

TACTICS, STRATEGY, AND BATTLEFIELD FORMATION DURING THE HUNDRED  
YEARS WAR: THE ROLE OF THE LONGBOW IN THE “INFANTRY REVOLUTION”

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The English longbow was the driving force tactical change during the Hundred Years War. The English army was introduced to the longbow by the Welsh and the weapon was used during the Scottish Wars of Independence where the English were exposed to new methods of strategy. The English did not adopt the use of the longbow on a large scale until the reign of Edward III. The longbow, in combination with men at arms, transformed the manner in which medieval warfare was conducted. This encouraged what is now known by historians as the “infantry revolution.”

The longbow was extremely effective and was considered by contemporary historians to be a deadly weapon. The introduction of plate armor caused some problems with arrow penetration which as a result diminished the lethality of the longbow, but it still continued to be a highly effective weapon.

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## Chapter 1: Introduction

The English longbow had a tremendous impact on strategy and tactics during the Hundred Years War. Early medieval warfare was often dominated by the “shock combat”<sup>1</sup> of cavalry whose greater numbers in battle usually determined the outcome. During the First Scottish War, a prelude to the Hundred Years War, the English army was on the receiving end of the power of the longbow wielded by experienced Welsh archers. The English would not adopt the weapon into its military on a large scale until the reign of Edward III (1327-1377). The adoption of the English longbow changed the manner in which medieval warfare was fought. The English longbow encouraged what is known by historians as the “infantry revolution.”<sup>2</sup> The use of the longbow in battle was a success and was considered by many contemporary and secondary historians to be a deadly weapon in the early stages of war until the introduction of advanced plate armor in combination with chainmail.<sup>3</sup> This raises the question as to why the English army relied so heavily upon the longbow during the second half of the Hundred Years War. Armor would not be the main reason for the decline in the English longbow. The training necessary to master the bow in combination with the appearance of the plague in 1350s created a void in available archers which would not be completely replenished. These difficulties in finding able-bodied archers in combination with the difficulty of finding the resources used to produce the bow attributed to the weapons decline.

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<sup>1</sup> Lynn White, Jr., *Medieval Religion and Technology: Collected Essays* (Berkeley: University of California, 1978), 78, 280-282.

<sup>2</sup> For more information on the infantry revolution and the role that technology had in encouraging it, see John Stone, “Technology, Society, and the Infantry Revolution of the Fourteenth Century,” *Journal of Military History* 68, no. 2 (Apr. 2004): 361-380.

<sup>3</sup> Plate armor existed and was worn by very few individuals throughout the entirety of the Hundred Years’ War, but did not truly become effective and in high demand until the mid-fourteenth century. It was expensive and only nobles and a few men-at-arms could afford it. The most common of armor was mail and it was worn throughout the Hundred Years’ War by men-at-arms and even under plate armor by nobles for extra protection.



The Treaty of Bretigny (1360) is used by modern historians as a marker to distinguish between the first and second phase of the Hundred Years War. The treaty became effective and was signed several years after the Black Plague began to ravage both countries. The disease prevented England from fielding armies and Edward III was able to use the recent capture of King John II of France during the Battle of Poitiers (1356) as leverage in extending peace.

Most knights could be expected to wear the most up-to-date armor, but outside of this very select group of wealthy soldiers, mail armor was the only protection that lower classes could afford if at all. During the early part of the war, most infantry were from the lower and lower-middle classes of society and were unprotected from melee and projectile weapons. The French armies did employ majority of professional mercenary troops, most notably the Genoese crossbowman<sup>4</sup> that would be equipped with both sufficient weapons and armor. The common soldier's lack of armor was a major reason the longbow had such a great impact on warfare and strategy in the early part of the war. The longbow was a lethal weapon and no one was protected from its deadly strike, even those equipped with the best of mail armor were at risk because an arrow from a trained English archer could penetrate it.

As armor technology and innovation began to improve, the efficiency of the English longbow began to decrease. During battle, the arrows would only be able to penetrate the armor at the "joints," which were necessary to allow soldiers mobility. It becomes clear when examining the contemporary sources that there were extenuating circumstances that favored the tactical use of the longbow. As archers became successful on the battlefield, technological innovation occurred which resulted in improvements to armor.

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<sup>4</sup> A Genoese crossbowman was a mercenary-for-hire soldier during the middle ages that was from the city of Genoa in northwestern Italy. They were hired in significant numbers by the French crown and played a major role in French military during the Hundred Years' War but were ultimately out-dueled by the English longbowmen.

There has been much speculation concerning the manner in which archers were deployed during battle. It is clear that prior to the Hundred Years War, archers were tactically deployed on the flanks of Welsh and Scottish armies when combating English troops. The archers were very effective, as can be seen in the contemporary chronicles. The French would eventually learn a new strategy that had existed for many years and use it to turn the tide of the Hundred Years War. This strategy is known as the “Fabian Strategy.”<sup>5</sup> This method of combat played a major role in determining the outcome many years later when used by the French to outlast the English in the final years of the Hundred Years War. The lack of detail paid to archer battlefield formation by contemporary chroniclers during the Hundred Years Wars has created confusion among modern scholars and this poses a major issue when discussing the tactical and strategic uses of archers during battle.

Though the Hundred Years War consisted of countless battles large and small, contemporary chronicles focus more on the major battles than on smaller or less significant skirmishes. For this reason, the major battles of the Hundred Years War will be used as case studies in developing an understanding of the strategy involved in using archers throughout the entire conflict. In order to fully understand the development of tactics, several pre-Hundred Years War battles will be examined including the Battle of Falkirk (1298), the Battle of Bannockburn (1314), the Battle of Dupplin Moor (1332), and the Battle of Halidon Hill (1333). The battles that will be examined during the Hundred Years War include the Battle of Sluys (1340), Battle of Crecy (1346), Battle of Neville’s Cross (1346), and the Battle of Poitiers (1356) and they will provide a framework of early medieval warfare and the development of tactics. For the latter half of the war this study will examine the Battle of Agincourt (1415). This battle

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<sup>5</sup> Fabius Maximus was a Roman general during the Roman Republic and essentially defeated Hannibal during the Second Punic War by avoiding open-field battles and mirroring Hannibal’s army winning a war-of-attribution.

will be compared to the earlier battles to examine the changes and modifications to strategy and tactics in battlefield engagements to determine what changes if any, were made to how archers were deployed during battle. Other battles will be referenced but not examined in great detail.

It is important to recognize that in the waging of medieval warfare major conflicts rarely took place. During the early years of the Hundred Years War, more specifically during the reign of Edward III, the English were in the habit of making siege in order to draw the enemy to attack their position that was selected for its defensive qualities.<sup>6</sup> They were normally outnumbered and typically only fared well because of their combination of archers and infantry. The French relied very heavily on the use of cavalry and mercenary troops for battle. Furthermore, the wealth of the French state, which was much greater than that of England, allowed them to purchase large numbers of soldiers for their army.

This leads to the most common feature of medieval warfare known as the *chevauchee*. The English predominantly used this “raiding” technique, a fact that infuriated the French. The *chevauchee* was a military strategy used by the English that can and should be considered as economic-warfare. Some scholars fail to see the objective of such strategy and have attributed the actions of soldiers in burning and looting villages to a lack of military leadership and not to strategy. This opposition, raised by Charles Oman and supported by A.H. Burne, suggested that these raids never produced tactical advantages.<sup>7</sup> However, an understanding of medieval warfare allows one to recognize the logistical issues faced when moving large army’s great distances without the convenience of having towns and cities as supply sources. Therefore, the

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<sup>6</sup> Clifford J. Rogers, “The Age of the Hundred Years War,” in *Medieval Warfare: A History*, ed., Maurice Keen (Oxford: Oxford University Press, 1999), 147-8.

<sup>7</sup> H.J. Hewitt, “The Organization of War” in *The Wars of Edward III: Sources and Interpretations*, ed., Clifford Rogers (Woodbridge, Suffolk: Boydell Press, 1999), 297.

*chevauchee* was a means for the English to not only cripple or at least seriously impede French mobility within their country, but caused economic damage as well.

Another factor that contributed to the methods of warfare during this period is the recruitment of the English armies. These methods were the “commission of array” and “contract of indenture.” These methods were necessary considering England did not have standing armies in this time period. Armies were raised by one or any combination of the previously stated methods, and the army was typically disbanded upon completion of service. The commission of array was a legacy of feudal obligation whereby every man between specific ages was to serve England in a time of military need and was based on land holdings. The contract of indenture was instigated by Edward I and eventually superseded the nobility obligation of forty days.<sup>8</sup> Indentured retinues could be any of the following: “residents of household attendants, men bound to serve their lords by written indenture to serve their lords in war or peace, and those whose attachment to the lord is shown simply by the acceptance of his fees and wearing his badges and livery.”<sup>9</sup> In later periods of the conflict, beginning with the reign of Edward III, arrays of commission begin to make an appearance in the *Calendar of Patent Rolls*<sup>10</sup> that suggest more drastic methods of recruitment were needed to replenish an already dwindling supply of archers.

There have been many arguments by modern historians as to the reasons for the decline of the English army’s use of the longbow in battle. Many have attributed the technological advancement of armor to the decline in the weapons’ use. This argument does carry some weight, but there is one major element of warfare that fails to support this theory and this is the

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<sup>8</sup> Clive Bartlett, *English Longbowmen, 1330-1515* (Oxford: Osprey Publishing, 1995), 5-6.

<sup>9</sup> Ibid., 6.

<sup>10</sup> The *Calendar of Patent Rolls* is a series of administration records that were kept by the English Chancery. These records were readily available and can be found on a database that is provided by the University of Iowa’s library system.

manner in which archers were used on the battlefield. Edward III and his commanders won their victories in France by the application and development of the tactics learned in the Scottish wars. The army would normally be divided up into three battalions of dismounted men at arms, with archers placed on the flanks at an angle, so that they could fire at the advancing enemy from the side.<sup>11</sup> There has been some speculation regarding the deployment position of archers, but it has been consistently stated by contemporary chroniclers Jean Froissart and Jean le Bel that the archers were placed in flanking locations on the battlefield. To support this concept, we must consider the reasons and strength of archers on the battlefield. The range of the longbow is often given as 400 yards, but the killing range was little more than half that, and real execution was not achieved over 50 yards. At close range, arrows could pierce the best armor, and the ‘arrow storm’ was capable of driving back even the most determined opposition.<sup>12</sup>

The combination of the archers and men-at-arms created a new type of warfare that, when effectively deployed, limited the use of French cavalry. Having the archer positioned on a slant or angled position forced enemy cavalry toward the center of the English lines. It also allowed the archers to aim at the ranks of the enemy knights and horses. This formation helped increase the fatality rate and penetration of arrows while armor was transitioning from mail to plate and increasing in strength. The introduction of the bodkin arrow would help stave off complete failure of penetration by archer’s arrows<sup>13</sup> but would ultimately fail at ranges where the crossbow succeeded. The archer’s rate-of-fire would more than make up for the lack of penetration when compared to the crossbow.

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<sup>11</sup> Michael Prestwich, *The Three Edwards: War and State in England, 1272-1377* (London: Weidenfeld and Nicolson, 1980), 197-198.

<sup>12</sup> Mathew Bennett, *Agincourt, 1415: Triumph Against the Odds* (Oxford: Osprey Publishing, 1991), 28.

<sup>13</sup> Andrew Ayton, “Arms, Armor, and Horses” in *Medieval Warfare: A History*, ed., Maurice Keen (Oxford: Oxford University Press, 1999), 203-204.

The turning tides of the war can be attributed to a change of strategy by French leaders who would avoid direct confrontation and realized that a war of attrition would deprive the English of victory. The English had begun using archers in their military prior to the beginning of the Hundred Years War but did not do so on a greater scale until the beginning of the conflict. The lack of military institutions created a problem since it allotted only a single avenue for archer recruitment in the English army. This avenue was the natural development of citizens which took many years to develop into well trained archers. The ultimate downfall and decline of the English army was due to a change in the ratio of men-at-arms to archers, which was what made the army so formidable. The steady decline of the availability and effectiveness of skilled archers had a significant impact on the English army's defeat.

By the middle of the fifteenth century, the English were experiencing a shortage of skilled archers, which became a significant problem. In 1450, Edward IV (1461-1470) requested 20,000 archers to be raised, but had to settle for far fewer than 13,000, and in 1456 he decreed that "playing football or other sports and amusements by all men between the ages of 12 and 60 be proscribed and archery practice substituted in its stead." However, nothing could be done to halt the decline of longbow archery in England, and by the early sixteenth century the weapon was widely replaced by gunpowder weapons.<sup>14</sup> Usually historians discuss the ratio of archers to men-at-arms and how it grew from about 1:1 in the middle of the 14<sup>th</sup> century to well over this figure by the end of the Hundred Years' War. The *Teller's Roll* for the 1475 French expedition indicates a ratio averaging 8:1 and this has been offered as evidence of a 'drying up' of men-at-arms and consequent decline in the overall quality of the English army from the middle of the

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<sup>14</sup> Kelly DeVries and Robert D. Smith, *Medieval Weapons: An Illustrated History of Their Impact* (Santa Barbara, CA: ABC-CLIO Publishing, 2007), 193.

15<sup>th</sup> century.<sup>15</sup> The requirements of a trained archer in combination with the appearance of the plague limited the availability of archers in future warfare. The longbow was never adopted elsewhere in Europe because it was difficult to use and required a lifetime of training. This very aspect made archers extremely valuable but also planted the roots for their steady decline.<sup>16</sup>

The longbow's success in the early part of the Hundred Years War can be attributed to the successes of English strategy against French cavalry. The penetration power of the longbow made mail armor essentially useless against the missile weapon. These two factors contributed to early English success. The appearance of the plague in 1348 decimated the population which had provided many trained archers thus making recruitment extremely difficult. As numbers began to decline, armies gradually became more nationalized and before the English considered such an option, the French created the first standing army. This had a major role in reducing the number of victories for the English. With upgrades to armor, the crossbow was relied upon more often, and early gunpowder technology began to have an impact. Gunpowder technology had begun to make a small impact with respect to siege canonry which had a greater range than the longbow but they were used mainly for siege warfare.

The purpose of the case studies will be to examine the reasons for the great success of the English longbow during the first half of the Hundred Years War and to examine the factors and causes for such a quick and decisive decline of the weapon. The strategy developed by the Scottish and adapted by the English for using archers and dismounted men-at-arms to defeat cavalry created what historian Clifford J. Rogers would refer to as the first stage of the "infantry revolution" and laid the roots for the end of "shock combat" in medieval warfare. The question that must then be explored is why a weapon that had such an impact on medieval warfare and

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<sup>15</sup> Bartlett, *English Longbowman, 1330-1515*, 13.

<sup>16</sup> Louis Morton, "War, Science, and Social Change," in *The Social Reality of Scientific Myth: Science and Social Change* (New York: American Universities Field Staff, 1969), 43.

revolutionized medieval tactics experienced such a rapid decline. The answer to this question lies in the continuing evolution of tactics in medieval warfare and a changing society, which will be examined through contemporary chronicles.



## Chapter 2: Historiographical Essay

The effectiveness of the English longbow during the Hundred Years War still encourages debate among scholars today. There are two schools of thought that hold great significance and weight when discussing the elements of and surrounding the longbow. British historians tend to acknowledge the effectiveness of the longbow, in some instances, placing too much emphasis on it as a “war-winning weapon.”<sup>17</sup> American historian Clifford Rogers tends to agree with the significance and impact of the weapon on warfare during this period. Kelly DeVries, using John Keegan’s work<sup>18</sup> discussing the Battle of Agincourt as a means to disprove the role of the longbow in medieval warfare.

There are many contemporary sources that cover the events of the Hundred Years War. Most originate in French and Latin, but have since been translated into English. Perhaps the most respected contemporary historian, when it comes to warfare during the Hundred Years War, is Jean Froissart. The most respected translation of Froissart’s *Chronicles* is that of Lord Berners. A collection of these translations, *The Chronicles of Jean Froissart: in Lord Berners Translation (1963)* was composed by Gillian and William Anderson and will provide the majority of Froissart’s insight. This work encompasses many of the major engagements of the Hundred Years War. There are several sections of Froissart’s chronicles which are problematic concerning numbers engaged. The foremost issue is that Froissart tended to exaggerate battle numbers. There is no real consistency to Froissart’s figures when it comes to the number of soldiers present at specific battles. An example of this is when he states that nearly 10,000

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<sup>17</sup> For a more in-depth look at this concept, see George Raudzens, “War-Winning Weapons: The Measurement of Technological Determinism in Military History,” *Journal of Military History* 54, no. 4 (Oct. 1990): 403-433.

<sup>18</sup> John Keegan, *The Face of Battle* (New York: The Viking Press, 1976), 87-116.

archers were present at the Battle of Neville's Cross<sup>19</sup> when modern day historians have concluded that nearly half that number were actually present. At different times in the Hundred Years' War, Froissart wrote his histories for both the English and French crowns respectively, and this is an element to his writing that needs to be considered when analyzing specific battles.

Froissart is perhaps known best by military historians of the period for his narrative of battle tactics, more specifically battle formations. In one instance, Froissart tells us that longbowmen were in a battle formation which was described as '*en herse*.'<sup>20</sup> This phrase has received much scholarly attention and this work provides an additional translation to compare with the early work mentioned. The additional excerpts in this work from Froissart are mostly descriptions of the major conflicts during the Hundred Years War and include but are not limited to the Battle of Sluys, Crecy, and Poitiers. Froissart is considered most credible because he traveled around Europe acquiring first-hand accounts of the events he writes about.

Jean le Bel, a Flemish chronicler, provides great insight into the events of the Hundred Years War because of his unique perspective. The Flemish changed sides throughout the war and Jean le Bel preferred to gather his information through personal experience or through interviews of those who experienced events first-hand. Froissart often used other chronicles to strengthen his work. It is for this reason that historians often note that there is some overlap in Froissart's chronicles because he "borrowed" from Jean le Bel at times."<sup>21</sup> Early in the Hundred Years War, Jean le Bel fought the Scottish under King Edward III.

A recent publication of Jean le Bel's chronicle, *The True Chronicles of Jean le Bel, 1290-1360* (2011), provides a translation of the original text that concerns several major battles that are

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<sup>19</sup> Jean Froissart, *The Chronicles of Jean Froissart: in Lord Berners Translation*, ed., Gillian and William Anderson (Carbondale, IL: Southern Illinois University Press, 1963), 82.

<sup>20</sup> Clive Bartlett, *English Longbowman, 1330-1515*, 15.

<sup>21</sup> A. Mary F. Robinson, *Froissart*, trans, E. Frances (New York: Scribner, 1895), 130.

of great interest to the discussion of the role of the English archer. Jean le Bel provides great detail on the battle formations and events of the battles of Neville's Cross, Crecy, and Poitiers. Like Froissart's usage of *en herse*, Jean le Bel clearly describes the formation of archers during battle. The arrangement is clearly described by Jean le Bel in the case of the abortive battle of Buironfosse in 1339, and this pattern is almost certainly what Froissart meant when he said that at Crecy the archers were organized *en herse*.<sup>22</sup> In addition to Jean le Bel's attention to detail, specifically his focus on battle formation, he pays attention to the habits of the English recruitment<sup>23</sup> during the Hundred Years War. This in combination with the *Calendar of Patent Rolls* may provide some important insight into the disappearance of archers from the battlefield.

The third major chronicler from this time period is a French chronicler, Enguerrand de Monstrelet. He chronicled the latter half of the Hundred Years War. Monstrelet provides insight in the latter battles, and his chronicles are nearly as detailed as Froissart. Regarding the specific soldier numbers at the Battle of Agincourt, Monstrelet provides accurate troop strengths and this is beneficial for comparison with other chroniclers.<sup>24</sup> Monstrelet also provides detail for the Battle of Agincourt on how archers were used outside typical battle formations and in flanking positions.<sup>25</sup> *The Chronicle of Enguerrand de Monstrelet (1840)*, translated by Thomas Johnes is most often quoted by modern historians for its accuracies.

There are a number of other various contemporary chronicles that, in combination with each other, play a major role in corroborating the information in Froissart's, Bel's, and Monstrelet's chronicles. The *Gesta Henrici Quinti: The Deeds of Henry the Fifth (1975)* is a great source for the early endeavors of Henry V and has made itself a significant source for the

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<sup>22</sup> Michael Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 197-198.

<sup>23</sup> Ibid., 200.

<sup>24</sup> Enguerrand de Monstrelet, *The Chronicle of Enguerrand de Monstrelet*, trans., Thomas Johnes (London: William Smith, 1840), 340-343.

<sup>25</sup> Ibid.

Battle of Agincourt and the years following. One of the major issues surrounding this chronicle is the lack of any information about the author of this chronicle. This source does, however, provide important information concerning the late battle strategy of the Hundred Years War and does so by attempting to get into the mind of Henry V (1413-1422) the night before the battle exploring Henry V's concerns. This source also provides information regarding the formation and location of archers on the battlefield, specifically, concentrating on how archers use stakes as a defensive measure against cavalry.<sup>26</sup> The *Gesta Henrici Quinti* focuses on the movements of the English army during the campaign of 1415 and the constant increase and decrease of troops in Henry V's army. The attrition concerns of Henry V provide insight and an examination into the ratio of archers to men-at-arms throughout the campaigns of the fifteenth century.

The *Chronicle of Jean de Venette* (1953) is another source by a French chronicler. Jean de Venette's chronicle focuses on the early part of the Hundred Years War. More specifically, Jean de Venette's writings focus on the battles of Crecy and Poitiers. Additionally, Jean de Venette focuses on the Black Death and how it ravaged Europe. More importantly, Jean de Venette's chronicle provides insight on the issues that crossbowman have in specific battles as well as how the training of English archers benefits them over the mercenary crossbowman.<sup>27</sup> Jean de Venette also provides insight into the early understanding of medieval warfare. Specifically, Jean de Venette focuses on the effects of the *chevauchee*<sup>28</sup> and how early medieval warfare essentially existed only in this form of organized raids and major battles only occurred on rare occasions.

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<sup>26</sup> Frank Taylor and John S. Roskell, trans., *Gesta Henrici Quinti: The Deeds of Henry the Fifth* (Oxford: The Clarendon Press, 1975), 69, 71.

<sup>27</sup> Jean de Venette, *The Chronicle of Jean de Venette*, trans., Jean Birdsall (New York: Columbia University, 1953), 43.

<sup>28</sup> *Ibid.*, 41.

An opponent of the devastation that occurred during the *chevauchee* of medieval warfare was Welsh chronicler Adam of Usk. The *Chronicle of Adam of Usk, 1377-1421* (1997) does not focus as much on the military conflict that existed in the latter half of the Hundred Years War, but on the movements of recognized English men throughout the period and their interactions with the people. This chronicle is short but does have material that focuses on the occurrences and devastation that occurred during the *chevauchee* of later campaigns.<sup>29</sup> This manner of warfare was preferred by most English kings for several reasons. The most notable is that it was very cost effective in comparison to sieges.<sup>30</sup> Army sizes also were much smaller and usually mounted making campaigns less costly.<sup>31</sup>

In order to examine the longbow and its usage during the Hundred Years War, it is necessary to focus on major conflicts in the years prior to the outbreak of war on the continent in order to ascertain if any major changes occurred to tactics. There are two sources that are often cited and respected among medieval historians that specifically address this early period and overlap the beginning of the Hundred Years War. *The Chronicle of Lanercost, 1272-1346* (1913) is a reliable chronicle that focuses on this earlier period and provides insight into tactics and strategy for many of the periodic conflicts that continually sprang up between the English and Scottish during our specific time period. Several specific battles discussed in this chronicle are the battles of Neville's Cross,<sup>32</sup> Bannockburn, and Dupplin Moor. *The Chronicle of Lanercost* provides specific information with regard to the usage of the English longbow in these

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<sup>29</sup> Adam of Usk, *The Chronicle of Adam of Usk, 1377-1421*, trans., C. Given Wilson (Oxford: Clarendon Press, 1997), 55.

