Cassino)
Hyginus, Fabulae (Existed only in one Beneventan manuscript of the early 10th c., a few fragments are in
Munich (CLM 6437)
Our knowledge of the Scholion of Varius’s Thyestes we owe to two Beneventan manuscripts: Paris lat.
7530 and Rome Casanat. 1086 saec. IX., written in Benevento.
Servius, De metris Hortatianis depends solely on Paris lat. 7530.
The value of Beneventan transmission is also seen in cases where different families of text exist: Vatic. Lat.
3342 saec. X has the best text of Solinus. For Ovid two Beneventan manuscripts: Vatic. Lat. 3262 saec. XI
ex., containing the Fasti, and Eton Bl. 6.5 saec. XI, the Heroides and Remedia Amoris.


80 Lowe, Paleographical, 87-90. Beneventan manuscripts were also valuable for the transmission of Roman law (Epitome Iuliani.)
Cicero, Vatic. Lat. 3227 saec. XII in. has the best text of the *Somnium Scipionis* and is the most familiar representative of the Italian family for the *Philippics.*

The Laurentianus 51.10 is, apart from Poggio’s Cluniacensis, our only source for Cicero, *Pro Cluento* Although the Monte Cassino manuscript of Frontinus is not in Beneventan, the original probably was. At any rate Monte Cassino save this unique work.

Others saved are:

- Apuleius (Florence Laur. 68.2 saec. XI and 29.2 saec. XIII)
- Auctor and Herennium (Florence Laur. 51.10 saec. ex. London Add. MS 11916 saec. XI ex.)
- Caesar (Florence Laur. 68.6 saec. XII/XIII)
- Germanicus (Madrid 19 (A. 16) saec. XI)
- Hyginus (Munich 6437 saec. X in.)
- Juvenal (Oxford Bodl. Canon. Class. lat. 41 saec. XI/XII)
- Livy (Prague Univ. 1224 fragm. saec. X)
- Macrobius (Vatic. Ottob. lat. 1939 saec. XI ex.)
- Ovid (Eton B1.6.5 saec XI, Vatic. lat. 3262 saec. XI ex., Naples IV. F. 3 saec. XII)
- Sallust (Vatic. lat. 3327 saec. XII/XIII)
- Seneca (Milan Ambros. C. 90 inf. saec. XI ex.)
- Solinus (Vatic. lat. 3342 saec. X, Monte Cassino 391 saec. XI)
- Statius (Eton B1.6.5 saec. XI, Vatic. lat. 3281 saec XII)
- Tacitus (Florence Laur. 66.21 saec. XI ex.)
- Varro (Florence Laur. 51.10 saec. XI ex, Paris lat. 7530 saec. VIII ex.)
- Vegetius (Vatic. Pal. lat. 909 saec. X/XI)
- Virgül (Vienna 58, Paris lat. 10308, Vatic. lat. 1573 and 3253, Oxford Bodl. Canon. Class. lat. 50, and Monte Cassino (sine numero) debris of Aen. III-XII

The Grammarians:

- Priscian (Vatic. lat. 3313, Rome Casanat. 1086, both saec IX)
- Servius (Paris lat. 7530, Vienna 27, Vatic. lat. 3317)

Others

- Orosius
- Justin, Epitome
- Hegesippus
- Victor Vitensis
- Bede
- Anastasius
- Gregory of Tours, *History of the Franks*
- Nidukind, *Res gestae Saxonicae*
- *Historia Saracenorum* (footnote: Becker, 133)
- *Historia Longobardorum* (Footnote: Becker 133.

**COENOBIO BOBIENSE—BOBBIO**

Libros Virgil numero quatuor

Lucan

Iuvenalis duo, & in uno ex his habetur Martialis & Persius

In uno volumine habemus Persium Flaccum & Iuvenalem

Libros Claudiani poetae quatuor & in uno ex his Sedulii quaedam pars in capite & alia opuscula

Libros Ovidi Nasonis duos.

Librum Lucretii I

Cicero

Plautus

---

81 Lowe, 190; Becker, 64-73; *Muratori Antiquit. Italicarum,* 3.817-24.
Libros Boetii III, de aritmetica
Hegesippus

SAEC VI
Glos. Super Virgil
Item de Ysidori libris: in uno ex his continentur epistolae diversorum & sinonima Ciceronis & gloss.
Plinii Secundi, naturalis historiae libros III.
Libros Valerii Probi III.
Libros Boetii III, de aritmetica, alterum de astronomia
Librum Marii Victoris, de rthorica
Libros Terentii II
Librum Honorati I
Libros PorphyrII & alterum de isagogis
Librum Prudentii I
Librum I Demosthenis
Libros IV categoriarum Aristotelis
Cato
Librum Iuvencii I
Librum Ausonii poetae I in quo habentur Plinii libri III
Libros Sedulli IV
Librum I de sententis philosophorum, in quo sunt libri Catonis & Theophrasti de nuptiis
Librum SosipatrI in quo continentur liber differentiarum Plinii
Librum Donati super Virgilum unum.
Libros glossarum super Virgilium IX
Libros Septimi SerenI duos, unum de ruralibus, alterum de historia Troiana, in quo & habetur historia Dareti
Librum Dareti de vastatione Troiae
Librum I de situ Indiae Alexandri ad Aristotilem magistrum.
De historia Alexandri Magni Macedonis librum unum
Librum I Ciceronis, in quo sunt topica & paritones
Contra Catilinam librum I
Generalium sententiarum librum I in quo Lucii Annaei Senecae
Valerii Flacci libr I
Phocae de grammatica librum unum
Librum Iosephti historiography unum
Librum Virgilii unum
Einhardi librum
De rethorica Karoli & Albini magistri unus
Libellus Einardi de psalmis, in quo habentur orationes, quae specialiter dicuntur, enchiridion Augustini
Librum Prisciani miniris, in quo Caper & Agroecius & Alechoi habentur
Librum Prudenii plenarium I
Librum Ciceronis, de senectute I
Expositio in somnio Scipionis & Boetii de musica
Item de libris Fulgentii
Unum librum Prisciani maioris de partibus orationis

AVELLINO
Livy (Third Decade)\textsuperscript{82}  SAEC V

ABBATIA S. EUTICII prope NURSIAM (12\textsuperscript{th} c.).\textsuperscript{83}

\textsuperscript{82} Lowe, 190.

\textsuperscript{83} Becker, 218-19.
Liber ystoria Alexandri
Aniphonarii sunt V. duo antiqui et duo novi et alius francigena
Hieronimus abbas conficere stuit

FRANCE

**COENOBIVM S. PETRI CARNOTENSE=CHARTRES (saec. XI).** 84

Ystoria tripartite
Priscianus
Iuvenalis
Josephus
Duo volumina Prisciani de XIIem (em put up) versibus
Franco et Saxo in tribus vol.
De partibus orationis tractatus Scottisca littera
Arithmetica et Boetius de consolatione et Properus et Avienus in uno vol.
Boetius alter de consolatione
Ysagoge Porphirii et Cassiodorus de institutione rerum humanarum in uno vol.
Boetius super categories Aristotelis
Rimigius super Donatum et super Catonem
Prognostica Iuliani Tolletani episcopi
Fortunatus
Ovidus
Vigiliius
Servius
Marcianus
Versus de Karolo Magno

**COENOBIVM S. MICHAELIS BAMBERGAE=MICHELSBERG (12th c.).** 85

Donati I
Eutici I.
Catonis II.
Aviani II.
Prosperi Ii
Sedulii I
Aratoris li Terentii III
Salustii II
Virgilii III
Servii comment. Super Virgil. III
Boetii IIII.
Oratii II
Statii III
Persii II
Iuvenalis II
Martiani III
Prisciani IIII.
Porphirii I
De his quae Virgilius de Graecis traxit liber I

---


85 Ibid, 192-94.
Pompeius Trogus I
Valerius Maximus I. Historiae Romanorum III.
Aurelius Symmachus de praefectura I
Iosephi historiography volum. IIII.
Tripartita historia
Gestorum charuli Imperatoris I
Regum Francorum I
De viat Caesarum Romanorum I
Epistolarii senecae lib. I
Senecae ad Novatum lib. I
Senecae epistolar. Moralium I

CORBIA—CORBIE. (saec XI) 86

Epithalamium Origenis in cantica canticorum
Lex Romana ab Alarico rege abbreviata
Libri veterum sedecim
Libri Novellarum sex Theodosii I, Valentinani I, Martiani I
Lex Burgunionum
Lex Gothorum
Iulius Frontinus de geometria. In eodem Siculus Flaccus de agris
Chigenus [Hyginus Mai] Augustus de limitibus statuendis
Euclides de figuris de geometricis
Historia Hegesippii
Codex pragmaticus Tiberii Augustii
Tripartita historia
Tertullianus: de resurrectione carnis, de trinitate, de spectaculis, de munere, deprescriptionibus ereticorum,
de ieiunii adversus physicis, de monogamia, de pudicitia
Homelie Origenis in genesim
Hieronymus de nominibus urbium vel locorum
Rathbertus Paschasius de corpore et sanguine Domini
Fugentius episcopus de remissione peccatorum
Optati Milibitani [milivetani Mai] episcopi libri septem ad Parmenianum scismaticum
Eusebius de fide adversus Sabellium

CORBIE (by c. 1200) 87

Cornelius Nepos, War with Troy
Aristotle, categorye (saec. X)
Vegetius, de re militaris
Alexandri regis historia
Alexandri regis liber
Alexandri regis det Dindimi liber de philosophia
Julius Caesar, historia (saec. XII) & historia belli Gallici 88
Livy (8th c.) 89

86 Becker, 139-40.
88 Noted in cod. I of de canone et regula glossae et verses diversi (Monastery Augiense or Riechenau [822]), and Reichenau had the full work.
Boetii commentum super chategorias Aristotelis
Cicer in rethorica
Cicero Tullius de officiis
Ciceronis liber
Ciceronis ad Herennium
Cicero Tusculanorum
Donatus minor
Donati et Beda de metrica arte et epigrammata Prosperi
Francorum gesta
Fulgentii fabularum libellus
Gai Cesaris historia
Isidorus de David et Goliat
Iuvenci liber et in eodem Sedulius
Iuvenci liber et similiter in eodem Sedulius
Martialis poeta
Pollio in duodecim libris Eneidorum
Priscianus de duodecim versibus Eneidorum
Persius in quo et Iuvenalis
Sacsonis et Franco his altercatio
Statii liber
Senecae liber
Sedulius
Sedulius et Prosper et Beda de metrica arte et Franco et Saxo et orthographia Bede
Sedulius et in eodem Arator
Terentii liber et in eodem diputatio Karoli et Albini
Terentius in quo et Statius
Themisii philosophi liber
Virgilii eglogae et in eodem libri octo Prisciani
Virgilii pars quaedem in Eneidis
Virgilii eglogue
Virgilii versus et in eodem eglogae et duo libri georgicorum
Virgilii quinque integri
Virgilii Maronis epytoma
Vigilius contra Nestorium
Victorius chronica
Victorinus in rhetorica
Victorini grammatica
Valerii Maximi codex.

CORBEIA=CORBIE (circa a. 1200): 90

Seneca de copia verborum. Collectiones Alexandri et Didymi regum
Seduli et Fortunati verus
Tertullianus de ignorantia
Ethimologie Ysidori
Codex Karoli Magni
Historia tripartite
Historia Egesippi
Historia Francorum
Historia Gothorum
Historia Anglorum
Historia de bello Troiano
Gesta Francorum Iherosolimis
Historia Treberensium. Pauli diaconi Romanorum historia

90 Becker, 280-85.
Iosephus antiquitatum et belli Iudaici
Historia Gaii Cesaris Belli Gallici
Philippicarum
Alexandri
Tiberius
Lex Romana
Glossarim Grecum et Latinum
Valerius Maximus gesta Britonum
Abdon et Sennes, vita Germani episcopi
Karoli Magni, Nicolai et Mauri
Via Karoli, Anscharii
Commentum Boetii super ysagogas Porfilii
Grammatica Euticii
Prima rethorica Tullii
Macrobius
Tullius liber. Secunda rethorica
Rhetorica Fortunati
Grammatica Pompei cum commento in donatum
Terentius cum Statio Thebaidos
Terentius
Plinius
Bucolica cum georgicis
Epistole Sidonii
Remigii super Donatum
Lucanus
Aeneid
Fulgentius super Eneidos
Virgilii
Flavius de re militari
Lucanus
Solinus de situ orbis terrarum
Persius
Juvenalis
Bucolica
Lucanus
Martialis
Statius
Eneidos
Ovidius fastorum
Salustius
Servius in Eneide
Pollion in Eneide
Cornutus in Persium
Titi Livii decada tertia
Epistoe Senece ad Lucilium
Seneca de controversies
Iunii Moderati rei rustice
Titi Lucretii de rerum natura
Seneca de beneficiis
Lucanus
Macrobius
Saturnaliorum
Liber Cornelli de bello Troiano
EVERARDUS COMES FOROIULIENSIS (FRIAUL) 9th c. 91

Librum de lege Francourm & Ripuariorum & Langobardorum & Alamanorum & Bavriorum
Librum rei militari
Gesta Francorum
Legem Langobardorum
Librum Alquini as Widonem Comitem

TULLUM LEUCORUM=TOUL (ante 1084). 92

Vuettini et Homero vol. I
Virgilius Ainardi vol. I
Item Virgilli uetra vol. II
Item unus quaternion in bucolicis Virgilii
Horatii vol. II
Statii vol. I
Ovidii vol. I
Lucanus vol. I
Anianus cum Esopo et Hincmaro et Vualtario vol. I
Quattuor quaternione Ovidii de amore
Item Vualtarius per se vol. I
Liber differentiarum Ciceronis cum epistolis Gunzonis et Hincmaro de fonte uitae cum Aviano et Prisciane
de nomine et verbo vol. I
Priscianus maior cum libris de constructione vol. I
Item Priscianum sine constructione vol. I
Item Priscianus non integer vol. I
Topic Ciceronis et topicae differentiae vol. I
Item Boetius sup. Topica Ciceronis cum libris de divisione et diffinitione et de topicis differentiis et de
categorici et ypoteticis sillogismis vol. I
Rethorica Ciceronis cum Fortunatiano et Alcunio vol. I
Victorinus sup. Rethoricam Ciceronis vol. I
Macrobius de somno Scipionis et de saturnalibus vol. I
Salustii vol. I
Dictis de excidio troiano cum Homero vol. I
Historia Iulii Cesaris vol. I
Liber Solini vol. I
Palladius de agricultura cum Vitruvio de architectur vol. I
Cicero de senectute cum Fulgentio mitologiar, vol. I
Cicero de amicitia vol. I

TOURS

Livy 93

FLEURY

Sallust’s, Histories 94

91 Becker, 29-30.
92 Becker, 152-54.
93 Lowe, 126.
94 Ibid, 126.
**ST. DENIS MONASTERY**

Schedae Vergilianae
Virgil, *Codex Romanus* 95

**LYON**

*Codex Theodosianus* 96

[France: Unknown centers by 8th c. 97

Pomponius Mela
Ovid, *Pontica*
First decade of Livy
Pliny, *Natural history*
Lucretius
Suetonius
Caesar
Catullus
Tibullus
Propertius

**ADSON, abbas Dervensis (Montier-en Der) 10th c.**

Hisagogae Porphirii
Cathegoriae Aristotelis
Rethorica Tullii
Servius super Virgilium
Sedulius I
Expositio super X egolgas Virgili et super georgica
Euticius I
Excerpta ex libris Pompeii Festi

**BERNARDUS saec. XI:** 98

Commentum cathegor.
Commentum in topica
Topicae differentiae et prior liber syllogismorum cathegoricorum et quaedam excerpta vel quaestiones de dialectica in uno volumine
Priscianus de constructione.