<sup>30</sup> Clifford J. Rogers, "The Age of the Hundred Years War," 148.

<sup>31</sup> Andrew Ayton, "English Armies in the Fourteenth Century," in *The Wars of Edward III: Sources and Interpretations*, ed., Clifford J. Rogers (Woodbridge, Suffolk; Boydell Press, 1999), 314.

<sup>32</sup> Sir Herbert Maxwell, trans., *The Chronicle of Lanercost, 1272-1346* (Glasgow: James Maclehose and Sons, 1913), 335-342.

battles.<sup>33</sup> The one drawback to this chronicle is that it fails to mention any specific details regarding battlefield formations and tactics or what troops were assigned to which leaders. This chronicle provides information regarding battle events in the form of summaries and does not provide the detail of Froissart's and Jean le Bel's chronicles.

Another source that paints a detailed picture of early battlefield strategy and tactics involving the English longbow is Sir Thomas Gray's *Scalacronica, 1272-1363* (2005). This chronicle, like the previous, focuses on many battles that are typically overlooked when discussing warfare in the middle ages. Specifically, this chronicle provides precise details for the battles of Bannockburn and Dupplin Moor; this chronicle provides very specific information regarding these two conflicts with regard to how specific weapons held up in the conditions they were used under.<sup>34</sup> Sir Thomas Gray's chronicle focuses on several conflicts that occurred in between the Battle of Crecy and Battle of Poitiers.<sup>35</sup> There are several additional chronicles and near-contemporary sources that provide insight and additional details that have been put into a collection that will also be used.

For the latter period of the Hundred Years War, there are two chronicles that will provide supporting evidence: *The Chronicle Mairoa of Thomas Walsingham, 1376-1422* (2005)<sup>36</sup> and *Knighton's Chronicle, 1337-1396* (1995).<sup>37</sup> Both of these works are considered to be valuable because they focus on the latter period of the conflict which tends to have fewer available

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<sup>33</sup> Ibid., 207, 270.

<sup>34</sup> Sir Thomas Gray, *Scalacronica, 1272-1363*, trans., Andy King (Woodbridge, Suffolk: Surtees Society, 2005), 75, 77.

<sup>35</sup> Andrew Ayton, "English Armies in the Fourteenth Century," 317.

<sup>36</sup> Thomas Walsingham was a monk at St. Albans Abbey and wrote on several of the English kings, including Henry V, who commanded the English army during the Battle of Agincourt. His account of Agincourt provides specifics on the impact of archers during battle, including their successes against plate armor.

<sup>37</sup> Henry Knighton, *Knighton's Chronicle, 1337-1396*, trans., G.H. Martin (Oxford: Clarendon Press, 1995). Henry Knighton was a canon at an Augustinian abbey associated with the House of Lancaster. His chronicle was a four volume work that provides the history of England through the mid-14<sup>th</sup> century. His original four volumes are considered to be a combination of other chronicles.

sources. Excerpts from the works of Geoffrey le Baker<sup>38</sup> focusing on the Battle of Crecy and Poitiers will be used. Also Jehan de Waurin's histories will be beneficial when discussing the Battle of Agincourt (1415). There are two works, *A Chronicle of England, BC55 – 1484AD* (1864) and *The French Chronicle of London*, that were put together using a variety of contemporary sources. These two works are going to be beneficial for the specific reason of adding additional contemporary evidential support to areas that will need it. Both works essentially present the Hundred Years War as a history using only primary sources for background information.

There are two sources that have essentially laid the ground roots for all academic research on warfare during the Hundred Years War. These works are *The Agincourt War* (1956) and *The Crecy War* (1955) by Alfred Higgins Burne. Both works examined the battlefield events in a new way for their time; Burne created the perception that English archers were interspersed throughout English 'battalions' in battlefield formation; this idea, however, was one completely of Burne's creation and lacked any real evidence to support the theory.<sup>39</sup> Later historians would conclude that this theory of battlefield arrangement would actually weaken the strength of the archer to men-at-arms ratio. Burne also failed to understand the benefit of conducting a *chevauchee* when on campaign. He found it difficult to see the military objectives that would be achieved by the systematic burning of villages.<sup>40</sup> Burne also suggests, in an indirect way, that

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<sup>38</sup> Geoffrey le Baker was an English chronicler that wrote on Edward II and Edward III. His early work built on that of Adam Murimuth's chronicle, but Geoffrey le Baker provides great insight that is not found elsewhere on the Battle of Poitiers.

<sup>39</sup> Bennett, 66.

<sup>40</sup> Alfred H. Burne, *The Crecy War: Military History of the Hundred Years' War from 1337 to the Peace of Bretigny, 1360* (London: Eyre & Spottiswoode, 1955), 45. Hewitt, "The Organization of War," 297.

the decline in success of the English longbow can be attributed to the growing ratio of archers to men-at-arms in the latter years of the Hundred Years War.<sup>41</sup>

The two volume collection by Charles Oman, *A History of the Art of War during the Middle Ages* (1959) builds on Burne's work. Oman's work provides a summary of the major battles during the Hundred Years War as well as a description of tactics and strategy. Oman uses contemporary sources to determine more precisely the strength and capabilities of armies, specifically, the Battle of Crecy and Poitiers.<sup>42</sup> Building on Burne's lack of appreciation for and of the military significance of the *chevauchee*, Oman calls them 'destructive but rather objectiveless raids.'<sup>43</sup> To Oman, they appear to be entirely aimless and lacking in real military value, contributions to the sum of human misery but failing to apply military pressure to secure political goals.<sup>44</sup> What is important is that the figures regarding attrition rates and soldiers' numbers for battle, in these works, are still considered to be accurate and for this reason are an important historical resource.

Medieval military historian Kelly DeVries is a well-respected scholar whose historical concentration focuses on technological innovation and gunpowder. His works provide insight into battlefield tactics and strategy during the latter half of the Hundred Years War. *Medieval Military Technology* (1992) provides a general summary of the usage of weapons and technological growth throughout the medieval period. Similar to this previous work, *Medieval Weapons: An Illustrated History of Their Impact* (2007) provides insight into the significance and impact of weapons used during the period, especially the effect of the English longbow. A

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<sup>41</sup> Alfred H. Burne, *The Agincourt War* (London: Eyre & Spottiswoode, 1955), 317. M.R. Powicke, "Lancastrian Captains," in *Essays in Medieval History*, ed., T.A. Sandquist and M.R. Powicke (Toronto: University of Toronto Press, 1969), 382.

<sup>42</sup> H.J. Hewitt, *The Black Princes Expedition of 1355-57* (Manchester: University of Manchester Press, 1958), 114. Charles Oman, *A History of the Art of War in the Middle Ages, Volume II: 1278-1485* (New York: Burt Franklin, 1959), 164.

<sup>43</sup> Hewitt, "The Organization of War," 297.

<sup>44</sup> Ibid.



very good work that explores the role of infantry during major battles in the early period of the Hundred Years War is DeVries' *Infantry Warfare in the Early Fourteenth Century: Discipline, Tactics, and Technology* (1996). This work is a great source for comparing and understanding the significance and role that infantry played in the limited success of the English longbow.

*Guns and Men in Medieval Europe, 1200-1500: Studies in Military History and Technology* (2002) is a collection of articles that have been published by Kelly DeVries. Several of these articles are valuable sources, especially, "God, Leadership, Flemings, and Archery: Contemporary Perceptions of Victory and Defeat at the Battle of Sluys, 1340." This work focuses partly on the role of archers in the English victory at the Battle of Sluys and whether or not there were additional circumstances that impacted the English victory.<sup>45</sup> DeVries has an interesting stance on the success of the longbow. He acknowledges the impact and importance of the longbow during battle, but declares that the longbow was not deadly in battle based on evidence that is used by John Keegan.<sup>46</sup>

Another important secondary work is John Keegan's *The Face of Battle* (1976), which examines the Battle of Agincourt to determine the success and impact of the longbow. In this work, Keegan concludes that the longbow was not a deadly weapon. He concluded that the longbow had its purpose, which included goading French armies into battle, among other roles, but fails when it comes to having a deadly impact; he compares archers with cavalry and infantry and vice versa to gain an understanding of all the events of the battle.<sup>47</sup> Keegan does raise some interesting ideas, but makes far too many assumptions based only on a limited amount of contemporary sources.

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<sup>45</sup> Kelly DeVries, "God, Leadership, Flemings, and Archery: Contemporary Perceptions of Victory and Defeat at the Battle of Sluys, 1340," *The American Neptune* 55, no. 3 (1995): 227.

<sup>46</sup> Kelly DeVries, *Medieval Military Technology* (Peterborough, ONT: Broadview Press, 1992), 37-8.

<sup>47</sup> Keegan, 87-94.

A British medievalist, Andrew Ayton, has published several works concerning the English army during the fourteenth century. He has focused a significant portion of his scholarship on military composition and tactics,<sup>48</sup> as well as discusses the military revolution on some occasions. *The Battle of Crecy, 1346* (2005) offers some new interpretations on this battle and the campaign of 1346. Ayton focuses on the composition of English armies and includes strategy and logistics. This work also examines and takes a new look at the role of the English archer in the victory at the Battle of Crecy. Ayton has several articles that theorize the composition of English armies including “English Armies in the Fourteenth Century,” “The English Army and the Normandy Campaign of 1346,” and “Arms, Armor, and Horses.” Ayton’s specialty is the early period of the Hundred Years War and this will help shaping a picture of early military developments that will assist in determining changes in the later periods. Ayton, as a military historian, focuses on the transformation of the English military in general.<sup>49</sup>

There are several historians that have made great strides over the past forty years in the analysis of the logistical and strategic aspects of warfare in the Hundred Years War. British historian, Christopher T. Allmand’s *Society at War: The Experience of England and France during the Hundred Years War* (1973) and his “New Weapons, New Tactics, 1300-1500” both focus on aspects related to a changing society of warfare. Allmand theorizes that the decline of the longbow can be attributed to political and social changes.<sup>50</sup> He also dabbles in the area of changing tactics during the Hundred Years War. There were several works that have revolutionized thinking and theory regarding the English army and military revolutions that

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<sup>48</sup> Andrew Ayton, “The English Army and the Normandy Campaign of 1346,” in *England and Normandy in the Middle Ages*, ed., David Bates and Anne Curry (London: The Hambledon Press, 1994), 254. Andrew Ayton and J.L. Price, “The Military Revolution from a Medieval Perspective,” in *The Medieval Military Revolution: State, Society, and Military Change in Medieval and Early Modern Europe* (London: I.B. Tauris Publishers: 1998), 9.

<sup>49</sup> Andrew Ayton, “English Armies in the Fourteenth Century,” 314-317.

<sup>50</sup> C.T. Allmand, *Society at War: The Experience of England and France during the Hundred Years War* (New York: Barnes and Noble Books, 1973), 98.

occurred. Michael Prestwich's *The Three Edwards: War and State in England, 1272-1377* (1980) in combination with the work done by H.J. Hewitt has provided a great framework regarding the logistics of warfare. *The Organization of War under Edward III, 1338-1362* (1966) and *the Black Princes Expedition of 1355-57* (1958) clearly establish and provide evidence to show the logistical system that existed and its role in the *chevauchee* while English armies were on campaign.<sup>51</sup> This logistical information in combination with *Patent Rolls* may provide an avenue for examining the decline of supplies for archers in the latter half of the Hundred Years War.

Military historian Clifford Rogers has been publishing many works in recent years on the military aspects of the Hundred Years War. He has several important works including several articles including: "The Age of the Hundred Years War" and "The Military Revolution of the Hundred Years War." An additional work, *The Wars of Edward III: Sources and Interpretations* (1999), provides valuable source material for determining the success or failure of the longbow. The first section of this work is a combination of contemporary sources from the period and the second half is composed of recently published articles.

There are several social and military histories on the longbow which will prove very useful. They may not be as specific with regard to battles, tactics, and strategy, but they do provide insight into recruitment and specification of the bow. There are several works including Jim Bradbury's *The Medieval Archer* (1985), Robert Hardy's *Longbow: A Social and Military History* (1992), and Donald F. Featherstone's *The Bowmen of England* (1967). Hardy's work is perhaps the most respected on the subject despite his lack of academic training.

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<sup>51</sup> Hewitt, "The Organization of War," 292.

### **Chapter 3: The English Longbowman: His Role in the Transformation of Tactics**

Just as “shock combat” resulted in a transformation of medieval warfare, the introduction of the English longbow and its corresponding tactics would change strategy and tactics. Many consider this transformation to be the first stage of a larger “infantry revolution” that began during the latter half of the first Scottish War of Independence (1296-1328). The English longbow in combination with dismounted men-at-arms is considered to be the beginning of the “infantry revolution.” The English first encountered the longbow during the Scottish Wars and would adapt to such warfare by incorporating the bow into the English military as well as dismounting their knights. This new type of warfare was only made possible by the unique abilities and strengths that archers possessed. Not only did the archer transform the English army, but he would transform medieval warfare by changing the manner in which battles were fought.

There was no contemporary term for “longbow” nor was there any specific term in Latin or French for the weapon until the very end of the Middle Ages. When the term “longbow” was first used, it was done so to distinguish it from the short bow and crossbow. The term longbow is a very modern concept.<sup>52</sup> The earliest reference to the term is from the 15<sup>th</sup> century. On their own, they were simply called ‘bowes’ and it was not until later in the 16<sup>th</sup> century that term ‘longbow’ became common and was identified with this particular type of bow.<sup>53</sup> The longbow represents the design chosen for military service though it is not the technically most efficient bow of the period, but it met the demands made upon it. Specifically, it was relatively cheap, well-made, and a robust weapon that was suitable for mass production and capable of projecting

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<sup>52</sup> Jim Bradbury, *The Medieval Archer* (New York: St. Martin’s Press, 1985), 71.

<sup>53</sup> Bartlett, *English Longbowman, 1330-1515*, 21-22. The contemporary title for it was ‘livery bow’ as the issuing weapon to the soldiers by the Ordinance Office.

a missile over a long distance with a fast rate-of-fire.<sup>54</sup> It is impossible to trace down the actual origins of the longbow, but there is good evidence to show that it was much in use in South Wales during the second half of the twelfth century.<sup>55</sup> Even though there was not a term for the existence of the longbow, there is no question that it existed in warfare as early as the late-12<sup>th</sup> century.

The earliest examples of the longbow in combat come from the *Itinerary through Wales* by Giraldus Cambrensis.<sup>56</sup> In 1188, Giraldus Cambrensis accompanied the Archbishop Baldwin who was preaching the Third Crusade, through Wales. As a result of his journey he produced his *Itinerary through Wales* in which he describes the people of Gwent<sup>57</sup> as being “more accustomed to war, more famous for valor, and more expert in archery, than those of any other part of Wales.”<sup>58</sup> Cambrensis provides evidence of the expert skill of archers and early missile penetration when he describes the events that occurred at the Siege of Abergavenny (1182) where Welsh arrows penetrated an oak door four inches thick.<sup>59</sup> A knight of William de Braose was hit by one which went through the skirt of his hauberk, his mail hose, his thigh, and then through the leather and wood of his saddle into his horse; when he swerved round, another arrow pinned him in the same way as the other leg.<sup>60</sup> Whether or not such missile penetration actually occurred is irrelevant.

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<sup>54</sup> Ibid. Clive Bartlett proclaims that such criteria are still used in modern military to examine the capabilities and strategic value of weapons.

<sup>55</sup> R. Ewart Oakshott, *The Archaeology of Weapons: Arms and Armor from Prehistory to the Age of Chivalry* (New York: Praeger, 1960), 294.

<sup>56</sup> The English Gerald of Wales Latinized is *Giraldus Cambrensis* which by most historians refer to him. He lived in the 12<sup>th</sup> century and was an archdeacon and medieval clergymen.

<sup>57</sup> Gwent, also known as the Kingdom of Gwent, existed until the 11<sup>th</sup> century and was a medieval Welsh kingdom that was located in western England.

<sup>58</sup> H.G. Heath, *The Grey Goose Wing* (Greenwich, Conn.: New York Graphics Society, 1972), 89.

<sup>59</sup> Oakshott, 294. Giraldus Cambrensis witnessed the door several years after the siege in 1188.

<sup>60</sup> Ibid.

Despite the lack of information indicating the role of Welsh archers in these wars, the relevant evidence suggests that the longbow was developed in Wales.<sup>61</sup> The English fought the Scots and the French on and off for a hundred years, however, neither nation was able to successfully replicate the English methods in crafting, skill and implementation of the longbow in battle. The French persisted in using the user-friendly but ineffective crossbow; while for the Scottish “neyther the love of theyr countrie, the feare of theyr enemyes, the avoydinge of punishment, nor the receiving of any proite that might come by it, could make them to be good archers: which be unapt and unfitted thereunto by God’s providence and nature.”<sup>62</sup> The reason the French and Scottish had such great difficulty adapting and utilizing the longbow was the method of its production and the lifelong training required to skillfully loose arrows.

The longbow was made from a single wooden stave of yew. The stave was rounded rather than flat, with the central part shaped like a “D,” tapering toward the tips. Elastic sapwood was used on the outer side of the stave with the resilient heartwood facing the archer. It is for this reason that the stave had a natural spring-like reaction, which provided the necessary tension to propel an arrow.<sup>63</sup> Clive Bartlett suggests that additional types of tree were used including ash, elm and wych elm. He concedes that yew is the best wood for making longbows and states that *wych elm* is a poor second.<sup>64</sup> England imported yew bow staves from throughout Europe and though native timber was also used it was never highly regarded. The native yew trees tended to be twisted and in poor condition for bowyers to use in making a longbow. The best yew originally came from Spain but following the destruction of the country’s stocks by its king

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<sup>61</sup> Adrian Eliot Hodgkin, *The Archers Craft: A Sheaf of Notes on Certain Matters Concerning Archers and Archery, the Making of Archers’ Tackle and the Art of Hunting with the Bow* (New York: A.S. Barnes and Company, 1954), 35.

<sup>62</sup> Ibid.

<sup>63</sup> Bartlett, *English Longbowman, 1330-1515*, 23. Bradbury, 23.

<sup>64</sup> Bartlett, *English Longbowman, 1330-1515*, 22.

during the Anglo-Saxon wars of the late 14th century, the best obtainable yew was from Italy. By the middle of the 15th century, Venice had become the main export center for bow staves, which were usually bought, stored and shipped by resident English merchants.<sup>65</sup>

Difficulties arise when attempting to understand the usage of the weapon due to a lack of universal standards in manufacturing in the 13<sup>th</sup> and 14<sup>th</sup> centuries. The combination of the lack of a universal standard and the fact that there are no intact surviving bow staves has made the process of attempting to understand the archer's worth in battle somewhat difficult. The length of the bow has been heavily debated and questions surrounding its length still arise today. Most scholars, including Jim Bradbury, Clive Bartlett, and H.G. Heath, have estimated lengths that are relatively similar. The length of the longbow is in the average range of 5'7" to 6'6" but there is no ideal length.<sup>66</sup> The bow is perfect only in relation to the archer. The span between the left hand grip on the bow and the right hand pull on the draw string varied from man to man.<sup>67</sup> Information gained from the *Mary Rose*<sup>68</sup> is at odds with these estimations concerning length since the longbows discovered on the wreck tended to be 3" to 4" longer than traditionally expected.<sup>69</sup> Adrian Elliot Hodgkin has suggested that most longbows would be the full height of,

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<sup>65</sup> Ibid.

<sup>66</sup> Heath, 84. Heath suggests that the longbow is roughly six feet in length. Bartlett, "*English Longbowman, 1330-1515*", 22. Similarly, Bartlett makes the suggestion that the longbow had an average length of anywhere between 5'7" and 6'2." Bradbury, 73. Bradbury suggests that the longbow had a minimum length of 5'8." All the estimates seem to be relatively close to each other, but based on the difficulty of creating a universal standard, it would seem that Bradbury's theory is more likely to be accurate. It has been discussed that most longbows were created to match the size of the individual that would be using them. Therefore, the bow not be produced with a universal standard which means that the longbow could be produced in different sizes to reflect the size of the archer using it.

<sup>67</sup> Bradbury, 73.

<sup>68</sup> The *Mary Rose* was a warship from Tudor England that was sunk in 1545 off the English coast during a naval battle and remained in such a state until 1982 when a conservation effort brought the ship to the surface. It currently is having conservation repairs affected to it. This ship is significant because it provides military historians with the best conditioned longbow staves. The time period that the staves are from does present some issue with attempting to make a connection with longbows used during the Hundred Years War because it sunk nearly one hundred years after the end of the war.

<sup>69</sup> Bartlett, *English Longbowman, 1330-1515*, 22.

if not more than that of the archer.<sup>70</sup> This theory makes some sense when considering what Bishop Hugh Latimer<sup>71</sup> says about bow length in a short dialogue on training: “My father was diligent in teaching me to shoot the bow; he taught me to draw, to lay my body to the bow, not to draw with strength of arm as other nations do, but with strength of body. I had my bows bought according to my age and strength; as I increased in these my bows were made bigger and bigger.”<sup>72</sup> Bishop Latimer description of his youth and using longbows shows that unless every archer was the same height and age that the longbow would not be a universal size.

The English target bow of today invariably will fracture if drawn 30 inches. It is true that yew, the most resilient and elastic wood in the world, will not stand an arc greater than 120 degrees, and usually is not drawn more than 105 degrees. To draw a yard shaft on a strong 6-foot bow would require an arc of 180 degrees. This is impossible without sinew backing, which the English did not use. Bows 6-feet 6 inches, however, can stand the strain.<sup>73</sup> In a man of average height and length of arms, the distance from his extended left hand to his jaw is 28 inches.<sup>74</sup> There are several depictions of archers throughout the Hundred Years War drawing to both their nose as well as to the ear.<sup>75</sup> It is probable that because archers were recruited across all of England and did not receive long periods of formal training that there were discrepancies in how archers released arrows.

It is not so much the length of the bow but its “pull” (power) and the expertise of the user that matter. To fully appreciate not only the difficulty in using the weapon, but the years of training and use needed to master the weapon, it is important to know the weight of the “pull”

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<sup>70</sup> Hodgkin, 29.

<sup>71</sup> Hugh Latimer was the Bishop of Worcester before the Reformation occurred. He was born in the late 15<sup>th</sup> century and lived until the middle of the 16<sup>th</sup> century. He was an outspoken advocate for the use of the longbow.

<sup>72</sup> J.W. Fortescue, *A History of the British Army: Volume 1* (London: MacMillan and Company, 1910), 28-9.

<sup>73</sup> Saxon T. Pope, *Bows and Arrows* (Berkeley: University of California Press, 1962), 53.

<sup>74</sup> *Ibid.*, 72.