95 Ibid, 190.
96 Ibid, 126.
97 Ibid, 126.
98 Becker, 138; A. Wilmanns in Museo Rhen. 23, 408 e cod. Palat. 828. fol. 172 v; 173 r.
Regulae prisciani
Ovidius metamorphoseon
Ovidius tristium
ovidius in amatoria
Virgilius
Lucanus
Terentius
Duo Sallusti
Arator
Avianus
Donatus
Martianus de nuptiis philologiae
Orosius
Cassiodorus
Juvenalis et descriptio astrolabii in uno volumine

BIBLIOTHECA AQUISCINCTINA=ANCHIN (saec. XII) 99

Macrobius unus
Plato de cosmopio I
Martianus Capella de nuptiis philologiae I
Boetii de consolatione philosophiae III
Salustius I
Cassiodorus Senator de VII liberalib. Artibus I
Item Cassiodori de orthographia II
Eucherius I de formulis
Isagoge Porphyrri et periermeniae Aristotel. In uno libello.
Periermeniae Apulei cum Platone
Cathegoriae Aristotel. Per se
Item cathegoriae eadem et commentum Boetii super eas in uno vol.
Questions Karoli ad albinum de dialectica et rhetorica
Marci Tullii Ciceronis libri duo de rhethorica, in legibus Romanorum et eiusdem libri Vi ad Herennium
Topica M.T. Ciceronis et commentum Boetii libri VI super ea, de dialectica et rethorica in uno vol.
Donatus
Priscianus Virgilii et Pedesci duplex glosarius [lege versibus Virgilii says G. Becker]
Remigius in Donato minore et maiore cum glosario
Item Euticius cum dialogo Franci et Saxonis
Fulgent sine fittis et Daretis historia de excidio Troiae
Epitome XII Virgilii
Cato cum Avieno I
Aratore
Item cum Remigio in se et glosario
Unus cum fabul.
Avienus I cum Catone
Unus cum exceptionib. De metrica arte et dialogo Albini et Karoli
Sedulio
Aratore
Simphosio
Seulius I cum Iuvenco
Item Sedulius c um Iuvenco
Unus cum Prospero

99 Becker, 247-50.
Iuvenci duo cum Sedulio
Prudentius I cum Serio de litteris
Persii V
Iuvenalis unus
Item expositio Iuvenal per se
Statii uno
Oratius unus
Lucanii unus
Virgilii duo integri
Bucolica et georgica per se
Terentius unus

BIBLIOTHECA CLAREMONTANA (saec. XII.):100

Sunt in custodia Widonis archidiaconi Lingonensis isti libri quorum haec sunt nomina:
Orosuius ab urbe condita
Capitula Caroli M. sive Ludovici Augusti vel Clotarii Caesaris
Gesta Francorum
Virgilii Exmardus
Lex Reboariorum sive Alemanorum
Priscianus minor
Euticius

BIBLIOTHECA MONASTERII CUISUDAM ANGLICI (saec. XII.):101

Historia Anglorum
Iosephus antiquitatum
Cronica Prosperi
Historia Romanorum et Africanorum

BIBLIOTHECA POMPOSIANA=POMPUSE (11th c.):102

Eutropii & Pauli de historia Romana lib. XV.
Lupi Servati lib.
Historia magni Alexandri lib. XV.
Liber Plinii & Solini
Item lib. Plinii & solini & historia Alexandri

BIBLIOTHECA QUAEDAM REGNI FRANCOGALLICI (saec. IX.):103

Terentii andrio. Libri multi


101 Becker, 216; R. Pauli in N. Archiv der Gesellschaft für altere deutsche Geschichtskunde II (1876) 433.

102 Becker, 161.

Diui Iuuenalis saturarum lib. II explicit
Albi Tibulli lib. II.
Horatii Flacchi ars poetica explicit
Claudii In eutropium lib. III
Valeri martialis epigrammatum libri VIII
Ad lucanum et tullum
Incipit uictoris artis rhetoricae parties
Servius aquiline
In cateleena ciceronis libri. VII.
Incipit uerrem action M. tulli ciceronis
Incipit uerrem libri VIII
Incipit Sallustii crispi orationis ex catilena
Sententia catonis Insenatu
Sentenia ex iugurtha et historia V

BIBLIOTHECA FRANCOGALLICA. Saece. IX\textsuperscript{104} (This is separate from the one above)

Historia Iosephi

\textit{Coenobium S. Emmerammi Ratisbonense} (late 10\textsuperscript{th} to 11\textsuperscript{th} c.).\textsuperscript{105}

Cassiodorus de anima I
Glosa Greca
Secundur quatuor versus abrasi de rhetorica
Servii
Sedulii
Orthographia Ciceronis
Aratores
Psichomachiae
Prudentii
Prisciani minores
Donati
Priscianus de 12 versibus
Catones 4.-453. de natura bestiarum et volucrum
Aviani
Iuvenci 4-462,
Liber consentii 1.-463.
Liber Senecae de 4 virtutibus
Glosae super Virgilium
Aesopus I.
Gesta Karoli I
Liber Alquini de virtute
Epistolae Hattonis et Agionis ad Karolum Magnum
Lex Ribuariorum
Lex Bawariorum

\textsuperscript{104} Becker, 42; Petit-Radel. \textit{Recherches sur les bibliothèques} p. 95. 96 es codice Mazarinaeo n.
130, qui Sanct Maximi scholia ad S. Gregorium continet (cf. p. 102).

\textsuperscript{105} Becker, 127l; Ph. Jaffé in \textit{Monum. Germ. Hist.} XVII, 567-68. e codice Pommersfeldensi 2821
FONTANELLENSE COENOBIUM: 9th c.:\textsuperscript{106}

Gesta Francorum in codice uno

**MONASTERIUM S. VEDASTI ATREBATENSE=ARRAS (saec. XII)\textsuperscript{107}**

Libri philosophice artis et auctores beati Vedasti hi sunt:

Duo Virgili
Duo Lucani
Unus Oratius
Priscianus unus
Boetii III
Boetius in periermeniis Aristotelis
Commentum ysagogis Porfirii
Item commentum periermeniarum Aristotelis de Greco in Latinum translatum
Arator
Item alius Arator et Prosper in uno vol.
Liber rethoricorum Tulii Ciceronis, decem prediccamenta Aristotelis in uno vol.
Item decem predicamenta Arist. Et commentum Boecii super ea.
Topica Tullii Ciceronis libri III
Liber Euricii, liber Probi per versus, versus Hubaldi ad Carolum umperatorem, Macrobius de
somnio Scipiones, Sedulius et Iuvenecus in uno vol.
Terentius
Ciclius Dioisii
Glosarius et maior Donatus
Soomnium Scipionis
Gesta Francorum
Prosper fugentius
Egesippus

**MONASTERIUM S. BERTINI=ST. BERTIN (saec. XII)\textsuperscript{108}**

Boetii liber in topica Ciceronis
Donatii libri grammatici II
Fortunati liber metrice
Fabula et excidium Troiae
Gesta Salvatoris
Gesta Francorum
Gesta Longobardorum
Gesta Anglorum
Glossae in editione secunda Donati
Iosephi historia
Iuvenalis libri satyrarum III
Iuvenci libri III
Libri Frontini de geometria
Ovidii libri III
Rethorice Tullii liber I

\textsuperscript{106} Becker, 15-16.

\textsuperscript{107} Becker, 254-56; A. d’Héricourt in *Bibliophile Belge* VI (1850).

\textsuperscript{108} Becker, 182-4.
Salustii liber
Servii liber super bucolicas [sic] et georg.
Servii lib. Super Virgilium
Vita Karoli

MONASTERIUM FOSSATENSE (circa a. 1200)\textsuperscript{109}

Gesta Francorum
Sedulius et Arator et Prosper simul.
Donatus minor et Cato simul.
Item Donatus minor in duobus locis
Boetius de consolatione
Sedulius cum isagogis Porphirii
Donatus maior
Expositio Remigii super Donatum
Sedulius cim Iuveneco
Iuvenalis
Terencius
Item Arator
Publius Ovidius Naso.
Priscianellus
Sinonima Ciceronis et Fulgencius episcopus simul ad Calcidium
Item Priscianus minor cum duodecim versibus Virgilii et Beda et Catone
Item libelli ex libris Valerii Maximi
Virgilius valde bonus
Liber Seduli

MONASTERIUM S. PETRI RESBACENSE=REBAIS (saec. XII)\textsuperscript{110}

Unus textus Scotticus
Unus Properi
Duo Prisciani maioris et duo minoris artis
Duo Donati
Duo Horatii
Duo Sedullii
Unus gestae Anglorum
Alter gestae Francorum
Unus M.T. ciceronis de senectute et amicitia, qui et vocatur Cato maior
Unus Properi
Unus Aratoris
Unus gestorum Alexandri
Unus Terentii
Remigii super Donatum minorem
Boethii de consultatione philosophiae
Duo texta Scotica
Duo libri Prosperi, prosaicus et metricus
Unus epithomatum Iustini super Trogum Pompeium
Duo Prisciani de maiori arte
Duo libri Donati
Expositio Remigii super Donatum minorem

\textsuperscript{109} Becker, 276; E. cod Vossiano 70 fol. 83 excerpsit Lucianus Müller 1.1.

\textsuperscript{110} Becker, 273-6; A. Mai. Spicileg. Rom. Tom V (Romae 1841) 201.2; E. codice Vossiano 70 fol. 82. excerpsit Lucianus Müller in Jahrb. F. Philologie 97, 66.67.
Unus Virgillii
Catonis
Unus Porphyrii
Unus Prudentii
Unus Terenii
Unus Aristotelis
Unus Persius
Unus categoriarum
Unus rhetoricae
Unus M.T. Ciceronis de senectute vel de amicitia
Unus Prosper de epigrammatibus
Unus Ysidori iunioris Ispalensis de disciplina et arte grammatic
Unus glosarius
Fabularum unus

**RICHARDUS PICTAVIENSIS (saec. XII)**

Iosephi
Egesippi
Eutropii
Titi Livii
Suetonii
Aimoini
Iustini ad brevioris seu excerptoris Pompeii Trogii,
Gilde Britonum hystoriographi
Langobardorum hystoriographi

**LUXEUIL**

Livy (First Decade)

**NONANTOLA (saec V)**

Pliny, *Natural History*

**MEAUX (saec. V/VI)**

The Younger Pliny, *Epist.*

**ECCLESIA CENTULENSIS SIVE S. RICHARII= (ST RIQUIER) 9th c.**

---


112 Lowe, 190.

113 Ibid, 190.

114 Ibid, 190. A copy is still extant, preserved in the Morgan Manuscript, which according to Lowe was written c. 500 AD in Italy. It crossed the Alps probably by the 9th c., or even before. But it is certain that by the 15th c. it had “found asylum in France” from where it later returned to Italy and then to New York. See Lowe, 126.
De libris grammaticorum

Donatus
Pompeius, de pedibus et syllabis
Priscianus
Commilianus
Servius
Marius Victorinus
Diomedes
Velius Longus
Alcuinus
Tullius Cicero, rhetoricum libri II omnia in IV vo.
Prosper
Arator
Sedulius
Juvenal
Epigrammata Prosperi
Versus Probae et medietas Fortunati I. vol.
Fabulae Avieni
Virgilius

De libris antiquorum qui de gestis regum vel situ terrarum scripserunt:

Iosephus plenarius
Plinius Secundus, de moribus et vita imperatorum
Pompeii, Epitoma
Aethicus de mundi descriptione
Historia Homeri, ubi dicit Baluzius et Dares Phrygius
Historia Socratis Sozomeni et Theodoriti.
Libri phionis Iudaei I vol.
De summa temporum et de origine actibusque Romanorum I vol.
Lex Romana
Pactum Salicae legis, qui sunt libri numero XV.

ECCLESIA ENGOLISMENSIS=Angoumois (after 1135)

Origenis
Hieronymi
Bruni
Boethii
Sidonii
Historiam Iulii Caesaris
Scripta Tulli

---

116 Becker, 28.
117 Becker, 197-8; Historia pontificum et comitum Engolismensium in Labbei Novae bibliothecae tom. II (Paris 1657), 261.
ELNO=SAIN T-AMAND (saec. XII)\textsuperscript{118}

Topica Ciceronis cum comment. Boetii
Item isagogae Porphyrii et cathegoriae Aristotelis cum periermniis Apulei cum commentario Boetii in periermenias Aristotelis (duo exemplaria)
Tullius Cicero de amicitia
Tullius Cicero de senectute
Tullius Cicero de paradoxis
Virgili du
Servius super eundem
Lucan
Salustius
Oratius
Terentius cum Omero de excidio Troiae
Juvenalis. Glossae super eundem
Donati ed. 2 de paribus orationis
Institutio Prisciani cum expositione Remigii super barbarismum
Dialogus Saxoni et Franconis super Donatum
Priscianus de duodecim primis veribus Aeneidorum. De figuris numerorum. De metris Terentii
Macrobius de somnio Scipionis
Ciceronis tres vol.
Persii I vol.
Boetii de consolatione
Martianus Capella
Alexandri magni historia
Apollonii gesta
Hegesippus
Orosius
Eutropi historia de gestis Romanorum
Platonis Timeus
Marius Plotius de metris cum proverbiis Senecae et cum ludo ipsius de morte Neronis
Prisciani duo maiiores
Euticii ars
Iosephi historia

HAMERSLEVEN (saec. XI)\textsuperscript{119}

Priscianus maior. Glossae eiusdem.
Aeneida in praesentie volumine
Scalprum Priscian
Liber rhetoricon rum primus, qui sic incipit: Quam Graeci vocant rhetoricam etc.
Glossae super librum divisionum rhetoricarum Ciceronis Saepe et multum duos libros
Platonem, qui sic inc,: Socrates in exhortationibus suis
Horsium
Categoriae Aristotelis in tribus (duobus) voluminis
Glossas super easdem in uno librorum
Sallustium cum glossis

\textsuperscript{118} Becker, 231-32; Léon. Maitre, les écoles épiscopales et monastiques de l’Occident (Paris 1866) e codice bibliothecae Parisiensis nationalis f. latin 1850.

Librum, qui sic inc.: Omnes homines, qui ses student. In eaodem Sallustium
Glossae Giselberti in librum Porphyrii, qui sic inc.: Ingredientibus logicam
Librum, qui sic inc.: Plenitudinem et plenitatem, hoc est.
inc. Poeta, quae pars
Summa dictaminum, que sic incipit: Urbanus epc. Hos libros metrice
Ovidium de Ponto in duobus volum.
Glossas super eundem
Ovidium epistroarum
Glossas eiusdem
Ovidium epitolarum
Glossas eiusdem
Ovidium de remediis, duos libros
Libros Aratoris
Boethium de consolatione in 3 vol.
Glossas duplices super eodem
Duos vel tres Prosperos.
Quator Sedulios
Tres vel quatuor Prudentios sichom achrne
Tres Homeros
Avinium
Aesopum
Prudentium historiarum
Prudentius contra Marcionitas
Duos Statios Achilleidos cum glossis
Ovidum de Licia
Tullium Philippicarum
Tullium de officiis
Tullium de senectute
Isagogae Porphyrii in categories Aristotelis dupliciter
Servius de festis
Introduciones dialecticae
Serviolum rhetoricae flores, dupliciter

**Rotomagus=Rouen (12th c.)**

Omerus
Ovidius metamorphoseon
Virgilii
Iuvenalis
Oratius
Topica Tullii
Sedulius et Iuvenalis in uno volumine
Arator
Liber de duodecim versibus Virgilius
Donatus
Ovidius de amatoria arte, sine titulo et de remedio amoris liber
Iuvenalis
Liber Virgilii Eneidos
Boecius
Terentius

120 Ibid, 196-7; 225.
Stacius
Bucolica
Tres Ovidii
Αρχιμήνης κοσμήτων
1. Τάξις μεταξὺ διδακτοῦ Απρίλιαν Μεροδασκύλου, Παν. α' 1856. 1856-1
2. Βασιλείας Παπαδιόπουλου Απαξιακοῦ Επιστημονικοῦ Εμπορικοῦ Αναπλήρωσε του οπτικού. 1856-1
3. Προφανία ταχύτητας 400 χλμ. 16. 1856-1
4. Επίκαιρη τεχνολογία. 1856-1
5. Συνέχεια τεχνολογία. 1856-1
6. Επίκαιρη τεχνολογία. 1856-1
7. Προφανία ταχύτητας 400 χλμ. 16. 1856-1
8. Συνέχεια τεχνολογία. 1856-1
9. Επίκαιρη τεχνολογία. 1856-1
10. Προφανία ταχύτητας 400 χλμ. 16. 1856-1
11. Συνέχεια τεχνολογία. 1856-1
12. Επίκαιρη τεχνολογία. 1856-1
13. Προφανία ταχύτητας 400 χλμ. 16. 1856-1
14. Συνέχεια τεχνολογία. 1856-1
15. Επίκαιρη τεχνολογία. 1856-1
16. Προφανία ταχύτητας 400 χλμ. 16. 1856-1
17. Συνέχεια τεχνολογία. 1856-1
18. Επίκαιρη τεχνολογία. 1856-1
19. Προφανία ταχύτητας 400 χλμ. 16. 1856-1
20. Συνέχεια τεχνολογία. 1856-1
21. Επίκαιρη τεχνολογία. 1856-1
22. Προφανία ταχύτητας 400 χλμ. 16. 1856-1
23. Συνέχεια τεχνολογία. 1856-1
24. Επίκαιρη τεχνολογία. 1856-1
25. Προφανία ταχύτητας 400 χλμ. 16. 1856-1
26. Συνέχεια τεχνολογία. 1856-1
27. Επίκαιρη τεχνολογία. 1856-1
28. Προφανία ταχύτητας 400 χλμ. 16. 1856-1
29. Συνέχεια τεχνολογία. 1856-1
30. Επίκαιρη τεχνολογία. 1856-1
Sagaming puellis de re militari nundem traduci
Afrodisiace liber vos de aere instruenda
Arrivat de aere instruenda libri tres
Vulgaris lib. quin. De machinis antiquis liber unus
Apuleius lib. sex.
Leonis imperatoris epistola tri militari
Ptolemaei libri libri eos
Athenaei libri duo de obsidione urbium
Pythii epistolarum quae de rerum eius, qui est imperator exercitum de
Problematum de re militari lib. sex.
Constantinopolis sua exhoratione ad deprimendam lib. sex
Conservavit tibi. de manu tui et, ut enaqueque surgas, in quas
Persistenda

Pebem ad imperatoris Antonini stratagemata levi duo octo
Clanculi stratagemata libri tres, quibus omnium audentur in causa
sine lege sanguinis. etiamque ejusdem generis qui accedit
sum in tempore histam, quod capere tressa minime, ut in omne
num non scripsit sine.
INDEX epistae tri militarium Luci Iunio

Proelium in qua aperire, qualem esse optimetarum. Durem
praeterea landare opes et maxime optimi Durei exercre
Non est nee fors non propriam manum Durem exercre bellare

dam iter. cap. 3

Cum tamen maxime opes et Durex exercitus praeterea
Non agere multitudinem conilita aliquibus momentis eis
Non debeo Durex exercitus magniorem numerum, & quemadmod
im praelium coniurare, si neque iuris nullum, quam
occurre commodum. cap. 6

Non opereti militem impetibus in eum offer. cap. 7

Non sustineo bello exercitum non opereti plurimi iterum
eretus. cap. 8

Non opereti Durem exercitus suas munitiones demul
eatur et velatos. Cum tamen manifesta appareat se
lium committere, tum eis idem beneficium et
sin obsessione non opereti statum regionis utatur, & e
est facere, etc. cap. 10

Cum urbe sita delectibus humanis argumenta et e
guemadmod quam si prorsus immodicem solemne &
cuendam praetere, officis armarii operari, & quemadmod
in
habet, sine human necinde non sit unusque munitio
vendam praelium, & quemadmodi potest debere minimo
gens & quemadmodum non operari. cap. adnisti
exercitum, non modo in instrumentis fortis, sed ne
quemadmodus etiue in recto militare semper dictere oper
in Durex exercitus simulae aut ignarum errata, e
ille, & quemadmodum ipsum major operatur, cap. 14
quemadmodum tempus munitionum maximo caenam
quam admodum errata a multi tempus eis, qui per perpet
Durex opereti ante proelium Durex exercitus sine exercitu
et
quemadmodum in alius regionis Durex exercitus sereni,

gent, quemadmodum opereti obsolete regionem exten
..... sola oceania praelium committere. cap. 17.
Non spectat praehipere malore; tunc autem aequo. cap. 18.
De casus, si quis edem sequatur, & quem modo pugna construeat, sic. cap. 19.
Quid si sequatur una in se, quid si ex hostis infra. cap. 20.
De inmodio quae admodum loca difficiliora transit, ut exercitii cum praebant. cap. 21.
De insinde solito facienda. cap. 22.
De exploratoribus cap. 23.
De legitas. cap. 24.
De rebus & praeliis, & quomodo semper eam servare opiteret. cap. 25.
De genere militum. cap. 26.
De differentia gentium in actio instruenda. cap. 27.
De armatia pedes, secundam Macedonos, Philippum, Alexandrum, & reliquos Graecos. cap. 28.
De armatia equitum Macedonum. cap. 29.
Quamodo pedes in actio instruunt apud Macedones. cap. 30.
Quamodo apud equestres equitum instruunt in actio cap. 31.
De exercitio conscriptus, et pedibus & equitibus instruendo ad actum. cap. 32.
Quamodo apud Romanos exercitos Dares, & in quibus praetit nomi nanteur cap. 33.
Quam modo esse miles cap. 34.
Quamodo armamenta sit miles cap. 35.
Armamenta pedium secundum Romanos. cap. 36.
Armamenta equitum Romanorum. cap. 37.
Differentia conscriptorum, & praecipuum, & quomodo excolentes & prae de fini facienda. cap. 38.
Quemam sit minima metas exercitum. cap. 39.
Quemam sit forma phalanx. cap. 40.
Quem ad dextra magnitudine, pugna militum infra dirus, prae ter quaeam longitudo sparsus, & de facto uterum. cap. 41.
Et dux facienda sit utraque pugna committere. cap. 42.
Causu Romani aciem instructum pedibus, & de singulis ordinibus cap. 41.
Causu idem equestres instructum in aere cap. 44.
Causu instructum in aemis exercitibus nisibus ex strigis, pilaeque pedibus & equitibus apud eosdem cap. 45.
De fugam meditata cap. 46.
De insurce faciendo exercitu conscribendi ex pedibus & equitibus in planis, & transita difficillimis locis, & quomodo posse quidem fit aequissimum eadem locorum, quae sit exercitus transierat cap. 47.
Exid exercitus Duxque furet opertus post victoriam auctarum, & quomodo fulta dimidienda fuisset, & mortis ipsius, & capitum nullius oricionis de maxime milites cap. 48.
In hostiis difficilius caede opertus fuit, & insidunt locis opinantis powere ob regnum severitatem, quam sita in fugienda verocidad olim statua cap. 49.
Quand Deus exercitus furet debem, cum hostes in omnem quam progressus regionem cap. 51.
Quand Deus exercitus obsisse faceretur sit cap. 51.
Quand Deus exercitus obsiderat hostes, scis cap. 51.
Quomodo celeberrimus exercitus sitque in omnibus hostium cap. 52.
Quomodo maxima sepera passis in omnibus hostium aequo exercite exerci, & quomodo multum apertus est usum armis dedimus cap. 53.
Quomodo non facile incidere est in maribus & isola & laboribus militibus cap. 54.
Quomodo & usornis milites non deducto cap. 55.
Quomodo proximas eiumque in maribus postulantiam milites ab hostibus deductum cap. 56.
Quomodo per nium ab hostibus milites potiusm, & nisi liuer quod modo per aquam cap. 58.
Quomodo inimique facere bidentes in diebus tres dies dormit, & quomodo rainum exstinctur cap. 59.
Quomodo arboris desinentur cap. 60.
Quomodo ad agricolatram agni viabiles sunt cap. 61.
Quomodo ad fugam facile etus seawtuntur cap. 62.
Candum omi sit potum interficiuntur, an omnem - cap. 61.
Candum eosque recusae cedam, & versus exciditior - cap. 62.
Candum eosque curantes sibi haetur - cap. 63.
Candum eosque ne iniurias - cap. 64.
Candum horum extingit ignem, & quemadmodum incendium lignis
ane parietibus, ete ne attingas - cap. 65.
Candum sanguis multus effluent ex plagis sibi haetur - cap. 66.
Candum curas univeras, sine curau, obducat & ostendat cap. 67.
Veque & nulius ne incidant in potentia - cap. 70.
Vt omnibus formae horum sive igne - cap. 71.
Vosst [sicularum legium] - cap. 72.

[Adhortationes satrapagmaticae ex gestis & satrapagmaticis antiquis
rum nimirum Romanorum, Graecorum & reliquorum.
Candum occulte mutantes lectus - cap. 73.
Fisciendi hostes per falsis transfiguris, ob quam nonum ab hostibus
transfiguris spatius - cap. 73.
Candum in maxime necessitatem iux exserciti primum debebat
viva - cap. 74.
Os frutes omnes exserciti laboris patientem & fortunam - cap. 74.
Vt beneficia sua damnum ub hostibus saepe saepe - cap. 76.
Non egressi tempus confiniam maxime tertius quod mutuus est omni
exercitu, & quomodo cognoscentur - cap. 77.
Os rational probantur amici - cap. 78
De expulso vestrum nostria & negotiis - cap. 79.
Candum tenebre spem, & non forem foelium gerendâ - cap. 80.
Quomodo intelligat sit hostium iussis in suspitatem additare hostium cap. 81.
Quomodo praeclare diuis anser exsercitus ad fortitudinem & audaciam
excellere - cap. 82.
Quomodo quin exiguum habem exsercium, multum habere videtis - cap. 83.
Quomodo versus magni exserciti habentes, exigium habet nisi habeat cap. 84.
Quomodo ex igne & unius adhaconum exsercitis contra hostes - cap. 85.
quamdo nostre quis fuerit exercitii efficit, ut nihilo, & se quis hostes
    propter inanitas insinues facile unamque poterent. cap. 106.
Oportet occurrere in secretis sine calamitatibus. cap. 107.
Quamum equester & pedes facile de bellabuntur. cap. 108.
Oportet ducem factus universa consensuari invicemque consulere.

Xam. cap. 110.
De predictis cap. 111.

Quelle hostes ad sum conscriptos occidendi, minus cum imminendi
praecipuis sequentibus, maxime in angustii & transitu difficillimus
locis. cap. 112.

Quamdo quis cun pericula difedere possit. 113.

Dictis locis enim de transientibus capita & in ea
virus facturum cap. 114.

Quamdo quis sedent ad praedam sine pericula cerari possit hostibus
immedietibus in locis difficillibus. cap. 115.

Cum manifestum est periculum nisi bellatrix, cum operes etc.
bellare. cap. 116.

Tabula legum militaris de paenit & Roffi & vagis fluminis.

Ne militares sinus.

Ne militares sunt in aemphyse cap. 12.

De militibus animo tamen contra suis principes facientibus. cap. 1.
De militibus isjus suis suis non observantibus cap. 6.
De militibus ignotibus cap. 7.
De militibus tempore bellae difficilis propter romanorum cap. 8.
De militibus ad hostes transfugos indigentibus. cap. 9.
De milites castrum ante urbem præcipuam: cap. 10.

De milites praedarem peram, altum, aus alio quippe inveniendas et quid tenententibus: cap. 11.

De milites tempore pagus fugitibus aut ex uallo circumjacentibus cap. 12.

De milites in praelio seca euad fugientibus cap. 13.

De eorum ab hosribus captis: cap. 14.

De uigus atque partis religiosa exercitus consistente: cap. 15.

De milites suarum praefertutibus tempore fugit: cap. 16.

De milites remittentis in bello succurrentibus: cap. 17.

De milites fugientibus : exercitus secessus in uero pagis: cap. 18.

De milites nemine capientibus et uincantibus: cap. 19.

De milites peritum uti sunt aut ex uallo secessantibus: cap. 20.

De milites sequentes in Regem: cap. 21.

De milites qui ad hostes fugientes: cap. 22.

De milites ordine non sequentes, vel turbes fugientes in uerum et imperium: cap. 23.

De milites qui praefugerint et deinde redeemerint: cap. 24.

De milites suarum armis: cap. 25.

De milites qui depromptibus sequeantur in aliquem locum, et qui fugerent, piam constituunt: cap. 26.

De milites ab adherentibus aut alio crimen condemnatis: cap. 27.

De fugientibus militem: cap. 28.

De milites heli tempore sui uirium subduentes, aut inuasum reddent

De milites manum injiciendis in suum secessum: cap. 29.

De milites secum committentem uulnerati: cap. 30.

De milites sejus Vulnerantes, aut aliquos medio metu sui infidius

De milites suarum partes: cap. 31.

De milites qui carereiim uigentem aut fugerint: cap. 32.

De milites qui propter Christum ordinem non sequantur: cap. 33.

De milites sui suum ordinem fugere: esequi: dimiserit: cap. 34.
De militibus quodam in Italicisbus, & ob sequiorem igīs perdendībus cap. 37.
De militis in deforis fuerint cum suis manibus: cap. 38.
De exercitis et igitur quibus est rēmiseri vel exercitis, vel locis castris
et in argentea vendendībūs cap. cap. 39.
De militibus suis qui in bello velquentibus: cap. 40.
De militis in lagūm regem nonesse & arma suadente: cap. 41.
De militibus haerexit ad bellum irritante: cap. 42.
De Exploratoribus significatis seu cornucopias: cap. 43.
De dominionis splendoris, & de captivis, & de igitur qui gladii a igni usus
muriānt, aut occiderint: cap. 44.