<sup>75</sup> Hodgkin, 29.



that would have been used with the longbow. This could vary greatly from 80-150lb, but to pull a bow of the latter magnitude required great strength and technique. Hence training from an early age was crucial, and English kings were able to promote archery throughout their lands, giving them an invaluable pool of skilled archers.<sup>76</sup> Matthew Bennett suggests, concerning the more extreme range, that the “pull” could have been as high as 150lbs. To put this in retrospect, the modern day compound bow does not typically exceed to 60-90lb range and they are built on a system of pulleys making the “pull” much easier. Clive Bartlett provides the same 80lb lowest “pull” minimum. Modern tests have shown that with this type of bow there is no real advantage in increasing the draw weight over 120lbs.<sup>77</sup> Leading expert on the issue, Robert Hardy notes that the draw weight during the reign of Edward III ranged between 80lbs and 160lbs.<sup>78</sup> The high draw weight of the bow made it necessary for archers to have a unique stance so that one could “pull with his body.”

Their stance was sideways on their target; in this manner the archer could best use his muscle for loosening the arrows. This stance allowed archers to stand closer together and created better volleys, permitting archers to shoot over the heads of other archers in front of the rear ranks.<sup>79</sup> The sideways stance of archers helped their aiming when they were in position during pitched battle. Archers did not aim instinctively because it was quicker, but really took careful aim, using their judgment to determine the height of their aim. It has been proven that the best manner of using the bow is to use the same force for every shot regardless of whether the target is close or far away; this was achievable by changing the angle of trajectory for different ranges. The English archer used the full power of his bow every time never using more

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<sup>76</sup> Bennett, 28.

<sup>77</sup> Bartlett, *English Longbowman, 1330-1515*, 23.

<sup>78</sup> Robert Hardy, *Longbow: A Social and Military History* (London: Bois d’Arc Press, 1992), 54.

<sup>79</sup> Donald F. Featherstone, *The Bowmen of England: The Story of the English Longbow* (New York: C.N. Porter, 1968), 52.

or less.<sup>80</sup> Knowing that the archer used the same amount of pull for every pull provided a pattern of consistency when firing the longbow. It also made aiming at greater distances much easier. Assuming a right handed archer stands as a modern archer does and simply extends his draw from chin to ear, then the off center line of the arrow is greatly exaggerated and the arrow flies to the left. To be able to shoot straight the archer has to bring his bow arm round to be in line with his drawing arm which immediately shortens the draw-length.<sup>81</sup> This method was used to help the archer shoot straight while another was used to acquire a target.

There were two methods used to acquire a target with one being more practical since it allowed for faster target acquisition. One method was to lower the drawing hand which in effect raises the bow hand, but this is a difficult technique with heavier bows. Roger Ascham describes the difference between ‘forehand archers’ who could reach long distances while still being able to view the target over the bow hand, as compared to ‘underhand archers’ who had to elevate their bow arm to view the target under the bow hand to reach the same mark.<sup>82</sup> It makes more sense to shoot in the manner that Ascham suggests which is to acquire a target over the front bow hand. This method would, however, would prevent archers from acquiring targets at longer ranges. It is likely that archers used a combination of both aiming techniques. Archers in the *Bayeux Tapestry*<sup>83</sup> are shown pulling the string back to the chest while later the bow was pulled back to the side of the face. Whether this resulted in greater power, needed more skill, or was just a different fashion is impossible to ascertain.<sup>84</sup> The *Bayeux Tapestry* does provide some insight, but the archers embroidered on the tapestry tend to be firing a bow that is much shorter

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<sup>80</sup> Ibid.

<sup>81</sup> Bartlett, *English Longbowman, 1330-1515*, 30.

<sup>82</sup> Ibid. Roger Ascham was an English scholar who wrote *Toxophilus (1545)* which was the first English work about longbow archery and archery as a sport. Ascham was an archer and an avid supporter of the weapon.

<sup>83</sup> The *Bayeux Tapestry* is an embroidered cloth that extends nearly two-hundred and thirty feet that depicts the events leading up to the Norman Conquest and ends with the Battle of Hastings (1066).

<sup>84</sup> DeVries, *Medieval Weapons: An Illustrated History of Their Impact*, 136.

in length than the longbow. It is difficult to determine exactly how far archers during the Hundred Years War drew the longbow, but it is clear that the bow was drawn to either the cheek or ear; any distance shorter than this would not provide enough power to loose an arrow that is considered to be a “clothyard” long.

Training for the English archer was no ordinary matter and to be an expert at firing the longbow, many years of training were required. Evidence from the skeletons of archers of the 15<sup>th</sup> and 16<sup>th</sup> centuries shows distinct changes to the bone structure that long term practice and shooting of bows brought about.<sup>85</sup> The fact that the bone structure was altered illustrates that there was continuous and rigorous practice throughout that individual’s life. The longbow is exhaustive to draw, and difficult to fire accurately. It requires bodily fitness and unremitting practice for proper management.<sup>86</sup> While a three-finger draw was certainly used, and Ascham instructs on that style, the great majority of medieval illustrations show a two-finger hold. This gives a sharper release as there is less friction on the string when loosed. This was the origin of the Englishman’s, still used, two-finger salute, adopted by archers in the face of French threats to cut off the drawing fingers of any archer they captured.<sup>87</sup> The English salute was famous throughout this time period and was the ultimate insult to the French. The insult reflected the large division between the knightly, nobler class and the peasant class of citizens. It was said that James Douglas,<sup>88</sup> who died in 1330, had such respect for the English longbow that he either cut off the right hand or gouged out the right eye of any English archer he captured.<sup>89</sup> The archer was feared because of their early success; they had great range, fire-rate, and penetration power.

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<sup>85</sup> Ibid., 193.

<sup>86</sup> Hodgkin, 35.

<sup>87</sup> Bartlett, *English Longbowman, 1330-1515*, 30.

<sup>88</sup> James Douglas (lord) was a knight and commander from Scotland and fought the English during the Scottish Wars of Independence. He was the first noble supporter of William Wallace.

<sup>89</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 70.

Tactically archers were very successful because of their use in combination with men-at-arms. Their missile superiority provided the English with an advantage. The “arrow storm” in did the following two things to an oncoming charge of cavalry: first, the longbow broke up the ranks of the opposing cavalry; and second, they funneled the cavalry into the center ranks composed of dismounted men-at-arms. Historians have been somewhat consistent in estimating the distance at which the longbow was combat effective compared to the distance at which it was lethal. This would, of course, vary depending on the type of armor in use at the time. Most historians suggest an effective range somewhere between 150 and 200 yards.<sup>90</sup> This would suggest that archers had a lesser distance at which they were deadly. Historians do, however, note that archers may have held a range upwards of 400 yards with a specific type of flight arrow that was meant for distance.<sup>91</sup>

The success and long service of the archer throughout the Hundred Years War can be attributed to their range and fire-rate. The use of archers in combination with men-at-arms was a deadly tactic for the English during the early part of the Hundred Years Wars following the tactical transformation that occurred after the Second Scottish War of Independence (1332-1357). Archers were effective because their range and high rate of fire created close-formation chaos within formed battalions in pitched battle. There has been some inconsistency regarding the rate of fire for archers throughout the Hundred Years War. It has been suggested by several historians that the rate of fire of archers during this period averaged around ten arrows per minute. One suggested that it was as high as twelve arrows per minute.<sup>92</sup> Historian Juliet R. V. Barker states that an archer who could not fire ten aimed arrows per minute was not fit for

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<sup>90</sup> Michael Prestwich, “The English Medieval Army to 1485,” in *The Oxford Illustrated History of the British Army*, ed., David Chandler (New York: Oxford University Press, 1994), 12-3. Bennett, 28. Morton, 43.

<sup>91</sup> Arthur G. Credland, “Sir Ralph Payne-Gallwey Bt. and the Study of Medieval and Ancient Projectile Weapons,” *Arms and Armor* 8, no. 1 (April 2011): 78. Bennett, 28. Featherstone, 40. Morton, 43.

<sup>92</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 70. Morton, 43.

military service.<sup>93</sup> H. J. Hewitt makes note that archers were “tested and arrayed between the time that orders were issued and the date that men were expected to be available for duty” and “that training could not have lasted more than a month and that this period of time was used more for the purpose of having these archers trained in submitting to the new authority.”<sup>94</sup> The idea of turning away archers that could not reach the mark of ten arrows fired per minute seems arbitrary because the archer was in such high demand it was more likely that peasants with archery experience were not turned away.

The research of Kelly DeVries and Clifford Rogers provides further insight into what the rate of fire archers was in battle. DeVries makes the point that archers could probably release ten to twelve arrows a minute but raises the question of whether or not this rate was ever achieved or if it was even necessary.<sup>95</sup> Attempting to reach such a fire rate would not only be exhausting but would not be an efficient use of supplies. A good archer could easily fire five arrows in the time it took mounted men-at-arms to charge home from out of bow range.<sup>96</sup> Rogers makes an important distinction here that needs further explanation. He notes that while in combat, archers would fire in volleys when the enemy was at a distance, which only required them to fire roughly five arrows. If any mounted men-at-arms made it close to the ranks, archers would then fire at will based on when they had clear line-of-sight and could acquire a target.<sup>97</sup> Therefore, the fire-rate of archers remained consistent as long as the archers were in “arrow storm” mode. Outside of the initial volleys, the fire-rate of archers would raise and lower depending on conflict severity and the ability to acquire a target. It is most likely that archers could discharge a minimum of six

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<sup>93</sup> Juliet R.V. Barker, *Agincourt: Henry V and the Battle that Made England* (New York: Little, Brown and Company, 2006), 86.

<sup>94</sup> H.J. Hewitt, *The Organization of War Under Edward III, 1338-1362* (New York: Barnes and Nobles, Inc., 1966), 94.

<sup>95</sup> DeVries, *Medieval Weapons: An Illustrated History of Their Impact*, 193.

<sup>96</sup> Rogers, “The Age of the Hundred Years War,” 143.

<sup>97</sup> DeVries, *Medieval Weapons: An Illustrated History of Their Impact*, 193.

arrows a minute<sup>98</sup> and perhaps more if the opportunity presented itself in close-quarter skirmishing. There is no point in making claims about archers having the ability to fire arrows on end if it was not practical for battle.

There are several examples that advance the idea that archers fired different arrows during combat. Both Featherstone and Bartlett have suggested, in their respective works, that archer may have carried a variety of arrows, which were to be used for either volleys or skirmishes. English archers carried into the field a sheaf of twenty-four arrows, buckled within their girdles. A portion of them, about 6 to 8, were longer, lighter, and winged with narrower feathers than the rest. With these ‘flight arrows’, as they were called, archers could hit a mark at a greater distance than with the remaining heavy sheaf arrows.<sup>99</sup> Sir John Smythe,<sup>100</sup> writing in 1590, stated that in every sheaf of 24 arrows, 8 should be lighter ‘flight’ arrows to ‘gall’ the enemy at longer distances.<sup>101</sup> It is more likely to have been practiced in the early years of the Hundred Years War when plate armor was still a rarity because the lighter arrow would have broken on direct impact with plate armor. Heavier arrows would more consistently have the strength to penetrate early plate armor.

Early types of military arrow-heads had a broad, flat blade with a prominent shoulder, but by the thirteenth century a more compact type of arrow-head had appeared. The reduction in size was a logical result of the development of body armor. The trend was to produce an arrow with more

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<sup>98</sup> Featherstone, 40.

<sup>99</sup> Ibid., 50.

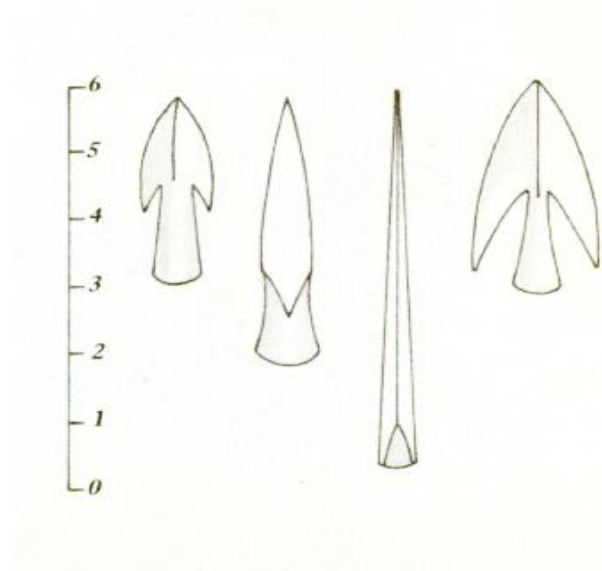
<sup>100</sup> Sir John Smythe was a diplomatist and military writer born in the early 16<sup>th</sup> century. Smythe published two treatises on the military and strategy. His works are titles *Certain Discourses* (1590) and *Instructions, Observations, and Orders Militarie* (1594). In his first work, Smythe vents his frustration with his removal from service from the crown because of his outspoken disapproval of the army’s training. Despite, many leaders agreeing with him he was removed from service due to “ill-health.” Within *Certain Discourses*, Smythe discusses the longbow and the “wonderful effects of archers.”

<sup>101</sup> Bartlett, *English Longbowman, 1330-1515*, 25.

penetrating power and the ultimate design was the famous bodkin point—a square-sectioned chisel-ended arrow-head capable of piercing chain mail and plate armor (see Figure 1).<sup>102</sup>

The length of the military arrow of the Middle Ages has never been satisfactorily determined although there are many estimates. From the available evidence as to the length of these shafts, only a generalization seems to emerge. Out of the millions of arrows that must have been made, we have only one exact arrow to examine—thirty and a half inches long. This

Figure 1: Longbow Arrowheads (L-R)  
General Purpose, Bodkin, Bodkin, Broadhead



isolated example cannot be taken as a pattern for all arrows and therefore we must use the estimation of an average length of between twenty-eight and thirty-six inches.<sup>103</sup> Long heavy shafts of either birch or aspen are mentioned as being used for the shaft of the arrow.

### Chapter 3.1: Archer Recruitment

For the first part of the war England sustained and replenished their army on the feudal basis which was backed by the National Militia (*the fyrd*).<sup>104</sup> The Commission of Array was a legacy of the “feudal obligation” whereby every man between the ages of 16 and 60 (*the posse comitatus*) was to serve his country in time of need. According to the Statute of Winchester of 1258, in force until 1558, those with lands or rents worth £2 to £5 per year were,

<sup>102</sup> Heath, 100-1. For Figure 1, see Bennett, *Agincourt, 1415: Triumph Against the Odds*, 27.

<sup>103</sup> Heath, 101. This arrow was found in the Chapel House of Westminster Abbey.

<sup>104</sup> Featherstone, 35.

to serve as or provide an archer.<sup>105</sup> The commission of array was the descendant of the old Anglo-Saxon *fyrð*, and the forerunner of the militia muster of the Tudor and Stuart periods, whereby all men between specific ages, were eligible for military service which was a form of conscription.<sup>106</sup> Archers were chosen and tested and arrayed and leaders were appointed, but between the issuing of orders for the array and the date by which the men were expected to be available for the journey to the port of embarkation, this period was often no more than two months.<sup>107</sup>

Not every levied archer was mobilized to serve in a field army. The duty of arrayed archers north of the River Trent was to remain on ‘standby’ ready to repel any Scottish incursion, most likely when the King of England was in France. Similarly, men of these coastal counties, especially those facing the English Channel, who lived within a six-league margin of the shore were arrayed and placed on ‘standby’ to serve in the *Garde de la Mar*. Their role was purely to defend their areas against any attempted invasion.<sup>108</sup> The Commission of Array was one of two methods of army recruitment for the English during the Hundred Years War. Edward III revolutionized this system by instituting a method of organization that was certainly the most significant development in the English army of the late Middle Ages. For the campaign of 1341, Edward had replaced the old feudal levy with a system of indentured contracts between the Crown and the captains of armed retinues; this method of raising paid professional soldiers for

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<sup>105</sup> Bartlett, *English Longbowman, 1330-1515*, 5. Contained within Peter Hoskins, *In the Steps of the Black Prince: The Road to Poitiers, 1355-1356* (Woodbridge, Suffolk: The Boydell Press, 2011), 4, is a description that helps understand pay rates and purchase value. Hoskins writes, “In medieval England the main currency was based on sterling silver and the pound, divided, as it would remain until 1971, into twenty shillings (s) each of which in turn divided into twelve pennies (d). A mark was worth 13s 4d (two-thirds of a pound) and the gold noble 6s 8d. A men-at-arms was paid 1s a day, a foot archer 3d a day, and a mounted archer in the English armies can be considered reasonably well paid with a wage of 6d a day. In terms of purchase value, 1d would buy a gallon of ale.” For more information regarding pay rates of archers, see Hewitt, *The Organization of War Under Edward III, 1338-1362*, 3, 33-4, 36, 52.

<sup>106</sup> Clive Bartlett and Gerry Embleton, “The English Archer, c.1300-1500” in *Military Illustrated: Past and Present*, no. 1 (Jun/July, 1986): 10.

<sup>107</sup> Hewitt, *The Organization of War Under Edward III, 1338-1362*, 94.

<sup>108</sup> Bartlett, *English Longbowman, 1330-1515*, 8.



was utilized until the end of the Hundred Years War.<sup>109</sup> This innovation may have been instituted even earlier than Edward III by Edward I in the late 13<sup>th</sup> century.<sup>110</sup>

For the nobility, the contracts of indenture superseded the old feudal military obligation. Contracts drawn up between the king and his commanders were subcontracted to lesser nobles. These in turn could be subcontracted down to the gentry and their tenants.<sup>111</sup> Until the 17th century there was no such thing as a standing army in England. Consequently, the campaigns of the 14th and 15th centuries saw the raising of temporary armies which were disbanded on completion of operations. An archer served in one of these armies by either “having been conscripted into the levy, raised by commission of array or recruited into a retinue, great or small, of a member of the nobility in a force raised by contract of indenture.”<sup>112</sup>

An indentured retinue would consist of any or all of the three types of the following personnel: first, resident household attendants; secondly, men who are bound by written indenture to serve their lord for life in peace and war; and thirdly, those whose attachment to the lord is shown simply by the acceptance of his fees and the wearing of his badges and livery.<sup>113</sup> It has been customary in discussing the Edwardian military revolution to focus particular attention on changes in method of recruitment and forms of remuneration. The raising of armies by means of short term, written contracts between the king and his captains was the most effective way in which paid armies could be put in the field.<sup>114</sup> Contracts often specified that if a payment fell into arrears, some contracts specifying as little as week, the agreement was annulled and the

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<sup>109</sup> Featherstone, 35.

<sup>110</sup> Bartlett, *English Longbowman, 1330-1515*, 6.

<sup>111</sup> Bartlett, “The English Archer, c.1300-1500,” 10.

<sup>112</sup> Bartlett, *English Longbowman, 1330-1515*, 4.

<sup>113</sup> N.B. Lewis, “Organization of Indentured Retinues in Fourteenth-Century England,” *Transactions of Royal Historical Society* 27, Fourth Series (1945): 29-30. Bartlett, *English Longbowman, 1330-1515*, 6.

<sup>114</sup> Ayton, “English Armies in the Fourteenth Century,” 304.

contracting party was free to depart without blame. Inevitably, in the real world, soldiers sometimes went unpaid for long periods.<sup>115</sup>

At no point in the English occupation was there a standing army in the field. Campaigns were conducted by a variety of troops brought together temporarily for specific operations in question.<sup>116</sup> The English army had lifted itself from the archaic feudal system to become a paid, professional short-service army, in which the mounted noble and the yeoman archer served overseas at the King's wages. The English army was a highly trained and disciplined mercenary army. A soldier who drew regular pay for his services was more amenable to discipline than the man dependent on looting and plunder.<sup>117</sup> The standard rates of pay stayed remarkably consistent over throughout the war. In fact, the only major change was to the pay of archers. Both the levied and retained archers were paid at the same rates which in the 14<sup>th</sup> century were, generally, for a mounted archer 6d a day in England and France, 4d a day in Scotland; for a foot archer 3d a day in England and France, 2d a day in Scotland.<sup>118</sup>

### **Chapter 3.2: The End of “Shock Combat:” The Triumph of the Defensive Battle**

The Scottish Wars of Independence encouraged a transformation in military tactics and strategy that terminated the old ways and made way for a new battlefield strategy. Since the beginning of the Middle Ages, cavalry had been the dominate force on the battle field giving rise to the long held standard of warfare which encompassed the ideal of chivalry. This style of warfare slowly deteriorated throughout the Hundred Years War because of what the English learned in fighting the Scottish in northern England. The stirrup, as Lynn White said,

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<sup>115</sup> Bartlett, *English Longbowman, 1330-1515*, 9.

<sup>116</sup> Anne Curry, “The Organization of Field Armies in Lancastrian Normandy,” in *Armies, Chivalry, and Warfare in Medieval Britain and France: Proceedings of the 1995 Harlaxton Symposium*, ed., Matthew Strickland (Stamford: Paul Watkins, 1998), 208.

<sup>117</sup> Featherstone, 36.

<sup>118</sup> Bartlett, *English Longbowman, 1330-1515*, 9. Hewitt, *The Organization of War Under Edward III, 1338-1362*, 36.

“effectively welded horse and rider into a single fighting unit capable of violence without precedent. By adding animal to human power, it greatly increased the knight’s capacity to damage his enemy. Cavalry, for the first time, became the shock weapon *par excellence*.”<sup>119</sup> The introduction of the stirrup altered in a fundamental way, the tactics of mounted warfare and enhanced enormously the importance of cavalry because no infantry of this time could withstand a cavalry charge.<sup>120</sup> The introduction of Welsh archers into the English army laid the foundation for a tactical transformation that slowly but surely destroyed the dominance that cavalry once enjoyed on the battlefield.

Until the longbow had been discovered, it was a relatively unknown weapon that had been overshadowed for many years by the crossbow, which had served European armies beginning in the 11<sup>th</sup> century. This can be seen in a statute that emphasizes the deadliness of the crossbow. In 1120 crossbows were prohibited in Flanders, in an effort to keep the peace. In 1139, the Second Lateran Council forbade the employment of bowmen and crossbowmen against other Christians.<sup>121</sup> The crossbow was seen as a weapon not proper to Christians and gentlemen.<sup>122</sup> Many continued to use crossbows throughout Europe after the declaration, but longbows were scarcely seen in battle. This prohibition was unenforceable: in the heat of warfare, every foe seemed an infidel. The crossbow had a measurable ability to shoot further

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<sup>119</sup> Lynn White, Jr., *Medieval Technology and Social Change* (Toronto: Oxford University Press, 1962), 2.

<sup>120</sup> Morton, 38.

<sup>121</sup> “*Artem autem illam mortiferam et Deo odibilem ballistariorum et sagittariorum adversus Christianos et Catholicos exerceri de cetero sub anathemate prohibemus.*” This text can be found in J.D. Mansi, *Sacrorum conciliorum nova et amplissima collection*, Vol. 21 (Venice, 1776), 533. The reason for this view was because of the deadliness of the weapon. The crossbow did and would continue to be a very penetrative weapon. The French would use the weapon throughout the Hundred Years War because of its penetration capabilities.