A selectiī de re militari lib. 22.
De apparatu bellī liber unus
Liber secundus qualis operis esse ducit exercitum.
Liber tertius: de divisione exercitum & nominibus praefatvo.
Liber quarto: quinam consiliandī suis
Liber quinto: de armis
Liber sexto: de armis armi, & pedibus.
Liber septimo: de senatorum equitibus & pedibus.
De passu militariibus: liber 8.
Liber nono: de exercitus et exercitu lib. 9.
De impedimentis: liber 10.
De Castrorum metātione liber 11.
De preparato bellī liber 12.
Quid fieri should die 135: de program.: lib. 13.
De igitur quae facienda sunt post program.: lib. 15.
De exercitatio novarii gentium: lib. 16.
De renuntiis & consulis bellāris lib. 17.
De regeneratim impetūs: lib. 18.
De obsidione urbium: lib. 19.
De regibus navalis: lib. 20.
Τὰς ἐπιστολὰς τοῦ Παύλου εἰς Χριστόν Οὐραίον μὲν μεταδόθησιν ὑπὸ Χριστοῦ ὁ Παῦλος τοῦ Ἰατροῦ τοῦ Ἰουδαίων. Ἡ ἐπιστολὴ τῆς Χριστοῦ ἑπτά μέλη μεταδόθησιν ἐν διάφοροις ἐπισκόποις εἰς τὸν Ἱουδαίαν ἐως τὸν Κυριακὸν ἡμέραν. Ἡ Χριστοῦ ἑπτά μέλη μεταδόθησιν ἐν διάφοροις ἐπισκόποις εἰς τὸν Ἱουδαίαν ἡμέραν.
καὶ πρύμνητα ἰπποῦ, ὡς ἰπποῦ πᾶσιν ἀσφαλίζεται. ἰπποῦ
μέχρι χαίρετο, ἐὰν ἔτη καὶ β., οὐ ἤρθεν οὔτε ὥσπερ, ὡς οὐ ἔτη
 phílate ἐχαίρει Χ. τοῦ μετώπου προσεύχεται, ἐὰν ἔτη ὥσπερ ἦν
μέχρι ὥσπερ ἐχαίρει, ὡς οὐ ἔτη καταπέλτη τῷ ἔτους προσεύχεται ἐὰν
μέχρι χαίρετο, ἐὰν ἔτη καταπέλτη τῷ ἔτους προσεύχεται, ἐὰν ἔτη
πρύμνηται ἰπποῦ, ὡς ἰπποῦ πᾶσιν ἀσφαλίζεται. ἰπποῦ
μέχρι χαίρετο, ἐὰν ἔτη καταπέλτη τῷ ἔτους προσεύχεται, ἐὰν ἔτη
πρύμνηται ἰπποῦ, ὡς ἰπποῦ πᾶσιν ἀσφαλίζεται.
APPENDIX C

ASKLEPIODOTUS, TACTICS
I. “The different branches of the Army”

Whereas the complete equipment for warfare is of two kinds, namely land and naval forces, we are now to speak of the land force. This, then, consists on the one hand of the fighting men, and on the other of those who serve their needs, as, for example, surgeons, baggage-carriers, and the like. Of the fighting men, some are infantry, the others mounted, for some fight on foot, the others on their mounts.

The infantry is divided into the corps of hoplites, the corps of targeteers, and the corps of so-called light infantry (psiloi). Now the corps of hoplites, since it fights at close quarters, uses very heavy equipment—for the men are protected by shields of the largest size, cuirasses, and greaves—and long spears of the type which will here be called ‘Macedonian.’ The corps of the light infantry on the contrary uses the lightest equipment because it shoots from a distance, and is provided with neither greaves nor cuirasses, but with javelins and slings, and in general with those missiles which we call ‘long-distance missiles.’ The corps of the targeteers stands in a sense between these two, for the target (pelte) is a kind of small, light shield, and their spears are much shorter than those of the hoplites…. These then are all the different military forces, each one of which is called a phalanx and includes divisions of a suitable size and officers sufficient in number to put orders into effect easily, both in daily exercises and in service upon the march, in camp, in battle formation, and in actual fighting.

II. “The Subdivisions of the Phalanx of Hoplites, their names and their Strength”

It is necessary, first of all, to divide the phalanx, that is, to break it into files. Now a file is a number of men dividing the phalanx into symmetrical units, and by ‘symmetrical’ I mean those which do not interfere with the fighting efficiency of the phalanx. Accordingly some have formed the file of eight men, others of ten, others of twelve, and yet others of sixteen men, so that the phalanx will be symmetrical both for doubling the depth of its units, in circumstances to be described later, so that it may consist of thirty-two men, and also for reducing it by one-half, i.e. to eight men, for thus it will not interfere with the light infantry who fight in the rear, since, as they use javelins, slings, or also bows, they will be able to shoot their missiles over a phalanx of this depth.

Now the file was formerly called a row, a synomoty, and decury, and the best man and the leader of the row was called the file-leader (lochagos) while the last man was called the file-closer (ouragos). But when later on the row was reorganized its parts received different names; for the half is now called the half-file (hemilochion), or the double quarter (dimoiria), the former term being used for a file of sixteen men, the latter for one of twelve, and the leader is now called the half-file-leader (hemilochites) and the

---

121 See Aeneas Tacticus, Tactius; Asclepiodotus; Onsander; Sextus Julius Africanus; William Abbott Oldfather, Aeneas Tacticus, Asclepiodotus, Onsander (London: W. Heinemann, 1943) editor’s note in Introduction, 233, 243: “The materials for a reconstruction of Macedonian tactics are...preserved here....A notable feature of the great Florentine MS is its series of diagrams which go back to Asclepiodotus himself, as is clear from the way in which mention is made of them in the body of the text.”
double-quarter-leader (dimoirites), and the quarter is called an enmoty and its leader an enomotarch.

The leading man has been given the name of the front-rank-man (protostates), while the one who follows him is called the rear-rank-man (epistates), so that in the whole file there comes first a front-rank-man, then a rear-rank-man, then successively a front-rank-man and a rear-rank-man, and so on, one after another until one reaches the file-closer, according to the following diagram:

Front-rank-man ( = file-leader)  comrades-in-rank
Rear-rank-man  comrades-in-rank
Front-rank-man  comrades-in-rank
Rear-rank-man  comrades-in-rank
Front-rank-man  comrades-in-rank
Rear-rank-man ( = file-closer)  comrades-in-rank

Now when one file is placed beside another, so that file-leader stands beside file-leader, file-closer beside file-closer, and the men in between beside their comrades-in-rank, such an arrangement will be a formation by file (sylochismos), and the men of the files forming the same rank, front-rank-men, and rear-rank-men, will be called comrades-in-rank because they stand sided by side.

The assembly (sylochismos) of all the files constitutes a phalanx, in which the ranks of the file-leaders is called the front (metopon), the length (mekos), the face (prosopon), the mouth (stoma), the marshalling (parataxis), the head of the files (protolochia), and the first line (proton zygon); and the rank behind this consisting of rear-rank-men running the length of the phalanx, is the second line, and the rank parallel and behind this is the third line, and the line behind this is the fourth, and similarly the fifth and the sixth and so on down to the file-closer; but taken all together everything behind the front of the phalanx is called its depth, and the file, from file-leader to file-closer, is the file in depth.

File

```
O O O O O O O O O O O O O rank
O O O O O O O O O O O O O rank
O O O O O O O O O O O O O rank
O O O O O O O O O O O O O last r
```

375
And those who stand behind one another in this formation are said to form a file (stoichein), but those who stand side by side are said to form a rank (zygein). When the phalanx is bisected by a line running from front to rear, one half is called the right wing and the other the left wing, while the point of division is called the navel and the joint.

How great the strength of the phalanx ought to be is not easy to determine, for the strength must be determined in proportion to the number which every commander is able to equip; only the strength must in every instance be suitable to the changes in form of the detachments, I mean the decrease and increase of their depth. Accordingly you should rather select numbers which are evenly divisible by two down to unity, and you will find that most tacticians have made the phalanx to consist of 16,384 hoplites, because this number is divisible by two down to unity, and half that number (i.e. 8192) for the phalanx of the light infantry. So let us also assume that the phalanx will consist of this number of men, and the file of sixteen men.

Now two files will form a double-file (dilochia) and the officer in command will be a double-file-leader (dilochites), and twice this number will be a platoon (tetarchia), and the officer in command a platoon-commander (tetarchs), and twice this latter number will be a company (taxis), and the officer in command a company-commander (taxiarchos), as he used to be called, but nowadays also a captain-of-a-hundred (hekatontarchs), and twice the number of a company will be a battalion (syntagma), and the officer in command a battalion-commander (syntagmatarches). [The file has thus 16, the double-file 32, the half-company 64, the company 128, and the battalion 256.]

The supernumeraries were formerly attached to the company, as their name (ektaktai) [That is, ‘a body of men outside the company’ (taxis).] indicates, because they were not included in the number of the company: an army-herald, a signalman, a bugler, an aide, and a file-closer. The first was to pass on the command by a spoken order, the second by a signal, in case the order could not be heard because of the uproar, the third by the bugle, whenever the signal could not be seen for the dust; the aide was there to fetch whatever was needed, while the supernumerary file-closer was to bring up the straggler to his position in the company. For when the file consisted of eight men, eight files constituted the square, which, alone of all the detachments, by reason of the equal length of the sides of the formation could hear equally well the commands from every quarter and so was properly called a company [or command]; when however, the file was later doubled, the battalion (syntaxiarchia) constituted the square, and, as a consequence, included the supernumeraries. [The battalion is the real unit of the phalanx, a perfect square of 16 ranks and 16 files. As a square it became the tactical unit for all the quarter-turns, etc., of the phalanx, pivoting on the men at the four corners, and so is the smallest unit to have its own officers outside the ranks. It was known under several names, in Asclepiodotus as syntagma and syntaxiarchia (ι. 9), in the Anonymus Byzantinus as tagma.]

Two battalions are called a regiment (pentakosiarchia), and its commander a colonel (pentakosiarches), and two regiments a brigade (chiliarchia), and its commander a brigadier-general (chiliarches), and two brigades were formerly called a wing and a complement (telos), and its leader a complement-commander (telarches), but later it was called a division (merarchia), and its leader a division-commander (merarches); two divisions, consequently, are even yet called a corps (phlangarchia), as well as a half-wing (apotome keratos), and its commander, formerly a general, is now a corps-commander
(phalangarches); when the corps or half-wing is doubled it is a double-corps (diphalangia) and wing (keras), and its commander a wing-commander (kerarches); and finally, the union of the two wings is called the army (phalanx), under the command of the general, comprising 2 wings, 4 corps or half-wings, 8 divisions, 16 brigades, 32 regiments, 64 battalions, 128 companies, 256 platoons, 512 double-files, and 1024 files:

<table>
<thead>
<tr>
<th>2 wings</th>
<th>64 battalions</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 half-wings</td>
<td>128 companies</td>
</tr>
<tr>
<td>8 divisions</td>
<td>256 platoons</td>
</tr>
<tr>
<td>16 brigades</td>
<td>512 double-files</td>
</tr>
<tr>
<td>32 regiments</td>
<td>1024 files</td>
</tr>
</tbody>
</table>

III. “The Disposition of the Men both in the entire Army and in its Subdivisions”

The entire army as well as its units is disposed on the basis of a fourfold division, so that of the four half-wings the bravest holds the right of the right wing, the second and third in point of valor the left and right, respectively, of the left wing, and the fourth the left of the right wing. For with the units ordered in this manner the right wing will have the same strength as the left, since as the geometricians say, the product of the first and fourth will equal that of the second and third, if the four be proportionate. [There is some point to this arrangement, if one thinks of an arithmetical series, where, e.g., in the series 5,7,9,11, 5+11=7+9; but the words clearly refer to a geometrical series 2,4,8,16, or a proportion 2:4::8:16 where 2 x 16 = 4 x 8, although it is difficult to see how one multiplies strength by merely adding together units.

In the same way we shall arrange each half-wing or corps; since, indeed, a half of it is the division and a fourth the brigade; we shall station the bravest brigade on the right of the right-hand corps, the second and third in point of valor on the left and right of the left-hand corps, and the remaining brigade on the left of the right-hand corps; for thus the several corps will have a uniform strength.

The brigades also we shall order in the same manner, since a half of these is the regiment, and a fourth the battalion. We shall, then, assign the first and fourth battalion to the right-hand regiment, setting the first among its right-hand units, and we shall, further assign the second and third battalion to the left-hand regiment, disposing them in the regiment on exactly the same principle.

Each battalion also, since it has as its half the company and as its quarter the platoon, will be ordered in like manner, that its companies may have an equal strength. The same arrangement applies also to the platoon. For its half is the double-file, and its quarter the file.

We shall not, however, arrange the file as above, but we shall place the strongest in the front rank and behind them the most intelligent, and of the former the file-leaders shall be those who excel in size, strength, and skill; because this line of file-leaders binds the phalanx together and is like the cutting edge of the sword, for which reason the companies, when covered on both flanks by file-leaders, are called double-edged (amphistomoi).
The second line must also be not much inferior to the first, so that when a file-leader falls his comrade behind may move forward and hold the line together; and the file-closers, both those in the files and those attached to larger units, should be men who surpass the rest in presence of mind, the former to hold their own files straight, the latter to keep the battalions in file and rank with one another, besides bringing back to position any who may leave their places through fear, and forcing them to close up in case they lock shields. [The importance of the ranks of file-leaders and file-closers can scarcely be exaggerated; the former were the first to meet the enemy and in between them and the file-closers were included the less brave.]

IV. “Intervals”

Now that the parts of the army have been brought into due relation with the entire force, we may well speak of the intervals in both length and depth. The needs of warfare have brought forth three systems of intervals: the most open order, in which the men are spaced both in length and depth four cubits apart, the most compact, in which with locked shields each man is a cubit distant on all sides from his comrades, and the intermediate, also called a ‘compact formation,’ in which they are distant two cubits from one another on all sides. [It must be borne in mind that one soldier is included in the interval, i.e., the distance is from right shoulder to right shoulder or from breast to breast.]

As occasion demands a change is made from one of these intervals to one of the others, and this, either in length only, which, as we have noted before, is called forming by rank, or in depth, i.e., forming by file, or in both rank and file, which last is called ‘by a comrade-in-rank’ and ‘by rear-rank-man.’

The interval of four cubits seems to be the natural one and has, therefore, no special name; the one of two cubits and especially that of one cubit are forced formations. I have stated that of these two spacings the one of two cubits is called ‘compact spacing’ and the one of a single cubit ‘with locked shields.’ The former is used when we are marching the phalanx upon the enemy, the latter when the enemy is marching upon us.

Now since the file-leader, forming the front of the phalanx, number 1024, it is clear that, drawn up in the most open formation, they will cover 4096 cubits, which is 10 stades and 96 cubits; in the compact formation, 5 stades and 48 cubits; and with locked shields 2 1/2 stades and 24 cubits. [That is the phalanx of 16, 384, drawn up 16 deep, would occupy 2048 yards, 1024 yards, and 512 yards respectively]. It will be necessary, therefore, for you to select your terrain with all this in mind.

V. “The Character and appropriate Size of Arms”

The best shield for use in the phalanx is the Macedonian, of bronze, eight palms [the ‘palm’ may be considered approximately three inches, so the shield should be about

---

122 A cubit is approximately eighteen inches.

123 The interval of one cubit seems hardly enough, but it was used only in receiving a charge and is the interval of the Swiss pikemen of the fifteenth and sixteenth centuries. See R. Schneider, Legion and Phalanx, 70.
2 ft. in diameter] in diameter, and not too concave; and their spear, moreover, is no shorter than ten cubits [approximately 15 feet], so that the part which projects in front of the rank is to be no less than eight cubits [approximately 12 feet] — in no case, however, is it to be longer than twelve cubits [approximately 18 feet], so as to project ten cubits [approximately 15 feet]. Now when the Macedonian phalanx used such a spear in a compact formation it appeared to the enemy irresistible. For it is obvious that the spears of the first five ranks project beyond the front, since the soldiers in the second rank, being two cubits back, extend their spears eight cubits [12 feet] beyond the front, those in the third rank six cubits [9 feet], those in the fourth rank four cubits [6 feet], those in the fifth rank two cubits [3 feet], and so five spears extend beyond the first rank. And the Macedonians, men say, with this line of spears do not merely terrify the enemy by their appearance, but also embolden every file-leader, protected as he is by the strength of five; while the men in the lines behind the fifth, though they cannot extend their spears beyond the front of the phalanx, nevertheless bear forward with their bodies at all events and deprive their comrades in the front ranks of any hope of flight. But some, who wish to bring all the projecting spear-points to the same distance in front of the line, increase the length of the spears of the rear ranks.

VI. “Light Infantry and Targeteers”

The light infantry and targeteers will be stationed by the general as the situation demands, sometimes before the line of battle, sometimes behind it, and on other occasions now on the right flank and again on the left; the first is called van-position (protaxis), the second rear-position (hypotaxis), and the third flank-position (prosentaxis). Sometimes they are incorporated in the phalanx and stationed one beside each man; and this is called insert-position (parentaxis), because there is an insertion of different branches of the service, e.g., light infantry as hoplites; but the incorporation of like arms, such as hoplites beside hoplites or light infantry beside light infantry—the reason for this will be discussed later—is not called insertion-position, but rather interjection (parenbole).

Now these light infantry will also have 1024 files, if they are to stand behind the phalanx of the hoplites, and extend the same distance, without, however, a depth of sixteen men—for they are only one-half as strong—but obviously of eight men.

With these, also, four files will form a squad (systasis), two squads a platoon (pentekontarchia), and double the platoon a company (hekatontarchia), to which will be attached the supernumeraries, five in number, an army-herald, a signal-man, a bugler, an aide-de-camp, and a file-closer. Two companies will form a battalion (psilagia), two of these a regiment (xenagia), the double of which will be a brigade (systrema), two brigades a division (epixenagia), the double of which will form a corps (stiphos), and where this is doubled we have the phalanx of light infantry, which some call also a supporting force (epitagma). To this are attached eight men as supernumeraries, four of whom are generals and the others brigadier-generals (systremmatarchai).

X: The Terms used for military Evolutions

The different branches of the entire army and the names of its lesser divisions
have now been given; it remains to consider in turn the terms used by the commanders in maneuvering the divisions of the phalanx. For they use first ‘right’ or ‘left-face’ (klisis), then ‘about-face’ (metabole) and ‘quarter-turn’ (epistrophe), also ‘back-turn’ (anastrophe), further ‘half-turn’ (perispasmos) and ‘three-quarter-turn’ (ekperispasmos) and ‘return-to-original-position’ (apokatastasis) and ‘advance-to-original position’ (epikatastasis), ‘order files’ (stoichein), and ‘order ranks’ (zygein), also ‘lines front’ (eis orthon apodunai) and ‘counter-march’ (exeligmos) and ‘doubling’ (diplasiasmos); they use also ‘march-in-column’ (epagoge) and ‘march-in-line’ (paragoge), and these either ‘to the right’ or ‘to the left,’ ‘extended front’, ‘column formation,’ and ‘oblique front’ (plagia, orthia, loxe phalanx), ‘interjection’ (parembole) and ‘insertion’ (parenthesis), and ‘van-position’ (protaxis), ‘rear-position’ (hypotaxis), and ‘supporting-position’ (epitaxis). The signification of each of these terms we shall endeavor to explain as briefly as possible.

Right- or left-facing, then, is the movement of the individual men, ‘by spear’ to the right, and ‘by shield’ to the left; this takes place when the enemy falls upon the flanks and we wish either to counter-attack, or else to envelop his wing, i.e. overlap the wing of the enemy.

The double turning, which is performed in the same way, whereby the soldiers face about to the rear, is called an about-face (metabole), of which there are two kinds, the one from the enemy, called ‘to the rear’ (ep’ uran), and the other toward the enemy, called ‘from the rear’ (ap’ uras).

It is a quarter-turn, when we close up the entire battalion by file and rank in the compact formation and move it like the body of one man in such a manner that the entire force swings on the first file-leader as on a pivot, if to the right on the right file-leader, and if to the left on the left file-leader, and at the same time takes a position in advance and faces ‘by spear’ if pivoting right and ‘by shield’ if pivoting left.

Let the battalion, for example, be $\alpha \beta \gamma \delta$ and $\alpha \beta$ its rank of file-leaders; it is clear, then, that the right file-leader will be the one at $\beta$ and the left the one at $\alpha$, and the divisions of the force at $\beta$ will be on the right, and divisions at $\alpha$ will be on the left; if then, we make the entire battalion $\alpha \beta \gamma \delta$ quarter-turn to the right, while $\beta$ holds his position, the line $\alpha \beta \gamma \delta$ will occupy the position $\beta \varepsilon \zeta \eta$, occupying a position in advance and facing to the right.

A back-turn is the reversal of the forward-turn to the position the battalion originally held, as to $\alpha \beta \gamma \delta$.

A half-turn is the movement of the battalion by two quarter-turns in the same direction, as $\beta \theta \kappa \lambda$; it proceeds from the first forward-turn position $\beta \varepsilon \zeta \eta$, takes a position in advance, and faces to the right, and, if considered from its original position $\alpha \beta \gamma \delta$, it faces to the rear.

It is a three-quarter turn when the battalions move by three quarter-turns in the same direction to the position behind and facing left from the original station, as $\beta \mu \nu \xi$, a position which, considered from $\beta \theta \kappa \lambda$, lies before and faces the right, and considered from the original station $\beta \alpha \delta \gamma$, lies behind and faces the left.

It is obviously impracticable to revert by a back-turn from the three-quarter-turn to the original position, for we shall require three back-turns to do this, one to the position $\beta \theta \kappa \lambda$, and one to $\beta \varepsilon \zeta \eta$, and one to $\beta \alpha \delta \gamma$; but it is practicable by a quarter-turn to the
right because $\beta \alpha \delta \gamma$ occupies a position before $\beta \mu \nu \xi$ and faces to its right. The return by a quarter-turn to the original position is called advance-to-original-position (epikatastasis).

Now the first position, the quarter-turn, and the third, called the three-quarter-turn, can be restored to the original position by a single evolution, the first $\beta \varepsilon \zeta \eta$, by a single back-turn, the second $\beta \mu \nu \xi$ by a single quarter-turn; but the position between these two, $\beta \theta \kappa \lambda$, which we also call a half-turn, can resume its original station equally well by two evolutions, because its movement by a back-turn equals that by a quarter-turn; since it requires two back-turns to revert to the original position, first to $\beta \varepsilon \zeta \eta$ and then to $\beta \alpha \delta \gamma$, and also two quarter-turns to advance to the original position, first to $\beta \mu \nu \xi$ and then to $\beta \alpha \delta \gamma$.

If we should make the quarter-turn to the left, then the battalion will in the same way occupy the position in advance, with its face, however, to the left since $\alpha \beta \gamma \delta$, by pivoting upon the stationary file-leader $\alpha$, will by the first quarter-turn take the position $\alpha \pi \rho$, by the half-turn the position $\alpha \sigma \tau \nu$ by the three-quarter-turn the position $\alpha \phi \chi \psi$, and by the advance-to-original position, the position $\alpha \beta \gamma \delta$. The different ways of returning to the original position you may consider similar to those used in evolutions to the right.

These evolutions are used whenever the enemy appears on a flank of the army.

It is called lines-front when man by man the force reverts [That is, from a turn to the right or to the left] to its original position, so that in case the command has been given to turn to the right from the enemy and then to form lines-front, the men will have to turn back so as to face the enemy.

There are three types of counter-march, the Macedonian, the Laconian, and also the Cretan or Persian; and each of these, again is performed in two ways, either by file or by rank. [The importance of the counter-march by files is evident, when one bears in mind that in the front lines of the ancient phalanx were stationed the best soldiers.]
It is a Macedonian counter-march when the rank of file-leaders holds its original position, and the rear ranks down to the file-closers march through to a forward position and then each man about-faces; thus a $\beta \gamma \delta \varepsilon$ is the rank of file leaders and remains in the same place, and the back ranks $\zeta \eta \theta \iota \kappa$ and $\lambda \mu \nu \xi \omicron$ move forward, either by rank so that $\zeta \eta \theta \iota \kappa$ marches through first and becomes $\pi \rho \sigma \tau \nu$ and $\lambda \mu \nu \xi \omicron$ becomes $\phi \chi \psi \omega \varsigma$ or by file so that $\kappa \omicron$ takes the place of $\nu \varsigma \iota \xi$ of $\tau \omega$, and so on, as $\theta \nu$ of $\sigma \psi$, $\eta \mu$ of $\rho \chi$, and $\zeta \lambda$ of $\pi \phi$: and then each man from the file-closer on about-faces, i.e., $\pi \rho \sigma \tau \nu$ and $\phi \chi \psi \omega \varsigma$ turn about and face with $\alpha \beta \gamma \delta \varepsilon$ as their front line, because the enemy was seen in the rear. [The following diagram will explain this maneuver:]

\[
\begin{align*}
\phi \chi \psi \omega \varsigma \\
\pi \rho \sigma \tau \nu \\
\alpha \beta \gamma \delta \varepsilon \\
\zeta \eta \theta \iota \kappa \\
\lambda \mu \nu \xi \omicron
\end{align*}
\]

It is clear that in this kind of counter-march the phalanx would seem to yield ground and to be almost in flight, which emboldens the enemy and disheartens those who are counter-marching.

The Laconian counter-march takes up a position the opposite of that shown above; for each soldier about-faces to the rear, while the rank of file-closers $\lambda \mu \nu \xi \omicron$ holds its position; and the other ranks $\zeta \eta \theta \iota \kappa$ and $\alpha \beta \gamma \delta \varepsilon$ march through on either side [to a position behind] the file-closer—and this, clearly, in two ways, either by file or by rank—and $\zeta \eta \theta \iota \kappa$ take the position $ZH \Theta IK$, and $\alpha \beta \gamma \delta \varepsilon$ the position $AB \Gamma \Delta E$. [To explain the maneuver:]

\[
\begin{align*}
\alpha \beta \gamma \delta \varepsilon \\
\zeta \eta \theta \iota \kappa \\
\lambda \mu \nu \xi \omicron \\
ZH \Theta IK \\
AB \Gamma \Delta E
\end{align*}
\]

By this form of maneuver the Laconian counter-march arouses a feeling in the enemy just opposite to that aroused by the Macedonian; for they would seem to those who have appeared in the rear to be making for and charging upon them, so that they dismay the enemy and arouse fear among them.

The so-called Cretan and Persian counter-march is an intermediate between these two; for it does not occupy the position behind the phalanx, as the Macedonian, nor the one before the phalanx, as the Laconian, but occupies the same ground, while the file-
leader takes the place of the file-closer, and in like manner the rear-rank-men those of the front-rank-men...marching past each other, and this in two ways, either by file or by rank, until the file-closer has in turn taken the place of the file-leader. That is, consider the line of file-leaders αβγδε of rear-rank-men ζηθικ, then λμνξο, and after it as the rank of file-closers πρστν; then αβγδε takes the position of πρστν, ζηθικ of λμνξο, λμνξο that of ζηθικ, and πρστν that of αβγδε. [Cf. The diagram:]

By this counter-march the phalanx will not change its ground, and this we shall find advantageous, whenever the terrain before and behind is less favorable.

Counter-marches are made by rank, when the half-wings exchange positions each within its own wing, [Since the strongest half-wing occupies the right flank, the second strongest the left, and the others the center, by this evolution the two stronger half-wings will exchange places with the two weaker, and so the center will be strengthened and the wings weakened.] for this strengthens the center of the phalanx. Sometimes it is not advisable to make the counter-marches by half-wings, when the enemy is nearby, but rather by battalions, so that the right wing of the battalion occupies the left and vice versa.

The term doubling is used in two ways; either of the place occupied by the phalanx, while the number of the men remains the same, or of the number of the men; and each of these may be by file or by rank, also called by depth or by length. Doubling of men, then, takes the place by length when we interject or insert between the original files other files of equal strength, maintaining all the while the length of the phalanx, so that a compact order arises only form the doubling of the men; doubling takes place by depth when we interject between the original ranks others of equal strength, so that a compact order arises only by depth. The difference between insertion and interjection has been explained before.

Doubling of place occurs by length when we change the above mentioned compact formation by length into a loose formation, or when the interjected men counter-
march by rank, either to prevent being outflanked by the enemy or when we wish to outflank the enemy; by outflanking is understood the throwing of one wing about the wing of the enemy—and this is done sometimes even when a wing is numerically inferior to that of the enemy—as when both wings are used in a flanking movement, it is called a double outflanking.

Whenever we wish to return this compact formation to its original position, we shall command the men who have changed their position to counter-march to their original stations. Some condemn such doublings, especially when the enemy is near, and, by extending the light infantry and cavalry on both wings, give the appearance of the doubling without disturbing the phalanx.

By such evolutions a phalanx assumes the form sometimes of a square, sometimes of an oblong rectangle, or, again of an extended from when the length is many times as great as the depth, or of an extended depth when the depth is many times as great as the length; an oblique front lies midway between the last two. In this formation one wing is drawn up close to the enemy and fights the contest, while the other is partly withdrawn and refused; it is called the right oblique when the right wing is advanced, and the left oblique when the left wing is advanced. [The figures to explain these formation will be found below: square (Fig. 21), extended front (Figs. 1 and 2), extended depth (Figs. 3 and 4), right oblique (Fig. 6), and left oblique (Fig. 5).]

Many other formations are in use, not merely in battle, but also on the march to guard against the sudden attacks of the enemy; for the entire army is broken up into its parts, sometimes large and sometimes small, such as wings and half-wings, so that when the parts are combined the army may face the enemy with inner fronts or with outer fronts, and at other times with corresponding or again with different fronts.

For the enemy is descried either on one side, or on two, or three, or on all sides. Each of these situations has been discussed in order.

Original Sketches Presumably
Passed Down from Asklepiodotus

Editor's Reproductions
XI. "Formations in Marching"

A march in line (paragoge) is the marching of the phalanx, either as a whole or by its parts; as a whole, it is called either a march by front when it advances with extended front, or a march by file when it advances in file. And if it march with an extended front it its either forward by the rank of file-leaders (Fig. 1), or backward by the rank of file-closers (Fig. 2); but if it move in column, if the line of file-leaders, which is also called the mouth, is on the right, it is called by the right (Fig. 3), and if on the left, it is called by the left (Fig. 4); also a left (Fig. 5) and right (Fig. 6) oblique march-in-line when the corresponding wing is advanced; a convex (Fig. 7) concave (Fig. 8), and a half-square march backwards (Fig. 9) and the same forward (Fig. 10), when the front is bent concave, convex, or as a half-square forward or backward, as in the following diagrams:

```
fig. 1  fig. 2
  fig. 3  fig. 4
    fig. 5  fig. 6
      fig. 7

fig. 8  fig. 9  fig. 10
```

The march by flank [That is, in file, or column] and the march by front need apply not merely to the entire phalanx, but also to its parts; for if the phalanx should march by wings, it may be either by column or by front, and each of these again either in sequence (epagoge) or in parallel formation (syzeuxis); it is a march in sequence when the second wing follows the first, and in parallel formation when neither precedes the other. [That is when the wings are side by side.]

There are four kinds of march in column in parallel formation: for the fronts may be either right or left, which is called the order with corresponding front, right (Fig. 11), or left (Fig. 12); or the fronts may be opposite, and if the men should march with fronts side by side it is called a march with inner fronts (Fig. 13), but if with file-closers side by side a march with outer fronts (Fig. 14).

When the army advances in sequence formation and in column, it can do so only with different fronts, so that one wing has its front right and the other its front left (Fig. 15), it is being possible for the fronts to be on the same side, for the march by wings would then differ in no respect from that of the phalanx in a body, since in this way the
fronts will follow one behind the other; but when the army advances in sequence
formation and with extended front it will have either corresponding fronts or outer fronts,
i.e., behind the file-closers of the leading wing will follow either the file-leaders (Fig. 16)
or the file-closers (Fig. 17) of the second wing.