<sup>122</sup> Bradbury, 1. Pope Innocent banned the weapon on moral grounds from being used against fellow Christians. The longbow and crossbow, however, were not banned from being used against those whom the church considered infidels.

and hit harder than any other portable missile thrower before the English longbow appeared in the later thirteenth century.<sup>123</sup>

The Battle of Falkirk would be the first pitched battle in which the English would use a combination of archers and infantry. It is important to make note that there is a difference between infantry and dismounted men-at-arms. Infantry were cost-effective soldiers with less training than men-at-arms. When Edward I found the Scottish in battle array, he discovered their spearmen disposed in four circular bodies, connected by lines of archers. When he ordered the attack, the first division of cavalry moved forward but were forced away from the Scottish battle lines by a wide ditch; likewise, the second division of cavalry was forced away as well.<sup>124</sup> The Scottish horsemen retreated behind the archers and held their ground until showers of arrows and stones from the English archers broke their formation.<sup>125</sup> There were several things that the English learned from this battle. First, after the cavalry attack had failed due to the ditch. The combination of archers that provided missile fire and infantry that provided the necessary close combat created a tactical advantage that easily defeated Scottish cavalry.<sup>126</sup> The battle was won by archers, infantry, and cavalry, but Edward I got a glimpse of the interworking of archers and infantry. This battle brings to light the difficulties that cavalry faced when charging an enemy on difficult terrain. During this battle, the English learned of the difficulties that cavalry faced as well as the importance of the archer. Supporting arms in medieval warfare was a new concept.

The Battle of Falkirk was won by Edward's masterly use of a combined force of Welsh bowmen and mounted men-at-arms.<sup>127</sup> Several years later at the Battle of Courtrai (1302),

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<sup>123</sup> White, *Medieval Religion and Technology: Collected Essays*, 266.

<sup>124</sup> James E. Doyle, *A Chronicle of England, BC55-1484AD* (London: Longman, Green, Longman, Roberts and Green, 1864), 269.

<sup>125</sup> Ibid.

<sup>126</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 70.

<sup>127</sup> Oakshott, 282. In Prestwich's *The Three Edwards: War and State in England*, he makes note that "Other military techniques were learned in the north. Although the large armies of Edward I's reign marched slowly,

between forty and fifty percent of the French cavalry were killed.<sup>128</sup> The real tactical turning point was not the Battle of Falkirk, but the Battle of Bannockburn, when the English cavalry, fighting in the traditional fashion on war-horses, were routed by a Scottish army consisting mainly of pikemen. It was this humiliating defeat which seems to have brought about a major shift in tactical thinking in England.<sup>129</sup>

The English suffered a great defeat at the Battle of Bannockburn which in combination with previous successes would ultimately provide them with the knowledge needed to amass a great disciplined army. The Battle of Bannockburn is often used by historians to mark a transition in English military tactics not because of a great success, but because of an insurmountable defeat. The English met the Scottish army in the morning; they were forced, however, to fight on a narrow front forcing their numerous divisions to mass one behind the other.<sup>130</sup> Sir Thomas Gray makes note of several important facts in his description of the battle which are also latter described in the chronicle of Lanercost. Gray writes the following:

They [Scottish] came out of the woods on foot in three battles, and steadily held their course towards the English army, which had been armed for all the night, their horses bridled. [The English] mounted on horseback in great consternation, for they were not at all used to dismounting to fight on foot, while the Scots had taken the example of the Flemings, who had previously defeated on foot the forces of France, at Courtrai. The Scots came quickly, lined in *Schiltroms*, and attacked the English battles, which were crushed together so that they could not move against them, whilst their horses were being disemboweled by spears.<sup>131</sup>

There are several accounts of this battle that recount the same story, but this one provides more light on the strategic errors that the English made on this fateful day. They allowed their

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encumbered by carts and baggage, some swift raids were mounted against the Scottish. In 1298, one was planned from Edinburgh to Stirling, to consist of two hundred cavalry with no infantry. Supplies were to be taken by three hundred pack-horses. This was in imitation of the Scottish mounted raids, and the English were quick to copy their opponents' techniques of burning and plundering," 67.

<sup>128</sup> DeVries, *Medieval Weapons: An Illustrated History of Their Impact*, 169.

<sup>129</sup> Ayton, "English Armies in the Fourteenth Century," 316-7.

<sup>130</sup> Doyle, 283-4

<sup>131</sup> Sir Thomas Gray, 75, 77.

overwhelming numbers to be neutralized by meeting the Scottish in battle instead of allowing the Scottish to find the English. The Scottish army was able to find a defensible position and this proved deadly for the English forces. Their weakness would be exposed and the English would later learn from this. The resistance of the Scots, fierce and successful for some time, began to falter beneath the shafts of the English archers. The danger was noted by Bruce and he brought up his reserve of cavalry; and these horsemen, suddenly rushing upon the flanks of the archers, slew or dispersed the whole force.<sup>132</sup> The *Chronicle of Lanercost* calls this battle “an evil, miserable and calamitous day for the English.”<sup>133</sup>

The Battle of Bannockburn showed the English that in order to be a formidable force, cavalry needed suitable terrain and weather. Cavalry could only operate on good terrain, however, and at Bannockburn the boggy ground proved disastrous. It was difficult to integrate the horsemen properly with the infantry who made up the bulk of the army. The fact that the Scottish were able to choose their ground with care, ensuring that the English cavalry would flounder in unsuitable terrain is something that the English began to consider in earnest when choosing a battlefield.<sup>134</sup> It was only after Bannockburn that the English began to experiment with tactics that would make effective use of both knights and archers.<sup>135</sup> Bannockburn was the first time the English experienced such a combination of knights and archers, however, during this battle, the knights did not dismount. The English, having learned their lesson at Bannockburn, chose contrary to the customs of their fore fathers to fight on foot at Dupplin Muir and Halidon Hill, where they wiped out two successive Scottish armies.<sup>136</sup>

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<sup>132</sup> Doyle, 283-4.

<sup>133</sup> Maxwell, 207.

<sup>134</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 54.

<sup>135</sup> Ibid., 66-67.

<sup>136</sup> Rogers, “The Age of the Hundred Years War,” 142.

The Battle of Dupplin Moor was fought between David II, the son of Bruce, and English allies. This was the first battle that the English used infantry in combination with archers on the flanks. There are several accounts of the battle, however, these accounts do not provide specific information with regard to the actual tactical maneuvering used. The descriptions provide information on the pre-battle formation and shed light on the actions taken by archers and how they helped win the battle. The *Anonimalle Chronicle* declares that the English archers and small force of footmen put the Scots to flight.<sup>137</sup> In a separate work Sir Thomas declares, "...the Scottish vanguard was brought to a halt momentarily, at the feel of spear-points and arrows."<sup>138</sup> This statement provides insight on the success of the joint endeavor between infantry and archers. The description of the victory found in the *Chronicle of Lanercost* also sheds light on the outcome of the battle and how the field was won: "...the Scots were defeated chiefly by the English archers, who so blinded and wounded the faces of the first division of Scots by an incessant discharge of arrows, that they could not support each other."<sup>139</sup> The archers were able to decimate the Scottish troops before they were able to reach the English position. Essentially, the archers softened up and removed any organization that the Scottish troops many have had. This battle was the first time that the English used a battle formation that involved three "schiltroms."<sup>140</sup> This battlefield set or formation is what the English would use throughout the Hundred Years War.

As the Battle of Dupplin Moor was not actually fought by the English royal army but rather by English allies in the north, the Battle of Halidon Hill would be the first time that the

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<sup>137</sup> Wendy Childs and John Taylor, trans., *The Anonimalle Chronicle, 1307-1334: From Brotherton Collection MS 29* (Leeds: The Society, 1991), 149.

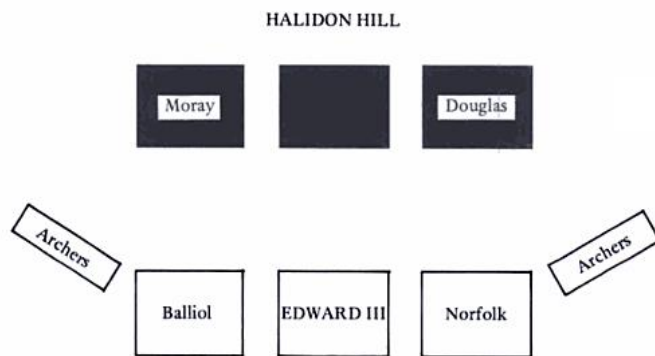
<sup>138</sup> Sir Thomas Gray, 111.

<sup>139</sup> Maxwell, 270.

<sup>140</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 70. A schiltrom is a compact formation of soldiers in a battle array.

new tactic involving archers and infantry was attempted by the royal army. Edward III was very anxious to fight; he had not forgotten the humiliation of the 1327 campaign.<sup>141</sup> He failed to obtain full parliamentary consent for his plans, but recruited an army in 1333 and proceeded to besiege Berwick. The Scots were now caught by a bargain similar to that which had led to Bannockburn: complex negotiations led to agreement that the town would surrender unless the Scots crossed the Tweed at a specified point, forced an entry to the town with two hundred armed men, or fight a pitched battle.<sup>142</sup> The *Anonimale Chronicle* depicts the Scottish army approaching the English army, which is “drawn up in four battle lines.”<sup>143</sup> It is likely that Edward III was in a vanguard position, which would have been drawn back from the main battle.

Figure 2: Battlefield Formation at the Battle of Halidon Hill (1333)



When referring to Figure 2,<sup>144</sup> an accepted representation of the Battle of Halidon Hill, it becomes clear that there were two battalions of winged archers and two battalions of infantry. Edward’s division would not have been considered in the formation because their position was somewhat removed from the main battle line as in the vanguard. *The Anonimale Chronicle* describes also, that while the Scottish were drawing up in battle array that Edward III encouraged his men, “especially the archers who had come to his aid, and promised them good reward.”<sup>145</sup> This

<sup>141</sup> During this campaign, Roger de Mortimer accompanied Edward III into the North and was almost captured during a night raid by the Scottish. This campaign was indecisive and the English failed to win any major victories as the Scottish conducted a series of raids throughout the year.

<sup>142</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 59.

<sup>143</sup> Childs, 163.

<sup>144</sup> For Figure 2, see Bradbury, *Medieval Archer*, 89.

<sup>145</sup> Childs, 167.



statement implies two possible things: one that the English archers were lacking in discipline and Edward III needed to promise them rewards to prevent them for deserting or two that he was just attempting to encourage and raise moral. It is impossible to understand his motivations for such a comment, but the actions of the archers during this battle speak for themselves.

The *Anonimale Chronicle* states that “the English archers destroyed and injured them [Scots] so that they were in a short time as if choked and blinded, and soon they were thrown into confusion.”<sup>146</sup> The *Chronicle of Lanercost* depicted a similar event saying that the Scottish were “blinded by the host of English archery,” and they “quickly began to turn their faces from the arrow flights and to fall.”<sup>147</sup> The chroniclers paint a picture of archers having a major success and truly proving their worthiness. As this battle showed, and future English engagements re-enforced, when the English army could find a good defensive position, anchored and protected by natural features on the flanks, and set up their “battles” with archers on the flanks and men-at-arms at center, they proved to a force with which to be reckoned.<sup>148</sup>

The English had learned much from the Scottish Wars regarding the art of war. They discovered the benefit of dismounting their cavalry in combination with their new weapon, the archer. The early success that the English gained in the latter years of the Scottish Wars of Independence would carry over into major victories against the French in the Hundred Years War. The English discovered the efficiency of the plundering raid, the destruction of villages and crops, and ransoming and slaying the civilian population.<sup>149</sup> At the heart of England’s rise to military power in the fourteenth century were changes in military organization and the

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<sup>146</sup> Ibid.

<sup>147</sup> Maxwell, 279-280.

<sup>148</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 14.

<sup>149</sup> Ibid., 199.

composition of armies. When taken as a whole these changes amount to a major overhaul of the military machine. Some historians have called it a military revolution.<sup>150</sup>

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<sup>150</sup> Ibid., 62. Ayton, “English Armies in the Fourteenth Century,” 304.

## Chapter 4: The Hundred Years War: Battle Tactics and Archer Demand, 1323-1360

The continued demand for the English longbow and the archer created immense stress on the supply of both during the early years of the war, and caused numerous issues in the second half of the Hundred Years War.<sup>151</sup> Near the end of the first half of the Hundred Years War, the English began experiencing a shortage of skilled archers and weapons (longbows). Constant warfare, in combination with the onset of the Black Plague, caused the aforementioned shortage. Despite the shortage, the introduction of plate armor, and competition from crossbowman, the English archer was able to remain successful throughout this early period of the Hundred Years War. Another strategic element of warfare known as the *chevauchee*,<sup>152</sup> learned by Edward III during the First Scottish War of Independence, would lower the demand for large armies by avoiding pitched battles. It is for this reason, that in most of the major battles throughout the Hundred Years War, the English were outnumbered.

The *chevauchee* solved recruitment and supply problems not requiring as massive an army. More importantly, the *chevauchee* was a mobile wrecking machine that was much more cost effective than besieging cities. In many cases, cities were besieged for very short periods of time for the purpose of getting a relief army to attack a fixed defensive position. The principle aim of the *chevauchee* was to weaken the enemy's morale, his ability to collect taxes, and break his resolve to resist. The prime targets of the *chevauchee* were population, the economy, and

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<sup>151</sup> The Hundred Years War lasted from 1337 to 1453. There were several peace treaties that were declared causing a cessation of battle activities between England and France; however, this did not always apply to their allies. The first peace treaty, the Treaty of Bretigny, lasted from 1360 to 1369. Therefore, when discussing the first half of the Hundred Years War, the years referenced are actually 1337 through 1360. Every event after 1369 will be referred to as the second half of the war. The Treaty of Bretigny marks several major differences between the first and second half of the war including a change in tactics, supply, and most importantly steadily changing armor that affects the effectiveness of the archer. The reason some historians mark this treaty as the midway point is because of the considerable overlap in military engagement in the later Middle Ages. Excluding a four year peace that occurred between 1328 and 1332, the English were at war with the Scottish well into the middle of the 14<sup>th</sup> century.

<sup>152</sup> A *chevauchee* is a raid that involves the plundering and burning of towns and anything that would lower the tax earning capabilities of the French.

social infrastructure rather than armies.<sup>153</sup> Though these motives were diverse they did not alter the nature of war, which at that period consisted mainly of military operations that destroyed the means by which life was maintained.<sup>154</sup> After amassing an army, the next issue to be solved was the matter of mobility. If an army planned to move through France raiding and destroying resources, they would need to do so quickly or risk being caught by a larger army. This was done early in Edward III's reign with the archers mounted so they could ride with the army and dismount to fight.

Mounted archers first appear in the records in 1334. With their mobility, they were integrated into the retinues provided by the magnates. The mobility also made it possible to adopt "far more systematic" battle tactics.<sup>155</sup> The emphasis on mounted troops and recruitment on the basis of individual retinues, consisting of roughly equal numbers of men-at-arms and archers, greatly enhanced the effectiveness of the English army under Edward III. The *chevauchee* had been influenced by the experience of the protracted Scottish wars, in which both sides had recognized the importance of mobility.<sup>156</sup> Conducting a *chevauchee* was very cost effective, and required very few troops in comparison to armies created for siege. The cost of supporting an army of around 23,000 men for roughly a two month siege of Tournai in 1340, for example, mounted to roughly £60, 000 in soldier's wages alone. The annual peacetime revenues of the English crown at the start of Edward III's reign, by contrast, were in the area of £30, 000 - 40, 000.<sup>157</sup> It is clear that the use of the *chevauchee* was more beneficial than a conventional army because it allowed for greater mobility and was cost effective.

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<sup>153</sup> C.T. Allmand, "New Weapons, New Tactics, 1300-1500," in *The Cambridge Illustrated History of Warfare: The Triumph of the West*, ed., Geoffrey Parker (Cambridge: Cambridge University Press, 1995), 95.

<sup>154</sup> Hewitt, *The Organization of War Under Edward III, 1338-1362*, 93.

<sup>155</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 69.

<sup>156</sup> Ayton, "English Armies in the Fourteenth Century," 316.

<sup>157</sup> Rogers, "The Age of the Hundred Years War," 148.

For the English, the beginning of the Hundred Years War was truly a continuation of the previous Scottish War of Independence. The English were constantly fighting the Scots and French on separate fronts but on some occasions the Scots and French were allied. As the first Scottish War ended, the Hundred Years War began. The tactical transformations of the first Scottish War carried over into the war fought against the French. Edward III and his commanders won their victories in France by applying tactics they learned in the Scottish wars. The English army was normally divided up into three battalions of dismounted men at arms, with archers placed on the flanks at an angle, so that they could fire at the advancing army enemy from the side.<sup>158</sup> The English developed a tactical system based upon the dismounting of men at arms, to allow them to fight in a coordinated fashion with archers. They would only remount their horses to pursue a beaten enemy or to retreat from the field.<sup>159</sup> The inherent ballistic qualities of the longbow meant that it was only effective when used *en masse* and discharged at close range.<sup>160</sup>

Archers and cavalry (dismounted) now combined to provide a new tactical system where arrows disrupted the enemy before the dismounted men-at-arms moved in against them. Archers released arrows on the flanks of enemy cavalry which disrupted their charge, unhorsed men, and forced remaining cavalry toward the archer center which contained heavily trained men-at-arms. In the company of the men-at-arms, the archer could stand his ground; he had less reason than his predecessors to flee before the menace of advancing cavalry.<sup>161</sup> The tactical combination of dismounted men at arms and archers was revived during the reign of Edward III. Such tactics were well suited to the war in France where numerical inferiority usually necessitated a

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<sup>158</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 197-198.

<sup>159</sup> Ayton, "The Military Revolution from a Medieval Perspective," 9.

<sup>160</sup> Gervase Phillips, "Longbow and Hackbutt: Weapons Technology and Technology Transfer in Early Modern England," *Technology and Culture* 40, no. 3 (Jul., 1999): 578.

<sup>161</sup> Allmand, "New Weapons, New Tactics, 1300-1500," 93.

defensive posture.<sup>162</sup> If brought to battle, an English army consisting of balanced numbers of men at arms and archers could offer an effective and tactical response.<sup>163</sup> This is a very important fact to note because the ratio of archers to men-at-arms increased considerably during the reign of Henry V. A second important factor for English success was that they chose the battlefield; this will be shown through a depiction of several pitched battles that occurred during first part of the Hundred Years War.

Many French looked down on these tactics; Jean de Venette was very anti-*chevauchee* as seen in his writings. Describing the events leading up to the Battle of Crecy, he writes, “Then the king of England marched to Saint-Germain-en-Laye, plundered it, and burned the royal palace there...burned many villages nearby, as Nanterre, La Chaussee, Rueil, and others, right up to the gate of Neuilly. They burned even the tower of Montjoye, which the king of France had had magnificently rebuilt not long before.”<sup>164</sup> Due to the success of such tactics in the hands of the English the French to tried to adopt them. At the Battle of Poitiers, Scot William Douglas<sup>165</sup> advised them to do the same. They lacked the support of experienced archers, however, and did not employ a defensive position like the Black Prince’s men. By the time the French had struggled through the English arrow-fire they were exhausted and in no fit state for the melee which then began.<sup>166</sup>

It had been the custom for the English to fight with three “battles,” archers on the wings of a formation with the men-at-arms in center. Jean Froissart declared on two occasions the positioning of the archers in a “herse” formation. The older translation of the term “herse” has

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<sup>162</sup> Ayton, “Arms, Armor, and Horses,” 205.

<sup>163</sup> Ayton, “English Armies in the Fourteenth Century,” 316-317.

<sup>164</sup> Jean de Venette, 41.

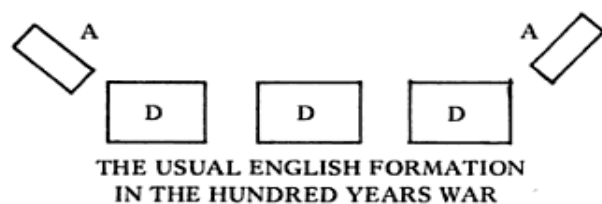
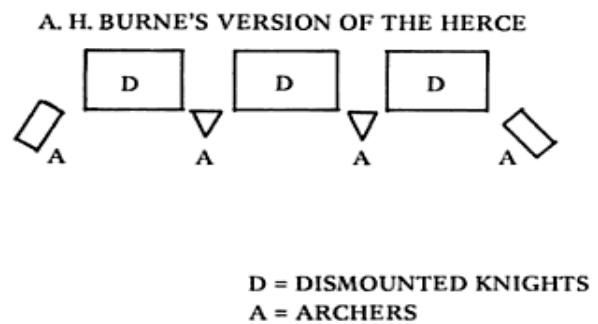
<sup>165</sup> William Douglas was 1<sup>st</sup> Earl of Douglas and fought with the French against the Black Prince at the Battle of Poitiers.

<sup>166</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 198.

drawn some criticism especially with more recent translations actually being “harrow.” It was assumed this early translation of *herse* was described a formation with respect to location, instead of how the archers lined up according to their own “battle.” Describing the Battle of Crecy, Froissart writes, “The first, which was the prince's battle, the archers there stood in manner of a *herse* and the men of arms in the bottom of the battle,”<sup>167</sup> and of the Battle of Poitiers, “at the end of this hedge, whereas no man can go nor ride, there be men of arms afoot and archers afore them in manner of a *herse*, so that they will not be lightly discomfited.”<sup>168</sup> In these translations the term *herse* should actually refer to “harrow” which refers more to the positioning of men within a “battle” than a strategic formation. This translation complicated the issue of attempting to figure out battlefield deployment of the English because of “herse” translating into wedge or rectangular formation.<sup>169</sup>

Froissart tells us that their formation was called a ‘hearse’, which has been taken to be an allusion to the medieval agricultural harrow (often triangular). The assumption has been that the archers were placed on the wings of the other footman to give each “battle” a flat-bottomed ‘V’ shape, the archers then shooting into the flanks of the attacking force.<sup>170</sup> Alfred H. Burne suggested in his work *The Crecy War*:

Figure 3: Standard Archer Battlefield Deployment



<sup>167</sup> Jean Froissart, 94.

<sup>168</sup> Ibid., 38.

<sup>169</sup> Phillips, 578.

<sup>170</sup> Bartlett, *English Longbowman, 1330-1515*, 15.

*Military History of the Hundred Years War from 1337 to the Peace of Bretigny, 1360* that the “harrow” translation meant that the archers were dispersed in between the men-at-arms in this triangle formation.<sup>171</sup> This idea is entirely Burne’s own invention.

Bradbury’s book *The Medieval Archer* concludes that the archers were never interspersed in the main battle line. His conclusion is that such a formation would have weakened the English battle lines considerably, because if heavily armored knights had come up against unarmored archers, they could expect to have dispersed the bowman quickly.<sup>172</sup> Bradbury, found that archers were always deployed to the flanks, of the men-at-arms, although often inclining forward to direct a converging fire on an advancing enemy.<sup>173</sup> The “harrow” is used as a reference to the loose formation of the archers compared to the shoulder to shoulder formation of men-at-arms. More importantly, the objective of archers was to disrupt the enemy cavalry as much as possible and force them toward their center with arrow fire. If archers were intermixed with men-at-arms, the complete formation would have collapsed and enemy troops would have broken through the lines.

#### **Chapter 4.1: Mail Armor and the Introduction of Plate Armor**

The English longbow was very successful during the first half of the fourteenth century. This was due to the introduction of new tactics and the fact that armor had not yet improved to the point when it could have prevented penetration. Mail was the earliest kind of metal armor to be developed, and it remained in widespread use for centuries. In Europe mail was made until the end of the seventeenth century. The reason for the survival of mail lies in its special advantages: it was easy to produce, flexible to wear, and provided good protection against cutting blows. Its fatal weakness was the limited protection it offered against missile

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<sup>171</sup> Burne, *The Crecy War...*, 23. For Figure 3, see Bradbury, *Medieval Archer*, 98.