The wings also, when in oblique formation, have two different positions: either
the left wing is advanced on the left side and the right wing on the right, in which array
the entire phalanx is called a hollow-wedge (koilembolos, Fig. 18), or just the opposite
formation is assumed, when it is called a wedge (embolus, Fig. 19); see the following
diagrams:

Sometimes the army marches in four parts by divisions, on its guard upon every
side against the enemy, and we have a four-sided figure fronting on each side, an oblong
rectangle (Fig. 20) or a square (Fig. 21) which fronts on all sides, as the following
diagram shows: [The locus classicus for this order of march is the Anabasis of Xenophon
iii. 4. 19-23.]
When the army marches in several divisions, the battalions will be either in loose or close formation: it is the close formation when the march is by battalions en échelon, the entire phalanx assuming the form of a V (Fig. 22); the loose formation, when the battalions form parallelograms with only the corners touching one another, but with the fronts facing forward (Fig. 23). The form of these dispositions will be clear from the following figure. There might, of course, be other orders of march, meeting the situations that arise.

The baggage-train, which is very essential and requires its own commander, is convoyed in five ways: it must precede the phalanx when the march is away from the enemy's country, or follow it, when the march is into the enemy's country, or parallel the phalanx on the right or left side, whenever danger is suspected from the opposite side, or, finally, it may be convoyed within the hollow square of the phalanx, when danger threatens on all sides.

XII: "The Commands used in military Evolutions"

Such being the number and character of the evolutions, there would naturally follow a discussion of the commands used in these movements, but which we can order and move the troops, and return them to their original station; for this is the one thing have left to do.

When, therefore, we wish the battalions to quarter turn to the right, we shall command the right file to hold its position and each man in the rest of the files to right face, to advance to the right, and then to face to the front; then we shall command the rear ranks to advance, and, when in this way we have the compact formation, to quarter turn to the right [the verb used here means to 'pivot on the right file-leader], and the battalion will be swung to the right.

If we wish the battalion to resume the original position, we shall give the command to left about face—the meaning of 'about face' has been explained above—and then for the entire battalion to resume its original position; [The battalion will pivot on the right file-closer, who now, because of the about-face, is the left file-leader.] after that, while the rank of file-leaders holds its position, let the other soldiers advance by rank and about face in the direction originally faced; next let the right file hold its position and the
rest of the soldiers left face, and advancing wheel to original position. In this manner each man will resume his former place.

If we wish to quarter turn to the left, we shall command the left file of each battalion to hold its position, and the other files to left face, to advance to the left, and then to face to the front; after that we shall command the rear ranks to advance and when in this way we have the compact formation, to quarter turn to the left on the left file-leader, and the command is carried out.

If we wish the battalions to return to their original position, we shall make each man about face, and each battalion resume its original place; let the file-leaders hold their position and the rest advance by rank and about face in the direction originally faced, then let the left file hold its position and the rest right face, advance until the intervals between them are resumed, and then face to the front; and all will have the original line.

If we wish them to half turn to the right, we shall command them to make two quarter-turns in that direction; and when we wish them to resume the original position, we shall command them to half-turn to the right—for the original position is again taken by four quarter-turns in the same direction--; when this has been done we shall command the file-leaders to hold their position, the rest to about face, and the rear ranks to advance and then about face; and we shall now command the right file to hold its position, and rest to left face, advance, resume the original interval from one to another, and then face to the front; and in this way the battalion will return to the original position. [These marchings are necessary to change from the compact formation, in which all wheeling by battalions is done, to the normal formation with an interval of three cubits.]

If we wish to half turn to the left, we shall give the command in just the opposite way, to quarter turn twice to the left,  [and then, wishing to return to the original position, we shall command them to quarter turn twice to the left.] not to the right, and to perform the similar evolutions. In the same way, when we wish to make the three-quarter-turn, we shall make the battalions perform three quarter-turns.

If the phalanx must assume the compact formation by wings, we shall give the command, if on the right wing, for the right file to hold its position and for the other files to right face, close up to the right, and then face to the front, and for the rear ranks to advance. Then, if we wish to resume the original position, we shall command the rank of file-leaders to hold its position, the rear ranks to about face and advance, and then again to about face; after that, while the right file holds its position, let the other files left face and advance, until they have resumed their original intervals, when they face to the front.

If the left wing must assume the compact formation, we shall give the opposite commands. If the center must assume the compact formation, we shall command the right wing to left face and the left wing to right face, then to advance to the naval of the phalanx, to face to the front, and to advance the rear ranks, and we shall have the desired formation. If we wish the wings to resume their former position, we shall command them to about face and all the ranks save the first to advance and then about face; and we shall order the right wing to right face and the left wing to left face, to follow by files the leading files until they have the original intervals, and then to face to the front.

In the compact formations the spears must be elevated, so as not to interfere in the turnings. We shall train the light infantry also in the same evolutions, which are so advantageous in case the enemy appears suddenly.

388
[We shall, furthermore, train the army to distinguish sharply the commands] given sometimes by the voice, sometimes by visible signals, and sometimes by the bugle. The most distinct commands are those given by the voice, but they may not carry at all times because of the clash of arms or heavy gusts of wind; less affected by uproar are the commands given by signals; but even these may be interfered with now and then by the sun's glare, thick fog, and dust, or heavy rain. One cannot, therefore, find signals, to which the phalanx has been accustomed, suitable for every circumstance that arises, but now and then new signals must be found to meet the situation; but it is hardly likely that all the difficulties appear at the same time, so that a command will be indistinguishable both by bugle, voice, and signal.

Now the commands by voice must be short and unambiguous. This would be attained if the particular command should precede the general, since the general are ambiguous. For example, we would not say, "Face right!" but "Right face!", so that in their eagerness some may not make the turn to the right and others to the left when the order to turn has been given first, but that all may do the same thing together; nor do we say, "Face about right!" but "Right about face!" nor "Counter march Laconian!" but "Laconian counter march!" and...Stand by to take arms! Baggage-men fall out! Silence in the ranks! And Attention! Take up arms! Shoulder arms! Take distance! Shoulder spear! Dress file! Dress ranks! Dress files by the file-leader! File-closer, dress file! Keep your original distance! Right face! Forward march! Halt! Depth double! As you were! Quarter turn! As you were! Length double! As you were! Laconian counter march! As you were! Right half turn! As you were! Or Forward to position! Either Right! Or Left!

These are in brief the principles of the tactician; they mean safety to those who follow them and danger to those who disobey.
APPENDIX D

LAVATER'S SEVENTEENTH CENTURY MILITARY MANUAL
Erklärung der Figurentafeln.

Fig. 1. Der lange Spieß. Die Hauptwaffe des schweizerischen Fussvolkes hatte 15 Schuh Länge und eine kurze eiserne Spießspitze von verschiedener Form (a, b, c, d).

Fig. 2. Kurze oder Knebel-Spieße. Sie waren 8—10 Fuss lang und hatten meist ein langes, schwere Eise. Die Form derselben hat im Laufe der Zeit vielfach gewechselt. a und b sind Knebel-Spieße aus dem XIV. und XV. Jahrhundert, c und d sind Partisanen aus dem XV. und XVI. Jahrhundert. (Zenghäuser von Luzern, Zürich, Bern, Solothurn, Basel etc.)

Fig. 3. Hellebarden. Ein Bündel Hellebarden von verschiedenen im XV. Jahrhundert häufig vorkommenden Formen. (Dietrich Schilling’s Berner Chronic.)

Fig. 4. Hellebarden. Die Formen a, b, c gehören dem XIV. Jahrhundert an; die Originalen derselben befinden sich in der interessanten Sammlung des Herrn Commandant Meyer-Bielmann in Luzern; d eine Art Hellebarden, die auch mit dem Namen Gose bezeichnet wurde (Dietrich Schilling’s Luzerner Chronic und in vielen Schweizer-Sammlungen); (Denn in seinen Kriegswaffen nennt diese Art Hellebarden (d) Schwert-Gläiven oder Rossenbinder [franz. glafve-guzman]. e und f Hellebarden aus dem XVI. Jahrhundert.

Fig. 5. Mordaxte. a. Mordax aus dem XV. Jahrhundert (Zenghaus in Luzern); b. aus dem XIV. Jahrhundert (Sammlung des Herrn Meyer-Bielmann in Luzern); c. (Zenghaus in Zürich); d. (Abbildungen in Dietrich Schilling’s Luzerner Chronic).

Fig. 6. Morgenstern. Eine alte und unvollkommene Waffe, die sich lange, wohl nur aus dem Grunde erhalten hat, weil sie leicht zu bauen war. — Die Nadeln sind bei den alten Morgensternen b, bei denen späteren Zeit denkbar. — Oft wurde der mittlere, auf dem Kopf des Morgensternes befindliche Nagel durch eine lange, starke, dreibeinige Klinge ersetzt. Die Waffe wurde dadurch geeigneter zum Stoßen gemacht.
Fig. 7. Der Luzernerhammer. Ein der Hallebarde nahe verwandter Streithammer auf langem Schäft. — Der mastet in mehrere Teile zersplitternde Hammer diente zum Zerschlagen der Stahlpflatten der Panzer. Der Hacken wurde berüchtigt für die Angriffe der Panzer außerhalb der Reiter vom Pferde zu ziehen. Die lange Spitze machte den Luzernerhammer zu einer geeigneten Stichwaffe.

Dieses 'Morwachskeg', welches nicht so leicht ein Panzer widerstand, wenn es von kräftigem Arme geübt wurde, war die Lieblingswaffe der Luzerner und bildete ihr charakteristisches Warenzeichen. Aus diesem Grund hat man auch die Waffe den Namen Luzernerhammer gegeben. Im Kanton Luzern findet man noch sehr viele Exemplare dieser Waffe, die an anderen Orten selten gefunden wird.

Fig. 8. Zweihändiges Schwert, auch Zweihänder genannt, mit langem Griff, mit Parierstange und gerader Klinge.

Fig. 9. Zweihänder mit gedrehter Klinge.

Fig. 10. Schwert des Fussvolkes. a. Schwert aus dem XV. Jahrhundert; b. Schwert des Streiters vom Anfang des XVI. Jahrhunderts (Sanitäter vom Heer, Josef Mayer-Ancklin in Luzern); c. Schwert des der Brüder von Kappel 1681 gefallenes Reformators Zwingli (früher im Zentralhaus in Luzern, jetzt in dem von Zürich).

Fig. 11. Kleine Morddolche (Mordaxt), welche von Fussknechten oft statt des Schwertes getragen wurden.

Fig. 12. Beinmesser. (Das kleinste nach einem Glas-Gemälde von Halbinsel, das größere nach Diebold Schilling's Luzerner Chronik).

Fig. 13. Armbrust nebster der Winde (Armbrustwinden) mittels welcher der Armbrust gespannt wurde.

Fig. 14. Armbrust, die blass von Hand mitteist einer Klammer gespannt werden konnte.

Fig. 15. Pfeil. Der untere ist ein Rotationspfeil. (Zeughaus in Luzern und Zürich.)

Fig. 16. Pfeil. Der untere ist ein Rotationspfeil. (Zeughaus in Luzern und Zürich.)

Fig. 17. Handdolche. a. Eiserne Handdolche (oder Handkanone) aus dem XV. Jahrhundert (Bern Zeughaus); b. Handdolche mit bronzenem Lauf (nach den Abbildungen Diebold Schilling's Luzerner Chronik); c. verbessertes Handdehrech; d. Hackenbühse mit Luschnenschloss.

Fig. 18. Mechanismus des Lupenschlosses.

Fig. 25. Reiter. — Die Reiter sind mit kleinen Rundschilde und Stablaufen bewaffnet. Letztere haben die abseitsliegenden Formen, und sind jedesfalls unverhältnismäßig groß abgebildet. Die Figuren sind der Abbildung der Schacht von Glascun, die sich in die Reihen der Schilde der Berner Kriegswesen annehmen.

Fig. 26. Reiter. — Die Reiter sind mit kleinen Rundschilde und Stablaufen bewaffnet. Letztere haben die abseitsliegenden Formen, und sind jedesfalls unverhältnismäßig groß abgebildet. Die Figuren sind der Abbildung der Schacht von Glascun, die sich in die Reihen der Schilde der Berner Kriegswesen annehmen.

Fig. 28. Fähnlein gemeinen Stammvolkes. Dieses ist zweispitzig, wie es gewöhnlich die Leibeschutzschilder in den Auslagen zu sehen sind. — Auf dem Fähnlein befindet sich der Wappenschild der betreffenden Stadt oder Landschaft. — Kleiner Schmuck, der aus Manschett von mehreren oder allen edlenheitlichen Orten zusammengesetzt waren, führten eine rote Fahne mit weissem Kranz.

Fig. 29. Schüleranhänge. Diejenige von Luzern hat eine Armbrust in weiß und blauen Feld. Die Armbrust ist gelb.

In späterer Zeit hat die Armbrust und Büchsenkugeln ihre eigentliche Form. Bei letzteren waren statt der Armbrust zwei Büchsen auf dem Fähnlein angebracht, wie dieser auf den Gemälden der Kappelbrücke in Luzern zu sehen ist.


Fig. 31. Tambour und Pfeifer (nach diebold Schilling's Luzerner Chronik). In den Berner Chroniken findet man über die Rolle des Tambourabgesell abgebildet.

Fig. 32. Harsthornblüter (aus Diebold Schilling's Luzerner Chronik, dem Bild der Schacht von Bellinzona entnommen). Die Harsthornblüter sind in die grauen Farben von Uri und Luzern gekleidet.

Fig. 33. Saum- oder Hodelroste mit ihren Führern. Die Pfeifer haben eine Art Packstück und sind mit Fässern oder Körben bekleidet. (Nach Diebold Schilling's Berner Chronik.)

Fig. 34. Ein Wagen mit Proviantfusseln. Oben sind Zelt aufgespannt.

Fig. 35. Gewurfs oder Bleyden. a. Ist in Wursilas's Basler Chronik abgebildet; die Basler sollen dieser Gewurfs 1484 haben construiren lassen (Wursilas, V. 597). b. Bleyden nach diebold Schilling's Berner Chronik.

Mit den Bleyden und Gewurfen werden grosse Stein, Feuerweschsel, auch Leibnemes und Fässer mit Kohl (letztere zum Verporen der Luft bestimmten) in hollogerber Bergen geschmiedet. Mit der Bedienung dieser Maschinen waren besonders Weber aus dem Werkmeister betraut.

Fig. 36. Geschütze (aus diebold Schilling's Luzerner Chronik). Bei a. ist das Rohr der Stockhöhe auf dem Boden gelegt und hat


b. Der Büller oder Möser ist von einem Holzschnitt vom Anfang des XVI. Jahrhunderts.


Fig. 39. Taubrücke. a. Taubrücke mit aufgeschnittenem Schirm; der Schirm ist durch Stangen auf der Lauffahne gestützt; b. Taubrücke bepflanzt; der Schirm ist niedergefahren; c. Taubrücke bei welcher die Stangen, welche den Schirm tragen, auf den Boden gestellt sind.

Fig. 40. Schlangen. Die Lauffahne ist mit Richtthürmen versehen. Neben dem Geschütze befindet sich ein Kasten mit Patronenbüchsen, daneben liegen Kugeln; das Laufzeug besteht in Pulverschüpp und Seiden.

Fig. 41. Leichtes Feldgeschütz mit einem Pärl boaspannt.

Fig. 42. Besetzte Stadt. (Abbildung im Atlas zu Emanuel von Redts Geschichte des Berner Kriegwesens.) Die Formen der Thürme sind solche, die in Diebold Schillings Berner Chronik vorkommen. Der neue, auf welchem die Fahne ausgesteckt ist, links hinter der Ringmauer, ist mit einem Zwingfahne (fanzo-braye) versehen, die der im Schloss Orbe, der die Schweizer im Burgunderkrieg nur mit Mühe erobertenabetic. Solche Thürme, wie dieser und der links daneben, dienten wie die Citadellen in späteren Zeiten, zum lebensfruchtbaren der Besatzung. Die Franzosen nannten solche Thürme „Denjens“.