<sup>172</sup> Bennett, 66.

<sup>173</sup> Ibid.



weapons.<sup>174</sup> The craft of making mail is quite distinct from that of manufacturing plate armor. Mail was produced in a large capacity; therefore the method of manufacture must have been rapid allowing for division of labor within the workshop.<sup>175</sup> Until the mid-thirteenth century, armor had been made of mail but gradually pieces of steel were added to afford extra protection against blows and missiles.<sup>176</sup> Sometimes a plate of iron was worn over the breast beneath the mail-coat in the thirteenth century, but the full development of plate armor took place during the second half of the fourteenth century, when it gradually extended over the whole body from plates worn over the mail to protect the breast and back.<sup>177</sup> The increased usage of archers in battle array by the English further encouraged the technological growth and improvement of armor.

The English longbow hastened the development of plate armor during the Hundred Years War as it has a high fire rate that would penetrate mail armor with ease.<sup>178</sup> The gradual introduction of plate armor around 1250, to reinforce chain mail, was a response to the development of the bow.<sup>179</sup> This development in defensive technology was a response to developments in offensive weapons. The medieval period saw a development both in weaponry and in armor, but it was the latter that underwent the greatest transformation, while the main weapons of attack, lance, sword, and arrow changed relatively little. There was no solution to the problem of providing protection for soldiers: equipment that best resisted blows (plate) provided the least amount of mobility.<sup>180</sup> There are records of simple plate armor existing in the early part of the fourteenth century. Of course these early iron plate armor prototypes would not

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<sup>174</sup> Mathias Pfaffenbichler, *Medieval Craftsmen: Armorer's* (Toronto: University of Toronto Press, 1992), 56.

<sup>175</sup> Ibid.

<sup>176</sup> Bennett, 20.

<sup>177</sup> A.R. Hall, "Military Technology," in *A History of Technology*, ed., Charles J. Singer, Vol. 2: The Mediterranean and the Middle Ages, 700BC – 1500AD (Oxford: The Clarendon Press, 1956), 721.

<sup>178</sup> Oakshott, 287.

<sup>179</sup> Allmand, "New Weapons, New Tactics, 1300-1500," 82.

<sup>180</sup> Prestwich, "The English Medieval Army to 1485," 18.

have the stopping power that later plate armor made exclusively out of steel. There was a steady progression of the development of armor from about 1300 in the form of experimentation where reinforced iron plates were placed upon chain mail.<sup>181</sup>

By 1330, plate armor had been devised for all main parts of the body and was in general use. Very few additions were made to the number of pieces of plate armor during the remainder of the fourteenth century,<sup>182</sup> but the thickness and composition of the armor would change. In all European countries, the greater part of the fourteenth century was essentially a period of experimentation for the armorer. After 1350, steel began to supplement iron which was previously used in armor which resulted in a stronger and more resistant armor.<sup>183</sup>

In describing the writings of the goods inventory of Raoul de Nesle, Constable of France, who was killed at the Battle of Courtrai (1302), A.V.B. Norman writes the following:

...while mentioning many hauberks and gambesons, includes padded cuisses, aems of leather and iron, gauntlets—one pair covered with red leather—body armors described as paires de plates, plates and corses, bascinets with their mail tippets (called camails), kettle-hats described as capiaus, gorgets of mail and plate, leg harness with greaves and close greaves (that is greaves with back plates), and am espauliere of whalebone for the tourney. This represents only that part of the armory that did not fall into the hands of the victor.<sup>184</sup>

It is clear that full body plate armor existed during the early fourteenth century, but the composition did not make it very effective. The manner in which archers were used *en masse* would have produced “arrow storms” that decimated the enemy. This method of *en masse* release of arrows would have left men in mail and early plate armor, as well as horses, vulnerable to injury, while causing confusion and loss of order in formation. As plate armor was

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<sup>181</sup> Oakshott, 284.

<sup>182</sup> A.V.G. Norman, *Arms and Armor* (London: Octopus Books, 1972), 53.

<sup>183</sup> Claude Blair, *European Armor, c.1066 to c.1700* (London: B.T. Batsford, 1958), 54.

<sup>184</sup> Norman, 15.

developing, the bodkin point, described in the previous chapter, was developed to penetrate it.<sup>185</sup>

It has been suggested by several historians, including DeVries, that the bodkin point became deformed upon striking plate armor. However, it is more likely that the bodkin head penetrated early plate armor made of iron, but plate armor made of steel would have required an arrowhead made of the same or harder material. Early armor was made of iron, but as plate armor became more abundant, arrows heads would have been made of steel just like that of the plate armor.

#### **Chapter 4.2: The English Archer v. the French Crossbowman**

For the majority of the Hundred Years War the English longbow had missile superiority on the battlefield. The crossbow, which had made a name for itself during the Crusades, was a close second, but would never achieve the reputation of the longbow for several reasons. There was one major advantage that crossbows held over the longbow which was its penetrating power at close ranges. The crossbow also had a longer-term influence on medieval warfare and may have been the principle stimulus behind the emergence of the great helm known and the development of plate armor in the thirteenth century. It had been known and widely used from the mid-eleventh century. During the thirteenth century the improved, composite crossbow spread throughout Europe.<sup>186</sup> French archers were armed with the crossbow which was a more powerful weapon than the longbow. The longbow could release four<sup>187</sup> or five<sup>188</sup> arrows in the time it took a crossbowman to discharge one bolt and attempt to reload a second. Compactness of troops was strategically important in medieval warfare, and the long-bowmen could stand

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<sup>185</sup> Ayton, "Arms, Armor, and Horses," 203-204. Kelly DeVries make a very important point in his work *Medieval Weapons: An Illustrated History of Their Impact*, 94, when he notes that the bodkin head has often been thought to be armor piercing, but that recent studies have suggested that it could not pierce armor but instead curled up on impact. He states that it is more likely that a small winged head that was tipped with steel on the point and wings was the likely culprit of penetration or was at least capable in penetrating plate armor.

<sup>186</sup> Ibid., 205.

<sup>187</sup> Featherstone, 40.

<sup>188</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 197-198.

closer together with their bows vertical than their brethren of the cross-bowmen with their weapons in the horizontal position.<sup>189</sup>

Though not a rapid shooting weapon, the crossbow was perhaps better suited to siege warfare than the battlefield, it was powerful and less dependent than the longbow on physical strength. Mail offered little resistance to the penetration power of the crossbow and it penetrated plate armor much easier than the longbow.<sup>190</sup> The crossbow could be used by any soldier if trained properly. The longbow, however, required years of training and practice for the archer to become an expert and this would be a major issue for the English army as the available pool of archers steadily began to shrink in the late-1340s. Alan Borg noted that, “The longbow was a simple instrument, only deadly in the hands of a skilled archer. On the contrary the crossbow, which was a complicated and expensive piece of equipment, required little skill to use.”<sup>191</sup>

Longbows were not only lighter and faster to operate, but also considerably cheaper to make than crossbows.<sup>192</sup> The first conflict of the Hundred Years War would have the crossbow set to play out against the longbow

Table 1: Commissioned Archers, 1326

Year	King	Number	Commissioned
1326	Edward II	1350	Archers
1326	Edward II	1300	Archers
1326	Edward II	3000	Archers
1326	Edward II	2000	Unarmed Archers
1326	Edward II	6500	Footman, Archers, and Others
1326	Edward II	2000	Archers
1326	Edward II	35,200	Archers and Others

during a major naval battle that would ultimately give the English dominance over the sea for the first half of the Hundred Years War. In the years prior to the outbreak of the Hundred Years War, there was an increase in demand for archers which dates back into the early years of the first Scottish War of Independence.

<sup>189</sup> Charles Henry Ashdown, *European Arms and Armor* (New York; Brussel and Brussel, 1967), 130.

<sup>190</sup> Ayton, “Arms, Armor, and Horses,” 205.

<sup>191</sup> Alan Borg, *Arms and Armor in Britain* (London: Her Majesty’s Stationary Office, 1979), 19.

<sup>192</sup> Barker, 87-88

### Chapter 4.3: Increased Demand: A New Reliance on Archers

During the latter half of the First War of Scottish Independence, the significance of archers in the English military can be seen in the demand for archers. As early as 1323, Edward II (1307-1327) placed an order for 4,000 archers to be commissioned by the English army.<sup>193</sup> The following year, Edward II, placed two separate commissions, one totaling 1,340 and the second requiring 430 archers.<sup>194</sup> The dependence of the English army on the archer in battle increased during, and remained at a high level throughout the Hundred Years War. As seen in Table 1,<sup>195</sup> there was a massive commission of soldiers in 1326, which were likely to have been used at the battles of Dupplin Moor and Halidon Hill after Edward II was deposed<sup>196</sup> and Edward III took power. From the year 1332 through 1339, a total of five-thousand and sixty archers were commissioned for service in England.<sup>197</sup> In 1338, supplies were requisitioned for archers that included one-thousand bows, four-thousand bow strings, and four-thousand sheaves of arrows which totaled ninety-six thousand arrows.<sup>198</sup> It is clear that this short period of decline in archer commissions is due to two factors. The English had built up a large force of archers already due to previous commissions, which, in combination with England not engaged in major warfare, necessitated a reduced number of commissions. The decline in commissions for archers did not last long as the Hundred Years War began in 1340 and the archer again would prove his worth at the first naval battle of the war, the Battle of Sluys.

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<sup>193</sup> *Calendar of the Patent Rolls (C.P.R.)*, Edward II, Vol. 4, 264.

<sup>194</sup> *C.P.R.*, Edward II, Vol. 5, 78-79.

<sup>195</sup> The information obtained for the creation of Table 1 came from the following source in descending order of the table. *C.P.R.*, Edward II, Vol. 5, 309. *C.P.R.*, Edward II, Vol. 5, 315. *C.P.R.*, Edward II, Vol. 5, 326-8.

<sup>196</sup> Edward II was deposed by his wife, Isabella of France and Roger de Mortimer. He was given two options: be removed and the crown would have been given to someone outside his bloodline or give it to his eldest son Edward III who had yet to become an adult. Edward II chose the latter and England

<sup>197</sup> 1332: (1,200) Archers; *C.P.R.*, Edward III, Vol. 2, 359. 1333: (1,000) Archers, *C.P.R.*, Edward III, Vol. 2, 401. 1335: (2,460) Archers, *C.P.R.*, Edward III, Vol. 3, 131-2. 1339: (400) Archers, *C.P.R.*, Edward III, Vol. 4, 355.

<sup>198</sup> *C.P.R.*, Edward III, Vol. 4, 124.

The Battle of Sluys is significant for several reasons which all invoke a successful image of the English war machine during the first part of the Hundred Years War. This battle, a victory for the English, gave them naval superiority until the Peace of Bretigny. It was also the first time that the English attempted to use archers en masse on the open seas. Before entertaining the role of the English archer in the defeat of the French, it is important to recognize that this battle was the first of many, in which the French would commit strategic blunders that would affect the outcome of the battle. Edward III stood out to sea and waited until the sun and wind were in his favor and then bore down on the enemy. The archers during the battle “gained ascendancy.”<sup>199</sup> The French had the wind and open sea but retreated about a mile into a narrow strait.<sup>200</sup>

The French not only gave up their maneuverability by losing the “wind” in this battle, but also by retreating further into the estuary, they gave up their numerical superiority. Edward III took advantage of this and as Geoffrey le Baker described, “a shower of arrows out of long wooden bows so poured down on the Frenchmen that thousands were slain in that meeting.”<sup>201</sup> W. Laird Clowes would conclude that the French loss could be attributed to the fact that the English had a homogenous fleet, one filled with loyal citizens compared to the allied fleet of the French. He also attributes the loss of this battle to a failure to recognize changing elements that occur during battle.<sup>202</sup>

The issue with understanding this battle revolves around a lack of recorded details regarding the course of the engagement and tactical deployment.<sup>203</sup> Froissart’s description of the battle includes some information that can help shed some light on the kind of battle array or

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<sup>199</sup> Doyle, 297.

<sup>200</sup> Geoffrey le Baker, *The Chronicle of Geoffrey le Baker of Swinbrook*, trans., David Preest (Woodbridge: Boydell Press, 2012), 60.

<sup>201</sup> Ibid.

<sup>202</sup> W. Laird Clowes, *The Royal Navy: A History from the Earliest Times to the Present, Volume 1*. (New York: AMS Press, 1966), 257.

<sup>203</sup> Ibid., 252-3.

formation used by the English. Edward III had a specific formation for his troops, one that had led to several victories during the last several years of the First Scottish War of Independence. Edward disposed of his largest ships in his vanguard, filling them with archers while filling two large craft he stationed in between these ships with men-at-arms; the remaining smaller ships were filled with archers and kept in reserve.<sup>204</sup> This formation, with the exception of archers splitting the men-at-arms is very similar to the battlefield deployment of the English that helped change their tactics and strategy. The French ships were in three divisions but created a forth and fastened each other's ship to the next with iron chains and cables.<sup>205</sup> This would prove to be an error because it allowed the English men-at-arms to be a stronger force with the artillery support provided by their archers. The French, having retreated into an estuary, forfeited any numerical superiority they had.

In this naval battle, it makes sense to disperse the archers evenly to provide a uniform shower of arrows across the French. The formation shown in Figure 3 as being suggested by Burne is more like the setup of the English army during this naval battle. In this battle, they were needed to soften up all French troops for the men-at-arms. *The French Chronicle of London* declared, "Our archers and crossbowmen began to fire so thickly, like hail falling in winter...that the French were unable to hold their heads up."<sup>206</sup> Geoffrey le Baker writes, "A terrifying shout rose to the heavens above the wooden horses, according to the prophecy of Merlin, an iron shower of quarrels from crossbows and arrows from long bows brought death to thousands of people."<sup>207</sup> After the original arrows were released, Edward's center met the French ships where the men boarded the ships, while the rear archers discharged showers of

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<sup>204</sup> Ibid., 253.

<sup>205</sup> Ibid.

<sup>206</sup> Clifford Rogers, trans., *The French Chronicle of London in The Wars of Edward III: Sources and Interpretations*, ed., Clifford Rogers (Woodbridge, Suffolk: Boydell Press, 1999), 85.

<sup>207</sup> Geoffrey le Baker, 60.

arrows.<sup>208</sup> The English archers caused a great deal of damage and in combination with men-at-arms achieved a victory.<sup>209</sup> Again, the combination of archers and men-at-arms would bring the English a victory. As recorded by the contemporary sources, the archers proved extremely successful at sea.

Geoffrey le Baker states that about two-hundred and thirty barges were sunk and that twenty-five thousand French soldiers were slain or drowned in this battle; he states that four thousand Englishmen died during the battle.<sup>210</sup> Edward himself put the force of the enemy at one hundred and ninety ships, galleys, and great barges; Knighton, as well as Walsingham, at two hundred ships, besides other craft; Froissart, at upwards of one hundred and forty vessels, besides smaller ones.<sup>211</sup> Contemporary estimates of the French losses vary from twenty thousand to fifty-five thousand while modern estimates suggest sixteen thousand to eighteen thousand, including commanders, together with most of their ships. The defeat at Sluys dealt a heavy blow to the French expectations of exercising any control over the seas.<sup>212</sup> The Battle of Sluys set the stage for English dominance at sea for the first part of the Hundred Years War. It also gave the French a first look at the English archer which they would not see *en masse* until the Battle of Crecy.

The Battle of Crecy was the first major pitched battle of the Hundred Years War. The battle sheds light on several interesting occurrences that present the tactical preparation and knowledge of the English while showing that the French, again, would make several blunders that would inevitably cause them to lose the battle. The English were devastating the countryside as they marched across France conducting a *chevauchee* and were able to find a

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<sup>208</sup> Clowes, 254.

<sup>209</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 173.

<sup>210</sup> Geoffrey le Baker, 61.

<sup>211</sup> Clowes, 251.

<sup>212</sup> Allmand, "New Weapons, New Tactics, 1300-1500," 101.



suitable position to defend. They were aware that the French had been marching to catch up with them and found a location that was very defensible. They prepared that land for battle, as Geoffrey le Baker writes, “The English, quickly dug a large number of pits in the ground near their front line, each a foot deep and a foot wide, so that if the French cavalry approached, their horses would stumble into the pits.”<sup>213</sup> The English drew up battlefield array giving the Prince of Wales twelve hundred men-at-arms and three thousand archers. A second battalion was given to the earl of Northampton, with twelve hundred men-at-arms and three thousand archers. The third battalion, which the king kept for himself, was to be placed at center and had roughly the same number of men-at-arms and archers.<sup>214</sup> During the first part of the Hundred Years War, there was a consistent ratio on the battlefield of three archers to one man-at-arms that would slowly increase and cause issues for the English during the second half of the war.

Archers were placed apart from the men-at-arms and positioned at the sides of the army almost like wings; in this way they did not hinder the men-at-arms, nor did they meet the enemy head on, but could catch them in a cross fire.<sup>215</sup> Describing the French battle array, Geoffrey le Baker writes the following:

The French army was divided into nine battalions. The first was commanded by the King of Bohemia, a man of great wisdom and experience of warfare, who to preserve his reputation had asked the usurper for command of the front line, and prophesied that he would die fighting against the most noble soldier in the world; for he was reproached for being foolish when he said that the king of England would not flee, and so begged insistently for command of the front line.<sup>216</sup>

The King of Bohemia (John the Blind), whose life ended on the battlefield, had been informed of the strategic acumen of Edward III. The French chose to ignore the advice of the Bohemian king.

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<sup>213</sup> Geoffrey le Baker, 73.

<sup>214</sup> Jehan le Bel, *The True Chronicles of Jean le Bel, 1290-1360*, trans., Nigel Bryant (Woodbridge: Boydell Press, 2011), 181-2.

<sup>215</sup> Geoffrey le Baker, 73.

<sup>216</sup> Ibid., 42.

The French, at this point during the war, still underestimated the capabilities of the English. This was certainly the case at the Battle of Crecy where the French outnumbered the English. The French underestimated the smaller numbers of the English. Additionally, the French were very eager to engage in battle to enrich themselves through ransoming and prisoners. Jean de Venette, in writing about the opening sequence at Crecy, describes the following:

Then when the king of France and his men came near Crecy...he boldly attacked the English drawn up facing them and their great multitude of archers in battle array, on the battlefield near Crecy...while our Frenchmen were disposing themselves for battle, lo! Suddenly rain descended upon the heaven...the strings on the crossbows of the Genoese crossbowmen who had come to aid the French were soaked by the rain and shrank, so that when it was time for them to be drawn against the English, they were, woe is me! Useless. It was not so with the bows and arrows of the English, for when the rain began as they were awaiting battle, they had quickly protected their bows by putting the bow strings on their heads under their helmets.<sup>217</sup>

Jean de Venette provided details concerning the opening phase of the Battle of Crecy. When the storm erupted and the battle was postponed, the English made sure that the archers kept their bowstrings dry, while French leadership failed to understand that wet strings were a problem.

When the French arrived to the battlefield, the English position, Philip VI's wisest captains suggested waiting until the men could be rested and organized before attacking the English because they were exhausted from a forced march to catch the English.<sup>218</sup> According to Doyle, "The French king first acceded to his counsel, but on beholding the English standing in tranquil array, his anger was so excited, 'for he hated them' that he passionately ordered forward a division of Genoese crossbowmen...to commence the fight without delay."<sup>219</sup> Despite the storm that was present and the advice of his counsel the French king ordered an attack. He ignored the difficulties that were present for his army because of a march and the weather. The

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<sup>217</sup> Jean de Venette, 43.

<sup>218</sup> Doyle, 301.

<sup>219</sup> Ibid.

rain would also cause great difficulty for the cavalry because it needed dry ground to be effective. Jean le Bel's account provides the best description of early events after the engagement had started and sheds light on the difficulties that French leadership faced with an over eager French king.

The Genoese crossbowmen were ordered forward and moved close enough to release their bolts against the English but were routed by English archers.<sup>220</sup> The next stage of the battle has drawn much attention for historians because it shows the problems of using a mercenary army that is not "homogenous." Seeing the disorder that existed and perhaps even the retreat of the crossbowmen due to the success of the English archer, the French cavalry charged trapping the Genoese in between them and the English. The weaker horses fell on top of them, and the others trampled them and fell on top of each other.<sup>221</sup> Of the English archers, Jean le Bel writes, "...the English archers were loosing such awesome volleys that the horses were riddled by the dreadful barbed arrows; some refused to go on, others leapt wildly, some viciously lashed and kicked, others turned tail despite their masters' efforts, and others collapsed as the arrows struck, unable to endure."<sup>222</sup> This battle was won by two factors: the success of the English archer against an army not protected from the arrow, and the strategic blunders of the French. The archer was proving to be a very important aspect in the English army. A carefully researched

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<sup>220</sup> Jean le Bel, 180.

<sup>221</sup> Ibid. Geoffrey le Baker (Barber) also describes this event saying that the "French men-at-arms, mounted on young warhorses and agile chargers, rode down seven thousands of the crossbowmen who were between them and the English," 43. Doyle writes that the French cavalry were ordered by King Philip to cut down "all that rascalry which was stopping the way without cause," 301. It is clear that the orders given by the French king during this battle show his lack of experience with warfare and strategic matters. The French lost many crossbowmen and cavalry during this little skirmishes within their own ranks in which archers freely released arrows on the lot of them.

<sup>222</sup> Jean le Bel, 180.

modern estimate of casualties is presented by Kelly DeVries who notes that, “Nine French princes, more than 1,200 knights, and between 15,000 and 16,000 others were slain.”<sup>223</sup>

Taking advantage of the Crecy campaign, in 1346, David II (1329-1371) of Scotland invaded England. Just outside Durham his army was met by a hastily recruited English force, which won a major victory at the Battle of Neville’s Cross. After the battle, the archers received a bonus, despite some doubt as to their role in the battle as well as a report that some archers withdraw from the fight.<sup>224</sup> Froissart makes note that the “archers shot so fiercely”<sup>225</sup> when the battle began. Doyle writes, “David had scarcely time to arrange his troops on broken ground where he then was, when the English were upon them. The Scots, hemmed in by enclosures, could make no effectual defense against the archers. Their right wing at last gave way; and the main body, under the king himself, was then assailed in the flank as well as front.”<sup>226</sup> David II was wounded by two arrows and captured by the English who sealed a decisive victory.<sup>227</sup> As mentioned, there is some controversy as to the role of the archers in this battle. It is clear that they had an impact, as David was wounded twice by arrows, but the fact that the archers retreated twice suggests that they may not have been well trained or well-equipped men. As Edward III did have many men in France, it is quite possible and likely, that the archers he had with them in France were the better-fit archers for duty. The archers raised at the Battle of Neville’s Cross were raised at the last second and it is impossible to know what kind of supplies they had for such an engagement. No written indentures appear to have survived from

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<sup>223</sup> DeVries, *Medieval Weapons: An Illustrated History of Their Impact*, 169. To provide an example of the importance and significance of the archer and his impact in war for this time period Henry Knighton’s Chronicle depicts an event at Crecy. Knighton says, “The king of France, King Philippe, was struck in the face by an arrow, and his charger killed, but he mounted another good horse and fled, and none of the English knew what became of him,” 63. During this time period, nobility had the best of armor. Whether King Philip was wearing a helmet or not is unknown. But this is a prime example that shows the fear that this weapon can place in an enemy.