Zwischen der Ring- oder Hauptmauer und dem Graben ist eine niedrige, ebenfalls mit vorspringenden Werken flankierte Vormauer mit Schiessthehren. Der Zwischenraum zwischen beiden Mauern bildet der Zwingfahne, später Wallgang (fanzo-braye) genannt. – Das Thör
kann durch ein Fallgitter gesperrt werden. Über den Graben führt eine Brücke.

**Fig. 43. Anführer mit Gebläse.** Der Anführer hat einen Schnellhammer und trägt statt des Helmes einen mit Federn gespickten Mütze. Er war dieses auf Menschen allgemein gebrauchlich. Der Helm und die Lanze wurden von einem Knappen nachgezogen und erst im Augenblick, wo es zum Geschehen ging, zur Hand genommen.

Auf den Abbildungen der Chroniken erscheinen die Befehlshaber und Hauptleute nie ohne Gebläse. Die vorstehende Abbildung ist Diederich Schilings Luzerner Chronik entnommen.

* b. Schön ausgezogene Pferdecke mit Sattel, von einem Anführer oder begleitenden Reitern. Der Mund des Pferdes zeigt auf dem Hintergrund eine Linie, die als Querung für den Schwieger des Pferdes, ausserdem sind noch 2 Säcke abgebildet.

**Fig. 44. Burgen.** a. Vierockiger Thurm mit einer Mauer umgeben; b. Abbildung der Burg Rothenburg nach den Gemälden auf der Kappelbrücke in Luzern.

**Fig. 45. Handhabung des Spießes.** Die Figur stellte das vollständige Exerzitium mit dem Spieß, wie es in Lazaretto Kriegsübungen enthält, dar. Die Kommando's zu den Übungen mit dem Spieß sind auf S. 240 und 251 angegeben und dienen diesen Figuren zugleich zur Erklärung.

**Fig. 46. Vollständiges Exerzitium mit der Muskete und Gabel.** Näheres darüber auf Seite 261 und 262.

**Fig. 47. Verdoppeln in die Tiefe oder Doublen der Glieder.** Die Männer der geraden Reihen treten einen Schritt rechts seitwärts und zwei Schritte vorn die Nebenmänner der ungeraden Reihen. Nach dem Verdoppeln wurde gewöhnlicher Reihen- und Glieder-Abstand (von 3 Füßen) genommen.

Die Verdoppeln in die Tiefe war das Mittel, die Zahl der Reihen zu vermindern und die der Glieder zu vergrößern. Durch Verdoppeln konnte auf die einfachste Weise der Kell gebildet werden.

In vorstehender Figur sehen wir eine Abbildung von 8 Reihen Breite und 8 Gliedern Tiefe. Nach der Verdoppeln würde sie nur noch 4 Reihen Breite haben, dagegen auf 16 Gliedern Tiefe stehen. Wie bei einer Abbildung von 8 Reihen kann die Verdoppeln auch bei einer beliebig grösseren in ähnlicher Weise vorgenommen werden.

**Fig. 48. Verdoppeln in die Breite oder Doublen der Reihen.** Es war dieses das Mittel, die Front weiter auszudehnen, wobei zugleich die Tiefe vermindert und die Zahl der Reihen oder Reihen doppelt wurde.

Auf das Befehlswort zum Doublen der Reihen treten die Männer der geraden Glieder (daher die 2. 4. 6. u. s. w. einen Schritt seitwärts und vorwärts) neben ihre Vormänner der ungeraden Glieder (das 1. 3. 5. u. s. w.) Nach der Bewegung werden die Abstände genommen.

Das Doublen der Glieder und Reihen konnte beliebig nach rechts und links ausgeführt werden.

**Fig. 49. Sturmdach und Sturmschleppe.** Sturmdach oder Käse mit darunter angebrachtem Sturmschleppe. Dieses Sturmdach ist aus Balken konstruiert und mit Huten oder Eisenblech überzogen. (Gemälde auf der Kappelbrücke in Luzern). b. ein Sturmdach, um die Minen an die Mauer zu bringen, welche diese untergraben sollten; es war dieses auch das Mittel, den Sturmschleppe und die Bestimmungsmannschaft an der Mauer gedeckt arbeiten zu lassen, (Diederich Schilings Berner Chronik); o. d. verschiedene Arten Wieder- oder Sturmschelpe (aus Valquir's Werk).

**Fig. 50. Ebenöcheln oder Fullbrüden.** Dieselben wurden im Mittelalter oft bei Belagerungen angewendet. — Das Wandelsambre gleiche Höhe erhielten wie die Ringmauer der belagerten Stadt, so nannte man die Ebenöcheln. Die Fullbrüden, welche auf der Abbildung an der Ebenöchel angebracht ist, bot das Mittel, die Mauer zu gelangen. Das Bild ist dem Werk des Robert Valquir's de re militar lib., XII., entnommen.

**Fig. 51. Sturmlieutenant (nach Valquir):**

**Fig. 52. Belagerte Stadt.** Auf der rechten und linken Seite sehen wir Steinbüsche durch Schirme gedeckt. Die Büchsenmächer sind mit Bedienung der Geschütze behaftet, während die Handlager, der eine den Schirm aufliegt, der andere ihm bereits aufgesessen hat. Der Büchsenmächer rechts ist im Pfeilkopf, das Geschütz laubkastenähnlich. Die beiden Geschütztände sind durch einen Laufgraben, in welchem sich die Bewachungsmannschaft befindet, verbunden. Das Ganze hat Ähnlichkeit mit den Paradebildern der neueren Zeit.

Im Vordergrund sehen wir zwei Wehrgeschütze, Blocker genannt, neben desselben Kugeln, Patronen, Feuerpfeile und eine etwas riesige Armbrust mit aufgelegtem Feuerpfeil; unter dieser liegt ein Rohrer. Auf der rechten Seite sieht man einige Baldänen, welche Sarschilde tragend, als zum Sturm bereiten. (Abbildung aus der Berner Chronik.)

**Fig. 53. a. b. Krieger mit Türsten, Schild- oder Sturmschilden.** (Berner Chronik.)
APPENDIX E

BUNDESBRIEFS OF SWISS INDEPENDENCE AND EARLY LAW
1. Freiheitsbrief der Schwyzer vom Kaiser Friedrich II. December 1240.1


2. Ewiger Bund der Landleute von Uri, Schwyz und Unterwalden.2

In nominee domini Amen. Honestati consulitur et utilitati publice prouidetur, dum pacta quietis et pacis statu debito solidantur. Noverint igitur vniuersi, quod hominess vallis Vranie, vniuersitasque vallis de Switz, ac communitas hominum intramontanorum vallis inferioris, maliciam temporis attendentes, ut se et sua magis defendere valeant et in statu debito melius conservare, fide bona promiseart, inuicem sibi assister auxilio, consilio quolibet ac fauore personis et rebus, infra valles et extra, toto posse, toto nisu, contra omnes ac singulos, qui eos vel alicui de ipsis alicam intulerint violenciam, molestiam, aut inijuriam, in personis et rebus malum quolibet machinando, ac in omnem eventum quelibet vuuiuersitas promisit alteri accruere, cum neccesse fuerit as succurrendum et in expensis proprius, prout opus fuerit, contra impetus malignorum resisteres, injurias vindicare, prout super his corpaliier iuamento, absque dolo servandis, antiquam confederationis formam iuramento vallatam presentibus innovando, Ita tamen, quod quilibet homo iuxta sui nominis conditionem domino suo conueniener subesse teneatur et seruire. Communi etiam consilio et fauore vnanimi promisimus, statuimus, ac ordinauimus, vt in vallibus prenotatis nullum iudicem, qui ipsum officium aliquot precio vel peccunia aliquid ter conparauerit, vel qui noster incola vel prouincialis non fuerit inter

---

1 Oechsli ed., Quellenbuch, 63-4. The Latin original is housed at the Bundesbrief Museen, Schwyz.

aliquos conspiratos, prudencio- res de conspiratis accedere debent ad sopiendam discordiam inter partes, prout ipsis videbitur expedire, et que pars illam respueret ordinationem, alii contrarii deberent fore conspirati. Super omnia autem inter ipsos extitit statutum ut qui alium fraudulenter et sine culpa trucidauerit, si deprehensus fuerit, utiam ammittat, nisi suam de dicto maleficio valeat ostendere innocenciam, suis nefandis culpis exigentibus, et si forsan discesserit, nunquam remeare debet. Receptatores et defensores prefati malefactoris a vallibus segregandi sunt donec a coniuratis prouide reuocentur. Si quis uero quemquam de conspiratis, die seu nocte silentio, fraudulenter per incendium uastauerit, is nunquam haberi debet pro conprovinciali. Et si quis dictum malefactorem fovet et defendit infra valles, satisfactionem prestare debet damnumificato. Ad hec si quis de coniuratis alium rebus spoliaverit vel damnumificaverit qualitercumque, si res nocentis infra valles possunt repariri, servari debent ad procurandam secundum iusticiam lesis satisfactionem. Insuper nullus capere debet pignus alterius, nisi sit manifeste debitor vel fideiussor, et hoc tantum fieri debet de licencia sui iudicis speciali. Preter hec quilibet obedire debet suo iudici et ipsum, si necesse fuerit, iudicem ostendere infra [vallem] sub quo parere potius debeat iuri. Et si quis iudicio rebellis extititerit ac de ipsius pertinatia quis de conspiratis damnumificatus fuerit, predictum contumacem ad prestandam satisfactionem iurati compellere tenentur universi. Si vero Guerra vel discordia inter aliquos de conspiratis suborta fuerit, si pars una litigantium iusticie vel satisfactionis non curat recipere complementum, reliquam defendere tenentur coniurati. Suprascriptis statutis pro communi utilitate salubriter ordinates concedente domino in perpetuum duraturis. In cuius facti evidentiam presens instrumentum ad peticionem predictorum confectum sigillorum prefatarum trium universitatum et valium est munimine roboratum. Actum anno domini m° cc° Lxxxx° primo incipiente mense Augusto.


In Gottes namen Amen. Wande menschlicher sin blöde und zerganglich, daz man der sachen und der dinge langwirig und stete solben beliben, so lichte und so balde vergizet, dur daz so ist es nutze und notdurftig, daz man die sachen, die dien luten ze fried und ze gemache und ze nutze und ze eren uf gesetzet werdent mit schrift und mit briefen wizentlich und kunlich gemacht werden. Dar umbe so kunden und offnen wir die Lantlüte von Ure, von Swits und von Underwalden allen dien, die disen Brief lesent oder hörent lessen, daz wir dar umbe daz wir versehen und fürkemen di herte und die strenge dez Cites und wir deste baz mit fried unde mit gnaben beliben möchten und wir unser lip und unser guet beste baz beschirmen und behalten möchten, so han wir uns mit trüwen und mit eiden eweliche und stetliche ze semene versichert und gebunden also; daz wir bi unseren trüwen und bi unseren eiden gelobt und gesworn han, ein anderen ze helfenne und ze ratenne mit libe und mit guete in unseren koste inrent lantes und uzerhalb, wider alle die und wider einen ieplichen, der uns oder unser dekeinem dekein schade an sinem libe older und sinem guote, deme sulen wir behulven sin dez besten so wir mugen, daz es ime gebezzert oder widertan werde ze minnen oder ze recht. Wir han och daz uf uns gesetzt bi dem selben eide, daz sich unser Lender enkeines noch unser enkeiner beherren sol oder bekeinen herren nemen ane der ander willen und an ir rat. Ez sol aber ein jeglich mensche, ez si wib oder man, sinem rechten herren, oder siner rechten herschaft
gelimplicher und cimelicher dienste gehorsan sin, ane die oder den herren, der der Lender bekeines mit gewalt angrifen wolde oder unrechter binge genöten wolde; deme oder bien sol man die wile enkeinen dienst tuou untz daz si mit dien Lendern ungerichtet sint. Wir sin auch dez uber ein komen, daz der Lender enkeines noch der Eitgenoze enkeiner enkeinen eit oder bekein sicherheit zuo dien uzeren tuon ane der anderen lender oder eitgenozen rat. Ez sol auch enkeins verrite older hingebi, oder der vorgeschribenen bingen bekeines breche older ubebergeng, der sol trüwlos und meinde sin und sol lip und sin guot dien Lendern gevallen sin. Dar zu sin wir uber einkomin, daz wir enkeinen Richter nemen noch haben suln, der daz Ampt koufe mit Missehelli oder bekein Krieg huebe oder uftuende unter bien eitgenozen, dar zuo suln die besten unddie witzegesten komen, und sulen den Krieg und die missehelli sichten und hinlegen nach minnen oder nach rechte. Und sweder teil daz verspreche, so sulen die andern eitgenoze dem andern minnen oder rechtes beLendern, und ir eines von dem andern weder minne noch recht nemen wolde, so sol daz dritte Lant bekeiner den andern ze todefluge der sol auch den lip verliesen, er mug banne beweren, als ime erteilet wirt, dass er ez notwernde sinen lip getan habe. Is aber daz er entwichet, swer in banne huset older hovet oder schirmet inrent landes, der sol von dem lande uarn und sol niht wider in daz lant komen untz daz in die Eitgenozen mit gemeinem rate wider inladent. Were auch daz, daz der Eitgenozin bekeiner den anderen tüblich older freuelliiche brande, der sol niemerme lantman werden, und swer in huset older hofet oder gehaltet, der sol ieneme sinen schaben ade tuon. Were auch daz, daz unser eitgenoze bekeiner den anderen mit roube oder ane recht schadegete, vindet man dez guotes tes icht inrent Landes, da mitte sol man deme fleger sinen schaden abe tuon. Ez sol auch niemanden von dem ander phenden, er si dannelge oder burge, und sol dannoch tuon nit, wu man mit sinen Richters urloube. Ez sol auch ein jeglich man sinem Richtere gehorsan sin und einen Richter eigein inrent landes, vor deme er dur recht sule stan. Swer auch deme gerichte so suln in die Eitgenozen twingen daz dien schadehaften ir schade von ime werde abgetan. Ande dur daz, daz du vorgeschribene sicherheit und biu gebinge ewig und stete beliben, so han wir die vorgenanden lantlüte und eitgenoze von Ure, von Swits und von Underwalden unser Ingesigel geheket an disen brief, der wart gegeben ze Brunnen, vo man zalte von Gottes geburte Drucehen Hundert Jar und dar nah in dene Drucehen Jare, an dem nehesten Eistage nach sant Niclaus tage. 3