<sup>224</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 61.

<sup>225</sup> Jean Froissart, 104.

<sup>226</sup> Doyle, 304.

<sup>227</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 61.

Edwards's campaign in France so it is difficult to determine how many skilled archers would have been left available for a second front.<sup>228</sup>

#### **Chapter 4.4: The Effects of the Black Plague on Archer Numbers**

Several years prior to this series of battles complaints were made concerning the fitness of archers, specifically that some archers were in fact 'feeble.'<sup>229</sup> The English army would also begin to have problems supplying weapons and supplies to archers. However, these issues would not arise until the later years of the first half of the Hundred Years War. The English benefitted greatly from continued success on the continent. The manufacturing of arrows increased considerably during the Hundred Years War with France. The Hundred Years War had a disastrous effect upon the French iron industry causing a depression which lasted almost to the middle of the following century, but in England which was spared the ravages of war it had exactly the opposite effect.<sup>230</sup> Weapons were required not only for the military expeditions to France, but also to arm the population in England. An order referring to this was issued by Edward III in 1345, so that the country was guarded against a threatened invasion by French and Scottish armies.<sup>231</sup> There were minor issues and concerns in regard to skilled archers but nothing reduced their numbers like the Black Plague.

While the French were unable to slow the English military progress in France, a plague of unprecedented scale and mortality did. The Black Death swept through Europe in 1348-1349 and effectively halted further campaigning by Edward and the English army.<sup>232</sup> Henry Knighton describes the event saying, "The grievous plague penetrated the seacoasts from Southampton,

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<sup>228</sup> Hewitt, *The Organization of War Under Edward III, 1338-1362*, 35.

<sup>229</sup> Ibid., 37. For the original source, see *Calendar of Close Rolls*, 1341-3, 369.

<sup>230</sup> H.R. Schubert, *History of the British Iron and Steel Industry from c.450BC to AD1775* (London: Routledge and Kegan Paul, 1957), 118.

<sup>231</sup> Ibid.

<sup>232</sup> DeVries, *Medieval Weapons: An Illustrated History of Their Impact*, 145.

and came to Bristol, and there almost the whole strength of the town died.”<sup>233</sup> The Black Death changed the situation in England; the nation was shaken to its foundation, and the merchants proved too weak to stand the shock, which affected trade greatly.<sup>234</sup> In England, by far the most noteworthy effects of the Black Plague were the social and economic effects. The population of France at the time of the plague was roughly ten million while England had roughly three to four million. The Black Death struck Britain in 1349, and swept away more than half of the population of England.<sup>235</sup> The effects of this plague on the Hundred Years War—on manpower, leadership, finances, as well as strategy and tactics—were major. Not only was there a cessation of hostilities for nearly a decade, but when they began anew, in 1355-1356, the sizes of the armies was dramatically reduced.<sup>236</sup> The decline in the population of England in the second half of the Hundred Years War drastically reduced the available number of archers due to mortality as well as social advancements resulting from the war and the plague.

During the peace that occurred between the English and French, the manufacturing of arms reduced because of the loss in manpower. In 1350 William de Rothwell was ordered to buy 240,000 good arrows and 24,000 best arrows.<sup>237</sup> In 1353 John de Brakelond, who was in charge of the production of bows, was sent to Lincolnshire (which was well known for the making of arms) to get additional staff; and William de Rothwell was able to show that, by purchase and manufacture, he had added to the stock 4,062 painted bows, 11,303 white bows, 4,000 bow staves, 23,643 sheaves of arrows, 341 gross of bowstrings.<sup>238</sup> During the 14th and

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<sup>233</sup> Henry Knighton, 99.

<sup>234</sup> Charlotte M. Waters, *An Economic History of England, 1066-1874* (London: Oxford University Press, 1925), 145.

<sup>235</sup> Featherstone, 42.

<sup>236</sup> DeVries, *Medieval Weapons: An Illustrated History of Their Impact*, 145.

<sup>237</sup> Heath, 100. The difference between “good” and “best” arrows would be the quality of wood that was used to produce them.

<sup>238</sup> Hewitt, *The Organization of War Under Edward III, 1338-1362*, 69. For original source, see *Public Record Office (E 101/392/14)*.

15th centuries the threat of war continuously existed. In 1356, King Edward III instructed fourteen sheriffs to supply, amongst other things, no less than 9,000 sheaves of arrows.<sup>239</sup> As seen earlier, William de Rothwell was being ordered to supply numerous supplies of weapons for Edward III despite the cessation of hostilities. All these weapons were being stockpiled for future campaigns.

Despite a reduction in supply, the demand is clearly seen through the orders of Edward III. Refer to Table 2<sup>240</sup>, for information concerning requests for bows and arrows that were sent out by Edward III. There are a significant number of bows and arrows that were received at the Tower of London in the early years compared to 1359. H.J. Hewitt makes note in his work that within Table 2 requests from (E) and (K) were never fulfilled. There are also two

Table 2: Supply Orders Received at the Tower of London, 1341-1359

Columns Year:	Bows					Sheaves of Arrows					
	A 1341	B 1346	C 1356	D 1359	E 1359	F 1341	G 1346	H 1356	I 1359	J 1359	K 1359
Bedford and Bucks	100			300		300		600	100	300	500
Cambs and Hunts	200	150					250			400	600
Cornwall and Devon											400
Essex and Herts	300	160		300		1,000	400		200	300	500
Gloucester		300	500	500	600		500	600	200	300	700
Hants	500	100				1,000	300		200	200	
Hereford								1,000			400
Kent	300	100	400	400		1,000	300	700	200	500	700
Lanes	100					1,000					
Lincoln	1,000		1,500	800	200	300		600	500	500	1,000
London	2,500	300				1,000	1,000				
Midd'x		100					300				
Norfolk and Suffolk	200	200	600			300	400	700		400	900
Northants	200	100	400	300		300	200	600	200	300	600
Notts and Derby	200						500			400	800
Oxford and Berks	100	200		200		1,000	400		100	300	400
Rutland	100	50				200	100				
Salop						1,000		1,000		300	500
Somerset and Dorset	300	200	300			300	500	400		300	400
Stafford								500		500	400
Surrey and Sussex	500	100				2,000	500		200	300	800
Warwick and Leics	300	120	200	500		600	200	1,000	200	400	600
Wilts	100					200				500	300
Worcs	200	100	400			500	200	1,000		300	600
Yorks	500					500				500	600

distinctive patterns that one can see within this Table. First, within the time period shown, the number of requests for bows slowly declines while the number of sheaves of arrows stays the same or increases. This suggests that archers were still in demand but that army sizes were relatively smaller due to the outbreak of disease that had occurred in the late 1340s.

<sup>239</sup> Heath, 100.

<sup>240</sup> For Table 2, see Hewitt, *The Organization of War Under Edward III, 1338-1362*, 64.

The resumption of hostilities renewed the demand for bows and arrows, and in 1356 there was a period of scarcity. Speaking for the supplies of a bowman, the chamberlain of Chester was informed, as seen in the *Register of the Black Prince* that, “No Arrows can be obtained from England because the king has...taken for his use all the arrows than can be found anywhere there.”<sup>241</sup> The increased use of the weapon caused occasional shortages and because of this, the Black Prince ordered the arrest and forced labor of all fletchers in Cheshire until his supply could be replenished.<sup>242</sup> Supplies were not the only problem for Edward III as there is some evidence to suggest that the pool of archers that made England so successful on the battlefield was beginning to dry up. In 1356, arrayers in Rutland could find not one archer fit for service. They had discovered one man who could not fight, as he had been wounded in the Black Prince’s service, and had only arrayed two others, neither of whom had sufficient means to provide himself with equipment.<sup>243</sup> The English crown still persisted in recruiting criminals for their armies. At least one thousand eight hundred pardons were issued to criminals in return for their service at the Siege of Calais. Not all were common offenders as some committed more serious crimes.<sup>244</sup> Edward III was doing what he could to replenish his supply of soldiers that had suffered tremendous losses due to the Black Plague.

The Battle of Poitiers was the last major battle between England and France before the Peace of Bretigny. It was it is also the major turning point in the Hundred Years War because the peace treaty is often considered a marker that represented a shift in the tides of war. It has been difficult for scholars to determine the number of soldiers that each side had during this conflict. The English have been estimated as having anywhere from 11,000 to 60,000 which was

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<sup>241</sup> Hewitt, *The Organization of War Under Edward III, 1338-1362*, 66-7. For original source, see *Register of the Black Prince*, Volume III, 23.

<sup>242</sup> DeVries, *Medieval Weapons: An Illustrated History of Their Impact*, 193.

<sup>243</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 192-193.

<sup>244</sup> Ibid.



suggested by Froissart.<sup>245</sup> Modern estimates have been somewhat stricter in their estimations. The French army has been suggested in some instances as having near 15,000 to 16,000 men.<sup>246</sup>

Prior to the start of this battle, King John II (1350-1364), received a scouting report by Sir Eustace de Ribemont who said, “They are in a very strong position; as far as we can judge they are no more than one battalion, but are most skillfully placed. They had chosen a road strongly fortified with hedges and undergrowth, and have posted their archers along this hedge on both sides of the road, so that one cannot approach to attack the army save between these rows of archers.”<sup>247</sup> It was during this meeting or counsel that King John had that he decided to have a majority of his men-at-arms fight on foot to prevent the chaos that ensues following an attack on French cavalry by archers.<sup>248</sup> Despite, the warning, and past experiences of cavalry against archers, the French sent their cavalry after the battles start through the hedges in an effort to flank the archers.<sup>249</sup> Froissart makes note that the archers began “to shoot on both sides and did slay and hurt horses and knights, so that the horses when they felt the sharp arrows they would in no wise go forward, but drew aback and flung and took on so fiercely, that many of them fell on their masters, so that for press they could not rise again.”<sup>250</sup>

The Battle of Poitiers also presented a new problem for the archers—an increase in the strength of plate armor. In response to this, archers changed the manner in which they fired. Archers were not aiming at the sides of horses and knights. During the battle, the earl of Oxford noticed the archers were failing to penetrate the plate armor and “came down from the prince’s squadron and led the archers round to the flank. He ordered them to shoot their arrows from here

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<sup>245</sup> Hoskins, 176.

<sup>246</sup> Hewitt, *The Black Princes Expedition of 1355-1357* (Manchester: University of Manchester Press, 1958), 114.

<sup>247</sup> Jean Froissart, 122.

<sup>248</sup> Jean le Bel, 226-227.

<sup>249</sup> Jean Froissart, 122.

<sup>250</sup> Ibid.

into the hind quarters of the horses. As soon as this was done, the wounded warhorses kicked and trampled their riders...<sup>251</sup> Once the warhorses had retreated, the archers took up their previous position and fired directly on the French flanks.<sup>252</sup>

The Battle of Poitiers was hard fought. One writer noted, that, whereas experienced archers could usually tell after the first four, or at most six, volleys which side would be victorious, on the occasion there was no telling after a hundred.<sup>253</sup> It was through a superior use of battlefield tactics that the English were able to overcome a numerically superior army. Despite archers having issues with penetration against plate armor they were still able to have a significant impact against cavalry as an estimated forty percent were killed.<sup>254</sup> The lack of penetration of armor was due to thicker plates and more coverage of the body. Archers, in response to this fired more arrows in an attempt to find gaps and joints. In some instances, archers were maneuvered to fire at the flanks to encourage more arrows to find their targets. This encourages the theory that more arrows were being released because of armor. The previous shortage of arrows in combination with the need to release more of them ultimately caused a supply problem. Archers “had used up all their arrows”<sup>255</sup> and were forced to fight hand-to-hand during the battle.

After capturing King John during the Battle of Poitiers, Edward would raise an army to seal his claim to the French throne. In March 1359, Edward III appointed his “fletcher” to engage in the counties of Kent and Sussex as many smiths as were required for forging of 500 arrowheads of steel.<sup>256</sup> In March of the same year, Edward appointed William de Rothwell, clerk

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<sup>251</sup> Geoffrey le Baker, 127.

<sup>252</sup> Ibid.

<sup>253</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 181.

<sup>254</sup> Prestwich, “The English Medieval Army to 1485,” 19.

<sup>255</sup> Geoffrey le Baker, 130. Hoskins, 189.

<sup>256</sup> *C.P.R.*, Edward III, Vol. XI, 222. Schubert, 119.

and keeper of the privy wardrobe in the Tower of London, to take armorers, workers of bows, arrows and bowstrings, and to take them to London to work on the King's wages.<sup>257</sup> In October of 1359, an order was made to buy 1000 sheaves of arrows with heads hard and well steeled, for the archers of the king's bodyguard.<sup>258</sup> In November, an order was made for William de Rothwell to buy 1,000 bows and 10,000 sheaves of good arrows and 1,000 sheaves of best arrows.<sup>259</sup> The orders for supplies in 1359, would be the last time for many years that the Tower of London would contain enough supplies to support an army with a sufficient amount of archers, but as would will be seen, that would change in the second half of the Hundred Years War were archer to men-at-arms ratios would increase significantly decreasing the effectiveness of the archer. Between 1360 and 1381 the supply of bows and arrows in England had declined from 11,000 bows and 23, 600 sheaves of arrows to no bows and only 1,000 sheaves of arrows.<sup>260</sup>

Despite a decline in available archer and weapons materials, the English archer would survive the first half of the Hundred Years War. The introduction into the army in combination with new tactics which included a system that involved working men-at-arms would prove to be a great success. The English archer would continue to be successful in the second half of the conflict, but their effectiveness would decline in battle would decrease due to improvements in armor and a heavy reliance on their previous success.

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<sup>257</sup> *C.P.R.*, Edward III, Vol. II, 221.

<sup>258</sup> Schubert, 119.

<sup>259</sup> *C.P.R.*, Edward III, Vol. II, 323.

<sup>260</sup> DeVries, *Medieval Weapon: An Illustrated History of Their Impact*, 193.

## Chapter 5: The Last Victories for the Archer

After 1360,<sup>261</sup> the English would rarely again see the success they had achieved in the first half of the Hundred Years War. There are many factors that played into turning the tide of the war but none as integral as a change of strategy on behalf of the French. Charles V would alter French tactics for the purpose of minimizing and eliminating the effectiveness of the English in Western Europe. In addition to a change in tactics, the combination of plate armor reaching its peak and the introduction of gunpowder weaponry would impact the tactical balance. A decrease of archers in the latter half the Hundred Years War also affected the manner in which the English fought—as pitched battles became more of a rarity. Despite supply issues, new strategy, and improved plate armor, the English archer was still able to make an impact in battle. However, whereas the archer was lethal in the first half of the war, he cannot be considered so effective in the second half.

Until the Peace of Bretigny, the English had held a decisive advantage on the field of battle, even when they fought traditionally mounted warfare. In the years after 1369,<sup>262</sup> when the French gave up trying to meet them in open battle, but rather devoted themselves to harassment and the reduction of English held territory by siege, the tide of war changed.<sup>263</sup> The English

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<sup>261</sup> There are several major pitched battles that occurred in the second half of the Hundred Years War including the Battle of Agincourt (1415), the Battle of Verneuil (1424), and the Battle of Patay (1429), to name a few; the Battle of Towton (1461) which was fought during the War of the Roses, sheds some light on the changing attitude of the English towards the bow, but to show that the longbow was still effective, it makes sense to discuss a major battle late in the time period which is the Battle of Agincourt. Armor had reached its peak during this battle, and this battle occurred long after the French had adopted their new strategy.

<sup>262</sup> Renewed combat began in 1366 and lasted until 1389. The period of the Hundred Years War is often referred to as the War of Succession of Castile whereas the English supported Peter of Castile's claim and the French supported his brother, Henry's claim to the throne. Concerned with the Treaty of Bretigny, the Black Prince supported Peter's claim through Aquitaine because Edward III did not want to break his treaty with France. After the death of the Black Prince (1376) and Edward III (1377), Richard II, son of the Black Prince took reign of England had to deal with several threats to the throne including another short conflict with the Scottish and the Peasant's Revolt. During the period 1389-1415, both England and France had ceased declared conflict between each other. The English were still suffering from a lack in leadership from Richard II and his threats against the throne while the French were essentially engaged in civil war because of Charles VI slowly losing his sanity.

<sup>263</sup> Prestwich, *The Three Edwards: War and State in England, 1272-1377*, 198-199.

were unable to find a solution to the style of warfare that was practiced by Bertrand du Guesclin under the direction of Charles V (1364-1380).<sup>264</sup> Charles became king in 1364 and quickly revealed his strategy of war which was the use of indirect means instead of head on confrontation. This strategy had no commitment to the principals of chivalry. Charles was more willing to take small gains rather than risk a large force in one great battle. He was also the first French king not to command in the field, instead giving those duties to his lieutenants, principally, Du Guesclin.<sup>265</sup> Du Guesclin was determined to wage a war of attrition by attacking isolated forces, harassing armies on *chevauchee*, and raiding English-held castles. Illustrative of his tactics is a story that he hired prostitutes to enter an English castle who later opened the castle gates at night for his forces. Apparently one French noble refused to lead the men in the attack because the manner in which they gained entrance was not chivalrous.<sup>266</sup>

Despite the lack of chivalry in Du Guesclin's tactics, they were effective. He would prevent the English of a major victory while he was Constable of France until his death in 1380. In 1373 the Duke of Lancaster<sup>267</sup> led his army across France from Calais to Bordeaux and through the mountains of Auvergne until he reached friendly soil in Guienne but he did not take a single town of importance.<sup>268</sup> During this *chevauchee*, Du Guesclin refused to fight and attempted to win a war of attrition. His tactics were to attack small outlying garrisons and to stir up discontent in regions that were loyal to France but possessed by the English. He assaulted isolated castles and if an army marched against him while he was besieging a castle he abandoned it and moved on to another.<sup>269</sup> He fought by night "surprises, ambushes, escalades,

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<sup>264</sup> Ibid.

<sup>265</sup> Frederick J. Baumgartner, *From Spear to Flintlock: A History of War in Europe and the Middle East to the French Revolution* (New York: Praeger Publishers, 1991), 141.

<sup>266</sup> Ibid., 141-2.

<sup>267</sup> John of Gaunt

<sup>268</sup> Oman, Vol. II, 198.

<sup>269</sup> Ibid.

and stratagems of all sorts, utilizing local treachery [or patriotism] whenever it was possible.”<sup>270</sup>

After several years this system degraded the strength of the English, whose tactics were best suited for open field, defensive battle.<sup>271</sup> French tactics successfully reduced the effectiveness of massed English archers in battle because they avoided them.

### **Chapter 5.1: The English Archer v. Plate Armor**

The Battle of Agincourt provides a great case study with which to analyze the effectiveness of the English archer in the later years of the Hundred Years War. Before discussing the events of this renowned battle, it is important to consider first the developments in armor used during this battle. The manufacture of plate armor was complicated and demanded the cooperation of an armorer, polisher, and finisher who was responsible for assembling the armor properly.<sup>272</sup> The armor was light compared to past suits and was easily wearable and simplistic in its creation.<sup>273</sup> A complete suit of plate armor was not cumbersome and it has been estimated that a suit weighed anywhere from 50-80lbs. The weight was distributed evenly which would have provided better mobility compared to early suits which used a combination of mail and plate armor. This allowed knights to mount easily and dismount their horses unassisted.<sup>274</sup> Modern experiments with armor from the 15<sup>th</sup> and 16<sup>th</sup> century has shown that even an untrained man could get on and off his horse rather easily and maintain the mobility he would have needed for combat. The major issue that arises with the armor from this time period is the lack of ventilation.<sup>275</sup> This would have made breathing difficult and dehydrating those soldiers that wore the armor for longer periods of time.

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<sup>270</sup> Ibid., 199.

<sup>271</sup> Ibid.

<sup>272</sup> Pfaffenbichler, 62.

<sup>273</sup> Oakshott, 283.

<sup>274</sup> Bennett, 21. Ayton, “Arms, Armor, and Horses,” 206.

<sup>275</sup> Blair, 191.

Armor during this period was usually able to stop arrows released at longer distances. During an arrow-storm, if the shafts struck the hard smooth surfaces of armor they would simply glance off. However, the armor presented weak spots at the exposed joints where the “shoulder-spandlers” met the armholes of the breastplate.<sup>276</sup> Both Oakshott and Featherstone note that archers understood this weakness and often aimed at the face or throat. In addition, when temperatures were high, knights removed helmets that lacked ventilation were removed providing archers with a vulnerable target.<sup>277</sup> Attempts have been made to determine whether or not arrows from the latter half of the war were able to penetrate steel-plate armor. There were two arrowheads that were used by the mass of archers—the small broadhead and the long bodkin.<sup>278</sup> The penetration of armor required “the delivery of maximum energy (arrow) to the smallest area (arrowhead).”<sup>279</sup>

Matthias Pfaffenbichler brings up an interesting point when discussing the hardness of the surface of armor. He notes that plate armor was case hardened which left the outside “diamond” hard while the inner side was soft as the original iron.<sup>280</sup> This means that the hardness of the plate armor was not consistent throughout the plating. This is important to consider when examining arrow penetration. Peter N. Jones performed a series of tests which he discussed in his article “A Short History of the Attack of Armor.” First he noted that “metallurgically, ferrous arrow heads vary very widely in terms of carbon content between 120-

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<sup>276</sup> Oakshott, 297-298

<sup>277</sup> Ibid.

<sup>278</sup> Refer to Figure 1.

<sup>279</sup> Peter N. Jones, “A Short History of the Attack of Armor,” *The Metallurgist and Materials Technologist* (May 1984): 247. Peter N. Jones has suggested that there would be a penalty for using the long bodkin against anything but plate armor because it would inflict much less damage than that of a broadhead which would cause much more tissue damage. On these grounds, Jones then draws the conclusion which many have also suggested which is that the long bodkin was meant for armor penetration.

<sup>280</sup> Pfaffenbichler, 36.

400 VHN.<sup>281</sup> Pfaffenbichler then noted that “measurements of plate armor thicknesses gave typical values of 3-4mm for the front of the helmet, 2mm for the breastplate and 1mm for the leg and arm defenses. With few exceptions, armor manufactured before 1480 is ferritic with occasional use of carburization giving hardnesses in the range of 120-220 VHN.<sup>282</sup> According to these results, armor from the time period, if struck at the appropriate angle and by the type of arrow head that was created with the VHN rating, it could be penetrated. This would again depend on the distance, arrowhead, and trajectory of the arrow. Jones’ testing results were as follows, “Tests show that arrow penetration occurred in the 1mm plate armor to an extent of 40-50mm, the 2mm breastplate was penetrated by 11mm and would not have been fatal. The 3mm helmet was not penetrated. Therefore the arrows would have been disabling not fatal.”<sup>283</sup>

According to these results, armor would have only been vulnerable at the joints within reasonable ranges. Outside of these circumstances, only at the joints, as previously mentioned, would an arrow have been able to penetrate plate armor. It has been assumed by many that armor was in widespread use for the time period. However, the amount of time, the cost in resources for manufacturing armor, and the specialization of manufacturing in its creation made it a luxury item and not an item in widespread use. This would explain why the English continued to employ the longbow in battle despite its limited effectiveness. In 1405, Henry IV issued a series of regulations governing specifications for the production of quality control over serviceable arrowheads. H.G. Heath concludes that this might indicate that the standard of arrowhead had become poor and mentioned that there are several examples of poor

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<sup>281</sup> Jones, 247. The carbon content concept is used for ferrous materials—mainly cast iron and steel—to determine various properties of the metal when more than just carbon is used. (VHN): Vickers Hardness Number. For example, a diamond has a VHN of 1600.

<sup>282</sup> Ibid., 248.

<sup>283</sup> Ibid.



workmanship.<sup>284</sup> Heath is correct in declaring that without specific standards that the arrowheads and the materials used would not measure up to the necessary acceptable standard of the period. However, the implementation of a universal standard implies that it was necessary to ensure that arrowheads were made with certain specific materials and in such a manner as to provide better penetration against this new armor.

## **Chapter 5.2: The Battle of Agincourt: The Last Victory**

The Battle of Agincourt is another example of the English using superior tactics against the French who had failed to learn any lessons from the first half of the war. Du Guesclin had provided the French with a strategy that avoided catastrophic defeat in pitched battles but that strategy was simply to avoid pitched battle. The French relied heavily on their numerical superiority in the first phase of the war, and were unable to adapt to the English tactics. The English were successful because of the combination of archers and men-at-arms as well as their ability to pick the field of battle. In many cases this element alone was enough to limit the numerical superiority of the French.

The English formation used by Henry V at Agincourt was similar to those used in previous battles with a minor modification. The *Gesta Henrici Quinti* provides the best description of the formations of archers and men-at-arms at the Battle of Agincourt. The *Gesta Henrici Quinti* says the following:

“He [Henry V] drew up only a single line of battle, placing his vanguard, commanded by the Duke of York [Edward, 2nd Duke of York], as a wing on the right and the rearguard, commanded by Lord Camoys [Thomas], as a wing on the left; and he positioned ‘wedges’ of his archers in between each ‘battle’ and had them drive in their stakes in front of them, as previously arranged in case of a cavalry charge.”<sup>285</sup>

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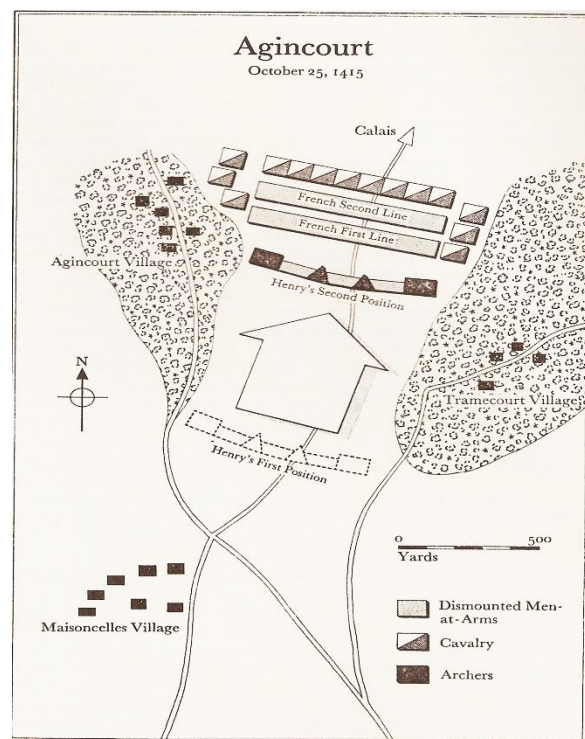
<sup>284</sup> Heath, 100.

<sup>285</sup> *Gesta Henrici Quinti*, 83

This was a new development for English battle tactics, but not that dissimilar from previous deployments.<sup>286</sup> Another innovation was the use of “stakes” as a measure to protect the archers from the French cavalry. In the first half of the Hundred Years War, stakes were not used, but on occasion it is mentioned that natural obstacles—ditches and tree lines—were sought out when looking for a battlefield. The new use of stakes implied that archers may not have had the same impact against cavalry as they once did, and at this point needed additional support for their defense. The use of “stakes” was in response to information that Henry V had gained from prisoners that the French had special cavalry divisions that were created for the purpose of running down the English archers.<sup>287</sup>

However, the French plan to attack the English archers on the flanks failed during battle. The cavalry were posted on the flanks and “made charges against those of our archers who were on both sides of our army...they were forced back under showers of arrows.”<sup>288</sup> The English archers may have had some issue with the French armor, the *Gesta Henrici Quinti* makes note that the archers loosed their arrows into the enemy flanks until they had spent their supply.<sup>289</sup> During their

Figure 4: Battlefield Formation at the Battle of Agincourt (1415)



<sup>286</sup> For Figure 4, see Keegan, *The Face of Battle*, 83.

<sup>287</sup> *Gesta Henrici Quinti*, 69, 71.

<sup>288</sup> *Ibid.*, 87.

<sup>289</sup> *Ibid.*, 89

deployment, the archers must have aimed at a significant angle to hit the “flanks” of the French cavalry. Henry V put his army in formation between two tree lines<sup>290</sup> and it is likely that this reference is in regard to the archers that were sent through the woods to take up a severe flanking position in a meadow.<sup>291</sup> Plate armor had been a successful element of the knightly class, and the only way for English archers to remain successful was to aim at the weakened sides of cavalry.

The French plan to initiate the battle, but instead wanted the English to cover the wet ground and tire themselves out advancing with their weapons and heavy armor.<sup>292</sup> Henry ordered his forces to advance toward the French, part way, and then commanded his archers to fire. This act goaded the French cavalry into an assault.<sup>293</sup> Before the two armies were able to meet, Monstrelet notes that “numbers of French were slain and severely wounded by the English bowmen.”<sup>294</sup> Jehan de Waurin, a French chronicler and soldier at the Battle of Agincourt writes that “the French were disabled and wounded by arrows”<sup>295</sup> and “their horses had been so wounded by the arrows that the men could no longer manage them.”<sup>296</sup> Jehan de Waurin had a first-hand account of the battle in which he clearly provides insight into the penetration power of the longbow in this period. It is clear that the armor protected the French men-at-arms from death in most cases as arrows did not have the penetration of French arm or leg armor at such distances. The English archer proved decisive in the ultimate victory.

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<sup>290</sup> Doyle, 366.

<sup>291</sup> Jehan de Waurin, *A Collection of the Chronicles and Ancient Histories of Great Britain, Now Called England, AD 1399 to AD 1422*, trans., Sir William Hardy and Edward L.C.P. Hardy (London: Her Majesty's Stationary Office, 1887), 276.

<sup>292</sup> Thomas Walsingham, *The Chronica Maiora of Thomas Walsingham, 1376-1422*, trans., David Priest (Woodbridge, UK: Boydell Press, 2005), 410.

<sup>293</sup> Baumgartner, 143-144.

<sup>294</sup> Monstrelet de Enguerrand, 342.

<sup>295</sup> Jehan de Waurin, 211.

<sup>296</sup> Ibid., 212.

Firing at the “flanks” of the French cavalry, the English archers would have been able to hit the openings and creases in the plate armor and inflict greater damage to them. Even if full leg and arm penetration was only possible at close distance, the horses which carried the knight were not as protected and would have been much more vulnerable. In combination with the issues with supply, the English crown began to have problems finding able-bodied archers following the Battle of Agincourt. By injuring a horse, a knight or men-at-arms no longer posed a serious threat to the archers. Their missile fire already funneled the infantry, and by removing the French cavalry from the battlefield, the archers would have faced less of a direct threat.

Table 3: Chronicle Army Estimations for the Battle of Agincourt (1415)

<b>Chronicle (s)</b>	<b>English Army Size</b>	<b>English Loses</b>	<b>French Army Size</b>	<b>French Loses</b>
<i>Gesta Henrici Quinti</i>	6,000 (battle)	24-26	60,000	6,000
Thomas Walsingham	8,000 (march)	43	140,000	2
Adam of Usk	10,000 (march)	-	60,000	-
London Chronicles	10,000	30	60,000	10,000
Enguerrand de Monstrelet	15,000 (march)	600	50,000	20,000
Jehan de Waurin	11,000 (battle)	1,600	50,000	20,000

Anne Curry provides information in her work *Agincourt: A New History* that offers insight into the size of the English and French armies during this battle based on several chronicles. Also included are the estimated killed and wounded from several of these chronicles. Referring to Table 4,<sup>297</sup> the average figure given for the English army ranges around 10,000 troops while the French army ranges around 60,000.<sup>298</sup> Bartlett notes that the ration of archers to

<sup>297</sup> This chart provides only several of the estimations for Agincourt. The English estimations by these few sources are considered to be accurate. The French estimations, however, are considered to be greatly inflated. With the English modern estimate being around 8,000 thousand strong, many have considered Jehan de Waurin saying “the French were six times more numerous” as being the best inclination of the French numbers considering the common estimations for the English and the wide spectrum that is given for the French. J.R.V. Barker has argued that the French were as low as three times as numerous and as much as six times as many as the English at Agincourt (Barker, x). For Table 4, see Curry, *Agincourt A New History*, 326-333.

<sup>298</sup> Anne Curry, *Agincourt: A New History* (Stroud, Gloucestershire: Tempus, 2006), 326. There are several estimates that figure the French army to be as high 120,000 which is outright ridiculous. There are many theories regarding the ration of French to English and it had been accepted that the ration of French to English is somewhere around 3 or 4 to 1.

men-at-arms at the Battle of Agincourt was around 5 to 1 which would suggest under the previously mentioned estimated size of the English army that there were anywhere from 6,000 to 8,000 archers at the battle.<sup>299</sup> With a fire-rate of six to eight arrows per minute, the English army could fire 36,000 to 64,000 arrows per minute as a whole. This rate of fire would not have lasted long since the archers would have used up their supply of arrows in roughly five minutes of battle. With the ability to fire this number of arrows, there can be no question that the archers made an impact.

### **Chapter 5.3: The Decline in the Supply of Archers and Archer Resources**

Throughout the period, the demand for archers remained constant. There is some evidence that suggests England was having issues finding suitable, trained archers. Until the 15<sup>th</sup> century, there were no statutes that encouraged the use of the longbow; however there were several statutes enacted throughout the second half of the conflict and even in the years following the Hundred Years War which supports the theory that the English army was struggling to find capable archers. Edward III complained in 1363 that England was beginning to neglect the practice of archery; a trend he thought would eliminate archers from England altogether. An excerpt from his statement reads: “As the subjects of our kingdom, both noble and non-noble, have, in times past, commonly practiced the art of archery in their games...great assistance to use in our military enterprises. Now, however, this practice having been almost totally abandoned...within a short space of time, will likewise become destitute of archers...”<sup>300</sup>

Considering the plentiful supply of archers that England had prior to the Peace of Bretigny, it is somewhat surprising that Edward had the foresight to notice a trend that would eventually play a major role in the replacement of archers in the English military. As a response to the issue, in

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<sup>299</sup> Bartlett, “The English Archer, c.1300-1500,” 12.

<sup>300</sup> Allmand, *Society At War: The Experience of England and France During the Hundred Years War*, 98.

1365, Edward III commanded all sheriffs to “suppress bowling, quoits, handball, football, club ball, hockey, cockfighting, ‘and other vain games of no value,’” and to encourage that on Sundays and holidays that the lower classes practiced archery.<sup>301</sup> It is difficult to determine if these statutes were able to encourage the use of the longbow, but the continued use of archers throughout the 15<sup>th</sup> century suggests that Edward’s initiative was able to at least delay the decline of the weapon. There are consistent requests for archers throughout the time period in the *Calendar of Patent Rolls*. When examining Figure 7,<sup>302</sup> this demand for these archers can be seen throughout the period; whether or not any of this archers were received is difficult to determine for certain, but such small numbers being requested suggests that in this instance these archers were received.

Table 4: Commissioned Archers, 1405-1436

Edward’s statute of 1363 was reissued in 1410 by Henry IV which made compulsory the practice of archery for “all able bodied men between the ages of sixteen and sixty” who were supposed to spend every Sunday and feast day at the shooting ranges to “learn the art of

Year	King	Number	Comissioned	Source
1405	Henry IV	10150	Archers	<i>C.P.R.</i> , Henry IV, Vol 3, 6, 61.
1406	Henry IV	3800	Archers	<i>C.P.R.</i> , Henry IV, Vol 3, 156.
1415	Henry V	1200	Archers	<i>C.P.R.</i> , Henry V, Vol. 1, 281.
1417	Henry V	1232	Archers	<i>C.P.R.</i> , Henry V, Vol. 2, 85, 141.
1418	Henry V	1256	Archers	<i>C.P.R.</i> , Henry V, Vol. 2, 148, 200.
1419	Henry V	180	Archers	<i>C.P.R.</i> , Henry V, Vol. 2, 213.
1420	Henry V	1000	Archers	<i>C.P.R.</i> , Henry V, Vol. 2, 319.
1425	Henry VI	2814	Archers	<i>C.P.R.</i> , Henry VI, Vol. 1, 299-300, 302.
1426	Henry VI	600	Archers	<i>C.P.R.</i> , Henry VI, Vol. 1, 362.
1428	Henry VI	500	Archers	<i>C.P.R.</i> , Henry VI, Vol. 1, 469.
1429	Henry VI	2020	Archers	<i>C.P.R.</i> , Henry VI, Vol. 2, 42.
1434	Henry VI	1494	Archers	<i>C.P.R.</i> , Henry VI, Vol. 2, 353, 359.
1435	Henry VI	700	Archers	<i>C.P.R.</i> , Henry VI, Vol. 2, 525.
1436	Henry VI	2200	Archers	<i>C.P.R.</i> , Henry VI, Vol. 2, 535.

shooting...came forth the honor to the kingdom and advantage to the king in his actions of war.”<sup>303</sup> In 1450 Henry IV had requested 20,000 archers but was only able to accumulate around 13,000; in 1456 he decreed that participating in sports and amusements by all men between

<sup>301</sup> White, 266-267.

<sup>302</sup> All the sources for Table 5 came from the *Calendar of Patent Rolls*. The specific volumes are listed in the table.

<sup>303</sup> Barker, 88-89.

twelve and sixty be proscribed, and archery be substituted.<sup>304</sup> In the past archers rarely received any formal training because they began their training in childhood. When such men were commissioned they simply picked up their weapon or were given a longbow and picked up any additional training in battle.<sup>305</sup> Writing about an army in 1475, Burgundian chronicler Philip de Commines, "...yet these were not the Englishmen of his father's day and the former wars with France. They were inexperienced and raw soldiers."<sup>306</sup> The problem of the decline of archers would continue throughout the sixteenth century. In 1549, Bishop Latimer said, "We have taken up whoring in towns instead of shooting in fields."<sup>307</sup> The longbow would survive the scarcity of archers for many years. It was not officially replaced until 1595 when it was phased out in favor of the musket of Elizabeth's army.<sup>308</sup> This decline might have been overcome with professionalized training; however, the difficulties in the supply of yew made the issue very pragmatic.<sup>309</sup> This may have attributed in some part to the peasant class from abandoning their use of the longbow over the latter half of the 15<sup>th</sup> century.

The Battle of Sluys is known as the first naval battle of the Hundred Years War. It is also relevant because the result of the conflict provided the English with naval superiority for the early phase of the war. This dominance would last for nearly forty years, and would end not with a fight against the French. In 1372, the English lost a major naval battle at La Rochelle to a Spanish fleet which turned the tide of sea dominance in the Hundred Years War. After which England had to content with piracy and the threat of a French invasion until the end of the war.<sup>310</sup> Early dominance on the sea allowed the English to reinforce and supply their army in France

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<sup>304</sup> DeVries, *Medieval Weapons: An Illustrated History of Their Impact*, 193.

<sup>305</sup> Bartlett, *English Longbowman, 1330-1515*, 31.

<sup>306</sup> Ibid.

<sup>307</sup> White, 267

<sup>308</sup> Ibid.

<sup>309</sup> Gervase, 593.

<sup>310</sup> Oman, Vol. II, 200.

unopposed. However, after the defeat, an already significant shortage in raw materials combined with security issue on the seas would prove to be a factor that the English could not overcome. Adding to the issue was the time it took to manufacture the longbow and the arrows. Bow making was not a precise craft; rather, it was a skill far more dependent upon the eye and touch than upon measurement.<sup>311</sup> Arrow making was a “tedious and difficult job”. Adrian Eliot Hodgkin, historian and bow-maker, stated that he would “rather make a whole bow than six broad-head arrows.”<sup>312</sup> Making matters worse for the already depleted supplies of bows was damage. If a bow stave broke, it was simply replaced because it could not be repaired.<sup>313</sup>

The quality of the bow depended on the wood that was available. There are mythical stories that English schoolchildren about the ancient yew trees in England that were grown to provide archers with bows. The problem with this is that the climate in England is too changeable causing the yew tree to twist while growing which for obvious reasons is not ideal when using the wood to make bows.<sup>314</sup> The best bow staves were cut from single piece yew trees that were imported from Spain, Italy, and Scandinavia.<sup>315</sup> In December 1418, Henry V ordered his sheriffs to find him 1,190,000 arrows. In the previous year, Henry V ordered that every goose in the twenty southern shires needed to have six feathers taken from it to provide for arrows at the Tower of London.<sup>316</sup> There is no way to determine whether or not the number of arrows requested were all received or at least if a proportion were received. Through accounts of Agincourt a picture is painted of archers of the six-to-eight thousand archers that ran out of arrows and fought with short swords and other small arms.<sup>317</sup> If the archers went through the

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<sup>311</sup> Hodgkin, 63.

<sup>312</sup> Ibid., 107.

<sup>313</sup> Borg, 13-19.

<sup>314</sup> Barker, 87-88.

<sup>315</sup> Ibid., 88.

<sup>316</sup> Ibid., 86.

<sup>317</sup> Hoskins, 189. *Gesta Henrici Quinti*, 89.



previously stated number of requested arrows, their fire rate would have to be upwards of twenty arrows a minute, an impossibility when firing in sync and “putting one’s body into the bow.” In some instance, archers would have attempted to recover arrows that were in the dead or in the ground to reuse, but this was both dangerous and very impractical during battle,<sup>318</sup> considering that archers wore no armor and were not trained in close quarter combat.

In the 1430s there were at least two incidents where Henry V commissioned the “bowyer” and “fletcher” of the Tower of London to requisition the raw resources or the weapons themselves with the “power to imprison” those that did not comply; in 1430, the “fletcher” was supposed to supply others of the craft raw materials and in 1435, the “bowyer” was to provide 2,000 bows or the equivalent in wood so they could be produced.<sup>319</sup> During this time period, statutes were enacted that were directed at merchants with the purpose of encouraging them to buy the raw materials for the longbow when trading outside of England. A good example of this happened during the reign of Edward IV to import four bow staves for every ton of goods they imported; and, for every “butt of wine, ten staves” and a heavy penalty was imposed for each stave that merchants were short.<sup>320</sup> Later in the reign of Edward IV, an act was passed that encouraged every Englishman to have a bow of his own height which was directed ““to be made of yew, wych hazel, ash or awburne,’ or any other reasonable tree to their power.”<sup>321</sup> The importance of this directive is not that it encourages all citizens to own a longbow, but that three additional types of wood are mentioned to make the longbow in addition to yew which suggests that yew had become a rarity.

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<sup>318</sup> Barker, 86

<sup>319</sup> *C.P.R.*, Henry VI, Vol. 2, 44, 607.

<sup>320</sup> Credland, 79.

<sup>321</sup> Heath, 130.

James Edwin Oxley has suggested that the disuse of the longbow may be attributed to an increase in the price of yew bow staves.<sup>322</sup> An Act of Parliament in 1472 said that archery was “greatly discontinued and almost lost.” It is possible that the statutes that placed imported limits on goods mandating to have a certain number of bow staves per ton may have actually backfired and prevent exportation to England. It is difficult to know the full impact that the statutes would have had on the importation of bow staves and yew. It is clear from the acts and statutes passed, however, that archers and raw materials were becoming rare in England.

#### **Chapter 5.4: The Introduction of Gunpowder Weapons**

It is often misunderstood that the introduction of gunpowder weapons was the cause of or played a role in the decline of English archery because gunpowder weapons ultimately replaced the longbow. The evolution of gunpowder weapons, including manufacture, transportation, storage, and availability remained relatively stagnant.<sup>323</sup> Medieval gunpowder technology falls into three distinct periods according to DeVries; the first period (c.1326-1382) saw the invention and early experimentation of the technology, the second period (1382-1436) saw the increased use of and production of siege cannonry, and the third period (1436-1494) saw an increase in the use of handheld cannons.<sup>324</sup> It is difficult to determine when early cannons first made an appearance in Europe because of the lack of written evidence. DeVries suggests that handheld gunpowder weapons began to appear in Europe by “the time of the illuminations of gunpowder weapons in Walter de Milemete’s *De notabilibus, sapientiis et prudentiis regum* which was made

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<sup>322</sup> James Edwin Oxley, *The Fletchers and Longbowstringmakers of London* (London: Worshipful Company of Fletchers, 1968), 28.

<sup>323</sup> Kelly DeVries, “Gunpowder and Early Gunpowder Weapons,” in *Gunpowder: The History of an International Technology*, ed., Brenda J. Buchanan (Bath: Bath University Press, 1996), 123.

<sup>324</sup> Kelly DeVries, “The Forgotten Battle of Bevershoutsveld, 3 May 1382: Technological Innovation and Military Significance,” *Armies, Chivalry, and Warfare: Harlaxton Medieval Studies, Vol. 2*, ed., Matthew Strickland (Stamford, 1998) in *Guns and Men in Medieval Europe, 1200-1500: Studies in Military History and Technology* (Aldershot, England: Ashgate, 2002), 2-5.

in London circa 1326.”<sup>325</sup> Despite the early invention and experimentation with gunpowder, it was not until the later years of the Hundred Years War that cannons would have a significant impact on battle.

The first firearms were so heavy and cumbersome that they were not used until the technology could be made more practical. The problem of reloading a weapon that was very “dubious” would have made it difficult to use while on horseback.<sup>326</sup> French leaders were aware of the capabilities of gunpowder weapons and wanted to incorporate them into their armies. In the case of the French, at least during the reign of Charles V and Charles VI, the production of gunpowder was not nationalized which meant that gunpowder stores and weapons would have been purchased at local levels.<sup>327</sup> France’s use of gunpowder weapons during the fourteenth century in comparison with England was very small but this does not mean that it was not effective.<sup>328</sup> Early gunpowder weapons consisted of field cannons rather than handheld cannons. Early gunpowder weapons were only effective in sieges. Gunpowder did not “revolutionize” the battlefield until the last of the sixteenth century. The French fleet “assailed” Southampton with bombards. In addition, in 1339, Cambrai was defended by ten mounted cannons.<sup>329</sup> It is not until the 1440s that handheld guns start to make an appearance replacing the longbow and crossbow, but they did not have a pivotal role on the battlefield until the battle of Pavia in 1525.<sup>330</sup> DeVries, here, is speaking of handheld firearms because there is evidence of an even earlier period where cannons play a major role in the defeat of English archers by bombardment

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<sup>325</sup> Ibid.

<sup>326</sup> White, 112-113

<sup>327</sup> Kelly DeVries, “Gunpowder Weaponry and the Rise of the Early Modern State,” *War in History* 5, no. 2, (1998): 131-132.

<sup>328</sup> Ibid., 130.

<sup>329</sup> James Westfall Thompson, *Economic and Social History of Europe in the Later Middle Ages, 1300-1530* (New York: Frederick Ungar Publishing, 1965), 91-2.