4. Der Pfaffenbrief. 1370, 7. October.4

Wir der Burgermeister, die Rät, die Zunftmeister und all burger gemeinlich der Stat Zürich, der Schilttheiße, der Rat und all Burger gemeinlich der Stat ze Lutzern, der Amman, der Ratt und all Burger gemeinlich der Stat Zuge, ze Egre und all die in daz selb Ampt Zug gehörent, die Amman und all lantlüte gemeinlich der dryer lender Vre, Switz und Undderwalden, Tuon kunt allen den (die) disen brief sechent oder hörent lesen: Daz wir mit gemeinem Ratt und mit guoter vorbetrachtung, durch nutz und notturft und guoten frides willen unser und dez landes über ein komen fyen, gemeinlich und einhelleklich, der Ordenung und gesetzten, als hienach geschrieben stat. Des ersten

haben wir gesetzt, Wer mit husrouchi, mit sin selbers lib oder mit sinem gesind sitzen und wonhaft sin wil in keinen disen vorgenannten stetten und lendern, er sij pfaff oder ley, Edel oder vnebel, die der Herzogen von Oesterrick Rat oder dienst gelopt oder geseoren hant, die alle sulent och loben undweren unser, der vorgenannten stett und lender, nutz und Ere ze fürdern, und mit guoten trüwen ze warnen vor allem dem schaden, so si vernement, daz dien vorgenannten stetten oder gemeinlich oder sunderlich bekeine wis sunderlich bekeine wis brästen oder schaden bringen möcht, und sol si da vor kein ander Eyd, den si ieman getan hant oder noch tätin, nüt schirmen, an all geurb. Waz och pfaffen in unser Eydganosschaft, in Stetten oder in lendern, wonhaft sin, die nicht burger, lantlüte noch Eydgnossen sint, die sulont kein frömdes gericht, geistlich noch weltlichs, suochen noch triben gen nieman so in disen vorgenannten Stetten und lendar, sin si sulent von iechlichem Recht nemen an den stetten und vor dem Richter, da er gesessen ist, es wer denn umb ein E oder umb Geistlich sachen, an all geurb. Welcher pfaff aber do wider tuot, da sol du statt oder daz land, so der selb pfaff wonhaft ist, verhüten und verforgen mit aller ir gemeind, daz dent selben pfaffen nieman essen noch trinken gäb, huse noch hohe, gen im mit kouff noch wederkouff noch kein ander gemeinsam mit im hab, an geuerd, und sol och der selb pfaff in niemans Schirn sin unser stett noch lender, alle die will untz er con dien frömden gerichten lat und och abgeleit den schaden, den der angesprochen genomen hat von der frömden gerichten wegen, an all geurb. Wer och daz ieman so in disen vorbenanten stetten und lendern wonhaft sint, den andern an Recht angriff und schadgolty, mit pfandung oder mit andern sachen, des lib und guott sulent die, bi dien unser geswornen brief wisent, daz nieman der andern an Recht schaden sol. Wer och daz kein ley under uns den andern mit frömden gerichten uff trib, geistlichen oder weltlichen, umb weltlich Sach, wie der angesprochen des ze Schaden kumt, daz sol im der kleger ablegen, wan ieberman sol von dem andern Recht nämen vor dem Richter da der ansprechig gesessen ist, als sunser Buntbriefe bewisent. Es sol och nieman, der under uns den vorbenemten stetten und lendern gesessen ist, sin sach oder anspruch ieman in behein wis geben, da von ieman bekumbert möcht werden, bi der pen so vor und hie nach geschrieben statt, an all geurb. Wer aber daz ieman in disen vorgenannten Stetten und lendern sin Burgrecht oder sin landrecht uf gab, und darnach ieman under uns mit frömden Gerichten, geistlichen oder weltlichen, uf trib und schadgolty, der sol doch niemer wider in dieselben statt oder in daz land komen, E daz er dem angesprochen gentzlich abgeleit allen schaden, den er von des frömden gerichten wegen genommen hat, an all geurb. Wer syen och einhelleklich über ein komen, daz wir all strassen von der Stibenden brugg untz gen Zürich ze allen sitten in aller unser Eydganosschaft schirmen suflin und wollen, er si gast, lantman oder burger, frömd oder heimsch, wie si geheissen sint, daz die mit ir lib und mit ir guott in allen unsern und der so zuo uns gehören, Gerichten und gebieten sicher varen, daz si ane Recht nieman kumbern, sumen noch schaden sol; wer aber do wider tuott, da sulen wir all einander behulmen und beraten sin, wie der gewisett werde, daz er den schaden und den angriff ableg und wider tuo so verre sin lib und sin guott erzugen mag, an all geurb. Und als da her ze etlichen zitten von Stetten und von dndern lute uss gezogen sint und ander lätt angriffen und gepfendett, geschadgott hant, da von vil grosser schad kamen möcht, und den schaden ze verkomen, haben wir einhelleklich gesetzett, meinen und wellen nicht, daz von disen vorgenannten stetten und lendern ieman kein löff oder uszog mache, mit pfandunge oder mit andern sachen ieman schadge, dann mit urloub, willen
und wisent Zürich eines Burgermeisters und des Rates, ze Lutzern des Schultheißen und des Rates, Zuge des Ammans und des Rattes, und in den obgenanten drin lendlern Ure, Switz und Underwalden der Amman und der Räten, sunderlich in jechlicher statt und lant, da die gesessen sint, den angriff tuen wellen oder getan hand. Wer aber do wider tuott des ieman an lib und an guott, daz er den angriff und den schaden ab leg und gentzlich wider tuon, unuerzogenlich an all guoer sol sin elu stuk, die in diesem frid betädingent und beret sint, Und wenn auch uns der selb Brief, von dem obgenanten Herren geben und geantwurt wirt, da mit sulln wir Inen iren Brief, den si und von bis friden wegen geben hant, wider anwurten ane fürzug. Her aber ze einem vesten urkund, dz bis vorgescriben alles war und stat belib, so haben wir die vorgenanten Stett und Länder Zürich, Lutzern, Zug, Ure, Switz und Unterwalden unsre Insigel offentlichen geheneret an disen brief, Der geben ist Zürich an dem Ersten tag Abrellen, do man zalt von Christus Geburt Drüzenhundred Achtzig Jar, darnach in dem Nünden Jare.

5. Der Sempacherbrief. 1393, 10. Juli.\(^5\)

Wir der Burgermeister, der Rat und die Burger gemeinlich der Statt Zürich, die Schultheissen, Räte und Burgere gemeinlich der Stett Luczern, Berne und Solotren, der Amman, der Rat und die- in das Ampt Zuge gemeinlich gehörent, die Amman und die Lantlüté gemeinlich der dryer Länder Vre, Switz und Underwalden, der Amman und die Lantlüté gemeinlich ze Glarus, kunden allen Menschen, die disen brief sechent, lesent oder hörent lessen: Als wir in einem offenn tötlliche kriege sint gewesen mit der Herschaft von Oesterrich und den Iren won manigfaltiger redlicher vordrunge und ansprache wegen, die wider die selb Herschaft fürgezogen ist vor ziten, dar umb auch angriffen und gefochten is vor Sempach, Har Inne wir einhellentlich durch unser aller Nutz und Notdurft, fird und gemach bestimmet und besorgen hant etliche Stuttlin gegen einander vestentlich ze haltende, nu und hie nach, als si an disem brief stand gelütert für füntig Infelle und und übergriffe unsern gelupen, Bünden, Eiden und Briefen, als wir ze samen ewenklich sin verbunden nu und hie nach unschedlich und gentzlich unuergriffenlich. Iem Ersten, Meinen wir das Jekliche Statt, Jeklich Land in unser Eidgnoschaft bi den Eiden, so wir unsern Stetten und lendern gesworn hant eigenlich besorgent und versprechen och dz also einhellentlich ze haltende in disen Brief, dz kein Eidgenoss dem andern oder den, die zuo inen gehörent gemeinlich, noch ir dehein sunderlich, hinnenhin frechenlich oder mit gewalt in ir hüser louffen sulent und Jeman dz sine dar Inne nämen, es sye in kriege, in fried oder in suone, durch da mir alle, fürbaz als fridlich und als gütlich mit einander leben und einander in allen unsern sachen als geträwlich ze hilfe und ze troste komen als wir vor getan haben und noch tuon sulent, an alle guoerb. Wer uns auch kouff bringet, des lip und guot sol biuns sicher sin. Dar zuo sullen wir für einander nit pfand sin in keinen weg. Und war wir für dis hin ziechende werdent, mit offenner Paner uf unser vyende, es sye gemeinlich oder dhein Statt oder Land sunderlich, alle die so dann mit der Paner ziechend, die sulent oouch bi einander beliben als biderbe lute und unser Vordern ie da har getan hant, wz Not uns oder inen danne begegent, es sye in einem gefechte oder in andern angriffen. Wer aber dz deheiner do von fluchtig wurde oder vt verbreche, dz in disen brief geschrieben stat, sunderlich dz ieman dem andern als da vor durch sin hus lieffe frechenlich oder wz er ander sachen

\(^5\) Ibid, 41.327-9.
misstate, dar um er geschuldget oder verkumdet wurde ze straffende in disem brief, und
dich dar an schulde mit redlicher kuntschaft zweyer Erber unuersprochner Mannen vor
den, zuo den er gehöret und die dar umb habent ze richten, des lip und guot sol dien
selben, die über in hant ze richtende und do er hin gehöret und nieman andern under uns
gefallen sin vff ir Genade. Und die sulent ouch den her umb straffen unuerzogenlich
nach dem als sich schulde vindet und si sich uber in erkennen, und sulent dis tuon bi dien
Eiden, so si der Statt oder dem Land, da si sind, gesworn hant, und als verre dz ein
Jeglicher hie bi Bilde name, vor sölchen Sachen sich ze hütende. Und wie Jeglich Statt
und Jeglich Land densinen her umb straffend, da mitte sulent die andern ein andern ein
benuegen han, ane alles widersprechen. Darzu ist unser aller Meinung ob einer
verwundet geschossen oder geworffen wurde, es were an eime gefechte oder an andern
angriffen, oder wy im beschech, dz er unnütz wer, sich selber ze helfende, her sol also
beliben bi dien andern untz dz dise Not Ende hat, und sol dar umb nit flüchting sin
geschetzet, dz er im selben noch nieman andern mag ze statthen komen, und sol man in dar
umb unbekümbert lassen an sinem libe und an sinem guote. Es ist ouch ze wissen dz
in dem obgenanten gefechte der vyende vil entwichen, do dz velde behoep wart, die alle
vff der walstatt und do umb beliben weren’t, hettent die unsern, so da bi waren, inen
nachgefolget und nüt geplündert. E dz der Stritte gentzlich erobert wurde uz ein Ende.
In disen dingen ist geschehen, so erber lute ein felde behuoben dz si ze sicher wolten sin
libes und quotes und vil under inen als da vor plünderten, dz sich dar under die
entwichnen wider samnoten und inen lip und guot und dz velde wider angwunnt: Do
meinen wir einhellerlich als dik uns söllich Not angient In kunftigen ziten, dz jeglicher
sin vermuende tuo als ein Biderman, die vyende ze schadgende, und dz velde ze
behabende, ane alle zuo versicht ze plunderte, es sye sin Bestinnen, Stetten oder uff dem
Land, untz di stunde, dz die Not ein Ende gewinnet und erobert wirt, dz die Houptlüte
menlichen erloubent ze plunderten, dannen hin mag menlich plunder sol Jeglicher
antwurten dien Houptlüten, unter die er gehöret, und die sulent in under die selben, die
under si gehöret und da bi sint gewesen, nach Marchzal gelich teilen und ungefährlich.
Und wie si den plunder under die Yren teilent, da mit sol si und menlich wol benuegen.
Und als der almchtig Gott mit sinem Göttlichen Munde gerett yet, dz sin hüfer des
gebettes hüfer sullent gehweise werden und ouch durch frowklich Bilde aller Mentschen
heil genüwert und gemeret ist, Setzen wir Gott ze lop, oz seiner der unsern kein kloster,
kilchen oder Cappelle beslossen uffbreben oder öffenn dar in gange ze brennende,
wüstende oder ze nämende, dz dar Inne ist dz zuo der kilchen gehöret, Heimlich oder
offenlich, es wer dann dz unser vyende oder ir guot in einer kilchen wurde funden, bz
mugent wir wil angriffen und schadgen. Wir setzen ouch unser lieben frouwen ze Eren,
dz keiner unter uns dehein fruowen oder tochter mit gewaffneter hant stechen, slachen
noch ungewonlich handeln sol, durch dz si uns lassent zuo flissen ir Genade, Schirme
und behuotnusse gegen allen unsern vyenden, Es were dann dz ein Tochter oder ein
frouw ze vil geschreyes machte, dz uns schaden möchte bringen gegen unsern vyenden,
oh sich ze weri stalte, oder deheinen anfiele oder wurffe, die mag man wol dar umb
straffen als es dann gelegen ist, ane geurb. Ze Yungst ist unser gantze einhellige
Meinung, dz kein Statt oder Land under uns gemeinlich, noch keine die dar Unne sint
sunder, deheinen krieg hinnehinh anhabe, muotwillenlich ane schulde oder sache, dz do
wider begangen sye, unerkenntet nach wisunge der gesworn brief, als Jeglich Statt und
Land ze samen sint verbunden. Und also sulent disse vorgeschribe Ordmunge und

406
Satzunge für uns und unser nachkommen und sulent einander da bi halten in guoten trüwen, vestenklisch, als dik es ze schulden kumt. Mit urkund ditz briefes versigelt mit unsern anhangenden Ingesigeln und geben an dem zeichenden tag Höuwmanodees, Do man zalt von Cristus geburt Drüzehundert Nünzig und drü Jar.


a. „Des ersten heimbringen die trüw, mü und arbeit, so der from man, bruder Claus in disen dingen getan hat, Im das trülich zu danken, als jeglicher bott weis witter ze sagen.” b. Man soll dem Bischof von Constanz von gemeiner Eidgenossen wegen schreiben, er möchte die Leute des Grafen von Suiz aus dem Bann und überhaupt die Dinge ruhen lassen bis zu dem Tag, welcher der ottenbürenschen Sache wegen zu Constanz wird gehalten werden, dann werden der Eidgenossen Boten, die dahin kommen, den Streit zu schlichten odern in ein Recht zu bringen trachten. c. Von den 800 Gulden von Howenhut sind 600 dem Kloster Wettingen zugehieft, die übrigen 200 Gulden wollen die von Zürich unter die VIII Orte theilen; betrifft jedem Ort 25 Gulden. d. Die von Bern haben einen freundlichen Tag gesetzt zwischen denen von Constanz und gemeinen Eidgenossen, des Landgerichts im Thurgau wegen, auf St. Agathentag (5. Februar 1482) in ihre Stadt. Jedes Ort soll seine Botschaft mit Boumacht dahin senden. e. Die Boten von Lucern sollen heimbringen, wie sie von gemeinen Eidgenossen dringend gebeten worden sind, um des Friedens und der Ruhe willen das Recht zwischen Caspar Koller und dem Herzog von Oesterreich wieder aufzunehmen, wie das vorher auf ihnen gestanden, und den Parteien beförderlich Tag zu setzen. f. „Item die botten hand angesechen, an welches end die brief ze siglen hin komen, dz man da sigle und man nit achten sol, welches ort vor dem andern also siglet, beschicht von wegen damit cost erspart werde.” g. „Item dewil nu die sachen von des Burgrechten wegen, betragen und gericht und man der geschriften eins worden sint, so sol damit dz burgrecht zwischent den stetten und och die einig zwischent den V orten und mim Herren von Costenz hin, tod und ab sin, und damit so sol man die brief darumb gemacht zu Tagen bringen und die hin und abtun.” h. Uri bringt an, dass denen von Thurwalden, so mit 250 Mann zu Bellenz gewesen, ihr Theil de Richtunggelds noch nicht ausgefolgt sei. Das soll man heimbringen und daran sein, dass ihnen geschehe wie den andern und sie befriedigt aufnehmen. k. „Item die botten wellen die soldner von Frankenreich nit herus manen; dann sy haben sy nit heissen hinin faren, sy wellen sy ouch nit-heissen herus faren.” l. Auf nächstem Tag soll man Antwort geben auf das Gesuch der beiden Grafen von Württemberg, sie in eine Vereinigung aufzunehmen, wie die gewesen, so man mit Graf Ulrichen gehabt. Zürich hat sich bereits ausgesprochen, es werde mit den Grafen die Vereinigung vollziehen, wollen dann noch mehrere Orte eintreten, so sei es ihm lieb; die Sache bedünke Zürich so, dass man sie nicht von der Han weisen soll. m. Jedermann sollte auf diesen Tag seine Entschliessungen bringen in Betreff dessen, was die Boten, so zu Mailand gewesen, angebracht haben. Da indessen etliche Orte über die Sache noch nicht genugsam unterricht waren und sich damit verantwortet haben „sy