<sup>330</sup> DeVries, *Medieval Weapons: An Illustrated History of Their Impact*, 170.

in 1450 near the town of Formigny. The archers were out-ranged by cannons and left their defensive position to counter the cannons only to be slaughter by the men-at-arms.<sup>331</sup>

It has been argued by Oakeshott that the longbow's supremacy only lasted a century because the French, in the mid-fifteenth century, became masters of the cannon as the English had become masters with the longbow.<sup>332</sup> The problem with this theory is that the longbow far outlasted cannons and it was only when handheld firearms had achieved practicality that they become somewhat of a threat only because the supply of archers and longbows had been dwindling and it was easier to train men to use handheld firearms. There were major issues with the early cannon. Thomas Esper notes that they were extremely dangerous to use after seven or eight discharges because they would heat up and explode the powder charge prematurely.<sup>333</sup> Firearms, in comparison to the longbow, had a much slower right of fire while an archer could release four to five arrows before the harquebusier was ready to fire once.<sup>334</sup> The one advantage that firearms had over the use of the longbow was penetration power.<sup>335</sup> The longbow was not as deadly in the later years of the war because of plate armor, but it was still able to remain effective by wounding horses and soldiers. Later advocates of the bow would argue that the longbow was more effective due to the damage the arrow caused when extracted from human flesh.<sup>336</sup> The example of Agincourt sheds light on how the weapon fared against plate armor. Plate armor limited the deadliness but not the effectiveness. Men did not need to be killed to be removed from battle, if they were wounded in a serious enough manner, they would not be able to carry on.

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<sup>331</sup> Baumgartner, 145-146.

<sup>332</sup> Oakeshott, 282-283.

<sup>333</sup> Thomas Esper, "The Replacement of the Longbow by Firearms in the English Army," *Technology and Culture* 6, no. 3 (Summer 1965): 390.

<sup>334</sup> Ibid., 389.

<sup>335</sup> Ibid., 390.

<sup>336</sup> Ibid., 389. Oakeshott, 297. The original source for this information is Loius de Gaya, *Traite des armes* [1678] (London, 1911), 48-49.

Early archer to men-at-arms ratios have been suggested as being as low as 1 to 1<sup>337</sup> and as high as 3 to 1<sup>338</sup> during the early part of the Hundred Years War. The ratio during the reign of Henry VI's reign has been estimated at roughly 3 to 1. It is during the reign of Henry VI that the ratio begins to increase in favor of archers who suggest that there may have also been an issue with the dwindling number of men-at-arms.<sup>339</sup> Powicke suggests that this may have been this may be a direct result of a growing disenchantment of the English with the war with France.<sup>340</sup> The armies of Edward IV have been suggested as being nearly 7 to 1.<sup>341</sup> Anne Curry points out that the English regarded the optimum ratio to be 3 to 1 with some room for flexibility in the event of an emergency.<sup>342</sup> This optimum ration allowed the archers to disrupt formations which then resulted in the men-at-arms mopping up or doing the majority of the fighting to a demoralized army that was without formation. The longbow also had a psychological effect on the soldiers that received its arrows. The French soldiers had to contend with the "bewildering" effects that the arrows created as they hissed past them and the clanking sound created by the arrows striking and ricocheting off their armor. Few soldiers have had to face both arrows and musket balls at the same time. Featherstone points out that of the evidence from those who have faced both, that all agree the arrows were more demoralizing than the balls fired from the handheld firearms.<sup>343</sup>

The decreasing availability of trained archers and the dwindling supply of raw materials played a major role in the decline of the longbow. Despite improvements in armor and a French strategy meant to take the longbow out of battle, the English longbow still remained a significant

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<sup>337</sup> Bartlett, *English Longbowman, 1330-1515*, 13.

<sup>338</sup> Powicke, 379.

<sup>339</sup> Ibid.

<sup>340</sup> Ibid.

<sup>341</sup> Bartlett, "The English Archer, c.1300-1500," 12.

<sup>342</sup> Curry, "The Organization of Field Armies in Lancastrian Normandy," 216.

<sup>343</sup> Featherstone, 38.

weapon in the hands of the trained archer. Philippe de Commynes once said of armies “the most important thing in the world, for battle, is the archers.”<sup>344</sup>

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<sup>344</sup> Clifford J. Rogers, “The Military Revolution of the Hundred Years War,” *The Journal of Military History* 57, no. 2 (Apr., 1993): 249. The original source can be found as Philippe de Commynes, *Memoires*, ed., R. Chantelauze (Paris: Firmin- Didier, 1881), 23-24.

## **Chapter 6: Conclusion**

The early adaption of the longbow into the English army changed the manner in which warfare was fought in the latter middle ages. The English experienced the longbow in the late 13<sup>th</sup> century and early 14<sup>th</sup> century and incorporated it into military use. This adoption of a missile weapon would ultimately initiate the slow decline of cavalry in warfare. Though cavalry would still exist in armies throughout the remainder of the Hundred Years War, there effectiveness would decline considerably. The transformation that occurred tactically was the direct result of the combination of archers and dismounted men-at-arms fighting together with the same strategy which included missile artillery that broke up formations and created chaos in which the men-at-arms then defeated or mopped up the remaining forces. This new strategy which was inspired by the archer's new capabilities because of the longbow essentially put an end to what Lynn White would call "shock combat."

The feudal system had created a large class of peasantry which during the early years of the Hundred Years War provided England with a pool of archers that outreached their demand. During the Scottish Wars of Independence, the English archers would prove themselves useful in defeating Scottish cavalry and pikemen. The Scottish defeats were also ensured by the penetrative power of the English archers against early armor which was mail and could withstand a blow from a sword but not stop an arrow released from a longbow. In 1340, at the Battle of Sluys, the English won a major naval victory which procured dominance over the seas for the first half of the Hundred Years War. This would allow the English to import resources of yew to make longbows without interruption from Spain and Italy. The yew grown in England was of poor quality and could not be used for the purpose of creating longbows. The combination of dominance over the seas and an almost unlimited supply of trained archers allowed the English to use the archer to their benefit, but to dominant the first part of the Hundred Years War ending

with the Battle of Poitiers in 1356. The archer was only beneficial the English when used with men-at-arms and when used *en masse*.

The long bow remained dominant in the early part of the Hundred Years War because armor technology had not reached its peak and the rival weapon of the period, the crossbow, could not out-perform the longbow. The longbow had a higher fire-rate, almost six times faster and had a much greater distance at which it was effective. The crossbow, however, did have better penetration against armor in later periods. The longbow would remain effective in the English army when used properly as would be seen at the Battle of Agincourt and Verneuil. However, the second half of the conflict would see a considerable decline in the use and availability of archers for combat. This can be traced to several events which have direct correlation to the decline in usage of the longbow as well as the issues English faced in manufacturing the bow. The Black Plague which made an appearance in England in 1348 severely affected the number of available archers for duty. Since archers were trained by their natural usage of the bow and not by the nation state, their success depended on the process of the peasantry naturally replenishing the available pool. The plague limited that capability very much and the turning tide of the war to did not help the issue either. The Battle of Auberoche, not only can be marked for changing the tide of the war, but removed the naval dominance England once held over the seas. They now had issues importing required materials and had to deal with raiding and piracy. The supply of archers and resources began to dry up while the demand for the soldier increased.

To offset the issues of recruiting enough archers, the English heavily relied upon the *chevauchee* which essentially consisted of smaller English armies raiding, pillaging, and burning their way across France. This was able to prevent to demise of the archer but the shortage of



archers and resources would ultimately take its toll. The Black Plague that limited the recruiting pool also created the need for labor that allowed many peasants to begin working for higher wages than they previously had. This played a role in the pool drying up. Edward enacted many statutes to not only encourage the practice of archery but to freeze wages to prevent a social blending of classes. The statutes were unable to keep the peasant class training with the longbow.

In recent years, several leading historians specifically Keegan and DeVries have questioned the efficiency of the archer. Keegan has theorized in his work *The Face of Battle* that at Agincourt, the English archer could not have been as effective as once thought for several reasons. Keegan says that the extreme angle needed to fire an arrow could not have done a great deal of harm given the terminal velocity of an arrow, at least to the men-at-arms.<sup>345</sup> He does concede, however, that the arrow storm would have had a moral effect on the French,<sup>346</sup> but really limits their effectiveness to only this. He later describes that the cavalry would have charged through several volleys of archers arrows which would have affected only several horses.<sup>347</sup> He later describes and uses the chronicle of St. Remy and the priest of the *Cottonian MS* which both assert that only several cavalry reached the archers<sup>348</sup> negating his original statement concerning the cavalry. DeVries then picked up this statement and concluded that at the Battle of Agincourt, the longbow was unable to penetrate the French armor and did nothing more than killing a few horses and wounding a few men.<sup>349</sup> DeVries' point about the longbow having issues with French armor during the Battle of Agincourt is not off point. The knights that

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<sup>345</sup> Keegan, 93.

<sup>346</sup> Ibid., 94.

<sup>347</sup> Ibid., 95.

<sup>348</sup> Ibid., 96

<sup>349</sup> DeVries, "*Medieval Military Technology*, 38. Clifford Rogers, "The Efficacy of the English Longbow: A Reply to Kelly DeVries," *War in History* 5, no. 2 (1998): 234.

had the most advanced armor would naturally have the best defense against the penetration of the longbow. However, not all French soldiers would have been able to afford such armor.

Monstrelet clearly states that the English archers defeated the French cavalry at Agincourt.<sup>350</sup> Keegan even recognizes that the archers were successful in channeling the French advance<sup>351</sup> toward their men-at-arms in the center. In his conclusion of the battle, Keegan says of the prognosis for the French that many would “have suffered penetrating wounds, either from arrows or weak spots in their armor.”<sup>352</sup> If archers were as ineffective against armor as Keegan mentioned, how would the French have suffered “penetrating wounds from arrows?” Additionally, if there were “weak spots” in the French armor, would the arrow not have penetrated those as well? Rogers brings up a very important point regarding armor that would have been used during the Battle of Agincourt. He says that even if the arrow could not penetrate plate armor, it would not have prevented the longbow from killing or wounding the “lightly armored or non-armored soldiers.”<sup>353</sup>

Throughout the Hundred Years War, the longbow remained an effective weapon in the hands of a trained Englishman. The early phase of the war saw great successes in battle due to the new tactic adapted by the English that used a combination of archers and men-at-arms. In response to the lethality of the longbow, and perhaps the crossbow as well, improvements were made to armor making it nearly impenetrable. Armor would reach its peak of development by the time of the Battle of Agincourt and would in some cases make penetration for the longbow somewhat difficult. Despite the longbow not being as lethal as it once was at the time of the Battle of Poitiers, the longbow was still able to be effective. Helping the longbow continue its

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<sup>350</sup> Monstrelet de Enguerrand, 340. Rogers, “The Efficacy of the English Longbow: A Reply to Kelly DeVries,” 242.

<sup>351</sup> Keegan, 98.

<sup>352</sup> Ibid., 113.

<sup>353</sup> Rogers, “The Efficacy of the English Longbow: A Reply to Kelly DeVries,” 239.

success was the ability for archer to adapt to battlefield changes, which in the case of Agincourt meant changing positions to release their arrows at the “flanks” and “hide quarters” of the French. In addition, the French would not have universally had the best of armor. Since most armies were made up of the lower classes, it is more likely than not that a majority of the French soldiers were still wearing armor developed in the previous century. It becomes clear that the longbow remained effective through the entirety of its service but would succumb to a lack of supplies and trained archers which would result in the ultimate decline of the weapon that changed medieval warfare.

## Bibliography

- Baker, Geoffrey le. *The Chronicle of Geoffrey le Baker of Swinbrook*. Trans. David Preest. Woodbridge: Boydell Press, 2012.
- Bel, Jean le. *The True Chronicles of Jean le Bel, 1290-1360*. Trans. Nigel Bryant. Woodbridge: Boydell Press, 2011.
- Calendar of the Patent Rolls Preserved in the Public Record Office*. London: Her Majesty's Stationary Office: 1891-.
- Childs, Wendy, and John Taylor. Trans. *The Anonimale Chronicle, 1307-1334: From Brotherton Collection MS 29*. Leeds: The Society, 1991.
- Doyle, James E. *A Chronicle of England, BC55 – 1484AD*. London: Longman, Green, Longman, Roberts & Green, 1864.
- Froissart, Jean, *The Chronicles of Jean Froissart: in Lord Berners Translation*. Edited. Gillian and William Anderson. Carbondale, IL: Southern Illinois University Press, 1963.
- Gray, Thomas. *Scalacronica, 1272-1363*. Trans. Andy King. Woodbridge, Suffolk: Surtees Society, 2005.
- Knighton, Henry. *Knighton's Chronicle, 1337-1396*. Trans. G.H. Martin. Oxford: Clarendon Press, 1995.
- Maxwell, Sir Herbert. Trans. *The Chronicle of Lanercost, 1272-1346*. Glasgow: James Maclehose and Sons, 1913.
- Monstrelet, Enguerrand de. *The Chronicle of Enguerrand de Monstrelet*. Trans. Thomas Johnes. London: William Smith, 1840.
- Rogers, Clifford. Trans. *The French Chronicle of London in The Wars of Edward III: Sources and Interpretations*. Edited. Clifford Rogers. Woodbridge, Suffolk: Boydell Press, 1999.
- Taylor, Frank, and John S. Roskell. Trans. *Gesta Henrici Quinti: The Deeds of Henry the Fifth*. Oxford: The Clarendon Press, 1975.
- Usk, Adam of. *The Chronicle of Adam of Usk, 1377-1421*. Trans. C. Given Wilson. Oxford: Clarendon Press, 1997.
- Venette, Jean de. *The Chronicle of Jean de Venette*. Trans. Jean Birdsall. New York: Columbia University, 1953.
- Walsingham, Thomas. *The Chronica Mairoa of Thomas Walsingham, 1376-1422*. Trans. David Priest. Woodbridge, UK: Boydell Press, 2005.

- Waurin, Jehan de. *A Collection of the Chronicles and Ancient Histories of Great Britain, Now Called England, AD 1399 to AD 1422*. Trans. Sir William Hardy and Edward L.C.P. Hardy. London: Her Majesty's Stationary Office, 1887.
- Allmand, Christopher. "New Weapons, New Tactics, 1300-1500." In *The Cambridge Illustrated History of Warfare: The Triumph of the West*, 92-105. Edited. Geoffrey Parker. New York: Cambridge University Press, 1995.
- . *Society at War: The Experience of England and France During the Hundred Years' War*. New York: Barnes and Noble Books, 1973.
- Ashdown, Charles Henry. *European Arms and Armor*. New York: Brussel and Brussel, 1967.
- Ayton, Andrew. "Arms, Armor, and Horses." In *Medieval Warfare: A History*, 186-208. Edited. Maurice Keen. Oxford: Oxford University Press, 1999.
- . "English Armies in the Fourteenth Century." In *The Wars of Edward III: Sources and Interpretations*, 303-320. Woodbridge, Suffolk: Boydell Press, 1999.
- . "The English Army and the Normandy Campaign of 1346." In *England and Normandy in the Middle Ages*, 253-268. Edited. David Bates and Anne Curry. London: The Hambledon Press, 1994.
- Ayton, Andrew, and J.L. Price. "The Military Revolution from a Medieval Perspective." In *The Medieval Military Revolution: State, Society, and Military Change in Medieval and Early Modern Europe*. London: I.B. Tauris Publishers, 1998.
- Baumgartner, Frederic J. *From Spear to Flintlock: A History of War in Europe and the Middle East to the French Revolution*. New York: Praeger Publishers, 1991.
- Barker, Juliet R. V. *Agincourt: Henry V and the Battle that Made England*. New York: Little, Brown and Company, 2006.
- Bartlett, Clive. *English Longbowman, 1330-1515*. Oxford: Osprey Publishing, 1995.
- Bartlett, Clive and Gerry Embleton, "The English Archer, c.1300-1500." *Military Illustrated: Past and Present*, no. 1 (Jun/July 1986): 10-17.
- Bennett, Mathew. *Agincourt, 1415: Triumph Against the Odds*. Oxford: Osprey Publishing, 1991.
- Blair, Claude. *European Armor, circa 1066 to circa 1700*. London: B.T. Batsford, 1958.
- Borg, Alan. *Arms and Armor in Britain*. London: Her Majesty's Stationary Office, 1979.
- Bradbury, Jim. *The Medieval Archer*. New York: St. Martin's Press, 1985.

- Burne, Alfred Higgins. *The Agincourt War*. London: Eyre & Spottiswoode, 1955.
- . *The Crecy War: Military History of the Hundred Years' War from 1337 to the Peace of Bretigny, 1360*. London: Eyre & Spottiswoode, 1955.
- Clowes, W. Laird. *The Royal Navy: A History from the Earliest Times to the Present*. Vol.1. New York: AMS Press, 1966.
- Credland, Arthur G. "Sir Ralph Payne-Gallwey Bt. and the Study of Medieval and Ancient Projectile Weapons," *Arms and Armor* 8, no. 1 (April 2011): 46-88.
- Curry, Anne. "The Organization of Field Armies in Lancastrian Normandy." In *Armies, Chivalry, and Warfare in Medieval Britain and France: Proceedings of the 1995 Harlaxton Symposium*, 207-233. Edited. Matthew Strickland. Stamford: Paul Watkins, 1998.
- . *Agincourt: A New History*. Stroud, Gloucestershire: Tempus, 2006.
- DeVries, Kelly. "God, Leadership, Flemings, and Archery: Contemporary Perceptions of Victory and Defeat at the Battle of Sluys, 1340." *The American Neptune* 55, no. 3 (1995): 223-242.
- . "Gunpowder and Early Gunpowder Weapons." In *Gunpowder: The History of an International Technology*, 121-135. Edited. Brenda J. Buchanan. Bath: Bath University Press, 1996.
- . "Gunpowder Weaponry and the Rise of the Early Modern State." *War in History* 5, no. 2 (1998): 127-45.
- . *Medieval Military Technology*. Peterborough, ONT: Broadview Press, 1992.
- . "The Forgotten Battle of Bevershoutsveld, 3 May, 1382: Technological Innovation and Military Significance." *Armies, Chivalry and Warfare: Harlaxton Medieval Studies, Vol. II*. Ed. Matthew Strickland. Stamford, 1998. In *Guns and Men in Medieval Europe, 1200-1500: Studies in Military History and Technology*, 289-303. Aldershot, England: Ashgate, 2002.
- DeVries, Kelly and Robert D. Smith. *Medieval Weapons: An Illustrated History of Their Impact*. Santa Barbara, CA: ABC-CLIO Publishing, 2007.
- Esper, Thomas. "The Replacement of the Longbow by Firearms in the English Army." *Technology and Culture* 6, no. 3 (Summer 1965): 382-393.
- Featherstone, Donald F. *The Bowmen of England: The Story of the English Longbow*. New York: C.N. Porter, 1968.
- Fortescue, J.W. *A History of the British Army: Volume 1*. London: MacMillan and Company,

1910.

Hall, A. R., "Military Technology." In *A History of Technology, Vol. II: The Mediterranean and the Middle Ages, c.700 BC to c. AD.1500*, 695-730. Edited. Charles J. Singer. Oxford: The Clarendon Press, 1956.

Hardy, Robert. *Longbow: A Social and Military History*. London: Bois d'Arc Press, 1992.

Heath, H.G. *The Grey Goose Wing*. Greenwich, CT.: New York Graphics Society, 1972.

Hewitt, H.J. *The Black Princes Expedition of 1355-57*. Manchester: University of Manchester Press, 1958.

———. "The Organization of War." In *The Wars of Edward III: Sources and Interpretations*, 285-302. Edited. Clifford Rogers. Woodbridge, Suffolk: Boydell Press, 1999.

———. *The Organization of War Under Edward III, 1338-1362*. New York: Barnes and Nobles, Inc., 1966.

Hodgkin, Adrian Eliot. *The Archers Craft: A Sheaf of Notes on Certain Matters Concerning Archers and Archery, the Making of Archers' Tackle and the Art of Hunting with the Bow*. New York: A.S. Barnes and Company, 1954.

Hoskins, Peter. *In the Steps of the Black Prince: The Road to Poitiers, 1355-1356*. Woodbridge, Suffolk: The Boydell Press, 2011.

Jones, Peter N. "A Short History of the Attack of Armor," *The Metallurgist and Materials Technologist* (May 1984): 247-250.

Keegan, John. *The Face of Battle*. New York: The Viking Press, 1976.

Lewis, N.B. "Organization of Indentured Retinues in Fourteenth-Century England." *Transactions of Royal Historical Society* 27, Fourth Series (1945): 29-39.

Morton, Louis. "War, Science, and Social Change." In *The Social Reality of Scientific Myth: Science and Social Change*. New York: American Universities Field Staff, 1969.

Norman, A. Vesey B. *Arms and Armor*. London: Octopus Books, 1972.

Oakshott, R. Ewart. *The Archaeology of Weapons: Arms and Armor from Prehistory to the Age of Chivalry*. New York: Praeger, 1960.

Oman, Charles. *A History of the Art of War in the Middle Ages, Volume II: 1278-1485*. New York: Burt Franklin, 1959.

Oxley, James Edwin. *The Fletchers and Longbowstringmakers of London*. London: Worshipful

- Company of Fletchers, 1968.
- Pfaffenbichler, Mathias. *Medieval Craftsmen: Armorer's*. Toronto: University of Toronto Press, 1992.
- Phillips, Gervase. "Longbow and Hackbutt: Weapons Technology and Technology Transfer in Early Modern England." *Technology and Culture* 40, no. 3 (Jul., 1999): 576-593.
- Pope, Saxon T. *Bows and Arrows*. Berkeley: University of California Press, 1962.
- Powicke, M.R. "Lancastrian Captains." In *Essays in Medieval History*, 371-382. Ed. T.A. Sandquist and M.R. Powicke. Toronto: University of Toronto Press, 1969.
- Prestwich, Michael. "The English Medieval Army to 1485." In *The Oxford Illustrated History of the British Army*. Ed. David Chandler. New York: Oxford University Press, 1994.
- . *The Three Edwards: War and State in England, 1272-1377*. London: Weidenfeld and Nicolson, 1980.
- Robinson, A. Mary F. *Froissart*. Trans. E. Frances. New York: Scribner, 1895.
- Rogers, Clifford J. "The Age of the Hundred Years War." In *Medieval Warfare: A History*, 136-162. Ed. Maurice Keen. Oxford: Oxford University Press, 1999.
- . "The Efficacy of the English Longbow: A Reply to Kelly DeVries," *War in History* 5, no. 2 (1998): 233-242.
- . "The Military Revolution of the Hundred Years' War." *The Journal of Military History* 57, no. 2 (Apr., 1993): 241-278.
- Schubert, H. R. *History of the British Iron and Steel Industry from c.450 B.C. to A.D. 1775*. London: Routledge and Kegan Paul, 1957.
- Thompson, James Westfall. *Economic and Social History of Europe in the later Middle Ages, 1300-1530*. New York: Frederick Ungar Publishing, 1965.
- Waters, Charlotte M. *An Economic History of England, 1066-1874*. London: Oxford University Press, Humphrey Milford, 1925.
- White, Lynn T. *Medieval Religion and Technology: Collected Essays*. Berkeley: University of California, 1978.
- . *Medieval Technology and Social Change*. Toronto: Oxford University Press, 1962.