Gunpowder Weaponry and the Rise of the Early Modern State

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Since the 1988 publication of Geoffrey Parker’s *The Military Revolution: Military Innovation and the Rise of the West, 1500–1800*, the term ‘Military Revolution’ has become common parlance and accepted scholarship among military historians.1 Recent books and collections of articles by Brian M. Downing, Weston F. Cook Jr, David Eltis, Clifford J. Rogers, and Andrew Ayton and J.L. Price have even incorporated the term in their titles.2 All these works agreed that a revolution in military tactics and strategy had been effected by the innovation of gunpowder weaponry. And while it is true that the ‘Military Revolution’ thesis has had its critics, these, like Jeremy Black, John A. Lynn, Bert S. Hall and myself, have specifically targeted Parker’s ideas of technological determinism.3


One of Parker’s noted changes wrought by the Military Revolution not discussed by his critics – in fact one that proves that the Military Revolution was indeed revolutionary – was that the increased use of gunpowder weaponry in Europe between 1500 and 1800 brought about the rise of the modern state. His argument seems quite logical: because gunpowder weapons were expensive to produce, maintain and supply, only the most wealthy and prosperous political entities were able to afford a gunpowder train large enough both to defend their lands and to attack their enemies. Smaller political entities, duchies, counties, earldoms and other smaller baronies, simply were not wealthy enough to compete with the centralized governments of kings and emperors, and thus this led to the rise of the early modern state.4

This is but one of the many points which Parker uses to support his thesis, and yet those adhering to the idea of the Military Revolution that he proposed have accepted it without question. Some have even used it to support their own early modern political paradigms. Note, for example, the following from Bruce D. Porter’s War and the Rise of the State: The Military Foundations of Modern Politics:

The crux of the matter as far as state formation was concerned was this: artillery was generally too expensive for the nobility to purchase, and hence tended to become a monopoly of the Crown. The superior military technology of the day both gravitated to and reinforced the political center.5

And Clifford J. Rogers has written:

The great cost of artillery, and the larger armies engendered by the growing importance of open battle, put a premium on the ability to produce and manage large amounts of cash. This created a self-reinforcing cycle, which continued to spiral upwards at least until the advent of the Artillery Fortress Revolution of the early sixteenth century. It went something like this: central governments of large states could afford artillery trains and large armies. The artillery trains counter-acted centrifugal forces and enabled the central governments to increase their control over outlying areas of their realms, or to expand at the expense of their weaker neighbors. This increased their tax revenues, enabling them to support bigger artillery trains and armies, enabling them to increase their centralization of control and their tax revenues still further, and so on.6

Indeed, only one historian has disagreed with this technologically determined rise of the early modern state, Sir J.R. Hale. In *War and Society in Renaissance Europe, 1450–1620*, he notes:

The case for the suggestion that artillery was an instrument centralizing power is . . . feeble. Governments, as a result of regalian rights over metals and their heavy investment in having guns made, insisted on making the manufacture of artillery a monopoly. But though an occasional rebellious magnate may have been brought to heel by royal cannon (but never just because of cannon) the complex shifts towards more effectively centralized forms of government began before cannon were effective or readily transportable and can be explained without reference to gunpowder weapons.7

In support of Hale’s dissent on this issue, this article will investigate the political control of gunpowder weaponry in Burgundy, France, and England during the last two centuries of the Middle Ages. This is the point at which political historians mark the beginning of the decline and eventual demise of feudalism in western Europe, with the rise of the central state in its stead.8 During this time, all three of these political entities fit this ‘feudalistic decline/central state rise’ pattern almost perfectly, with England and France rising at the end of the fifteenth century to near-absolutism under the Tudors and Valois respectively, and with Burgundy, despite losing its lord, Charles the Bold, in 1477 at the battle of Nancy, becoming part of the inheritance package passed on to Charles V at his ascension to the imperial throne in 1519.

To fit Parker’s Military Revolution thesis, then, we should expect to find each of these states during this time, in terms of gunpowder weaponry, transforming from a locally owned and controlled technology to that of a state-run, state-used and state-restricted technology. And in fact that is almost precisely what we find in researching the history of gunpowder weapons in France and Burgundy. Each of these rising states recognized the effectiveness of gunpowder weapons as used by local entities, seized this technology by whatever means they could and then turned it against these same local entities to force their submission to the increasingly more powerful state. However, this model is not followed in England, which begins with an extremely effective state-controlled gunpowder weaponry arsenal, only to lose both cen-

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centralized control and technological expertise after failing to use the weapons against warring ‘local’ entities in the course of the Wars of the Roses, thus effecting a virtual ‘dark ages’ of military technology which would last for more than a century.

The Earliest Gunpowder Weapons

The history of fourteenth-century gunpowder weaponry in continental Europe is one of almost complete local control. Nearly all the earliest ‘trustworthy’ references to gunpowder weapons, such as those mentioning guns at the siege of Metz in 1324, in a Florentine armoury in 1326, and at the siege of Cividale (Friuli) in 1331, and even the ‘less trustworthy’ references to guns appearing at the defence of Forli in 1284 and in the armoury of Ghent in 1313, indicate use by local entities, in this case urban militias, and not by royal armies.\(^9\) Local ownership is also evident in the earliest extant gunpowder weapons, four Italian bombardellas, all of which were founded for local use.\(^10\) This would continue to be the case throughout the century, especially in France and in the Low Countries, the latter area forming by 1400 the greatest part of the Burgundian lands, bringing both wealth and an artillery arsenal to its dukes.

France

Despite the need for more research on this, and without explaining more fully the reasons for these conclusions, it seems from an investigation already undertaken that France’s use of gunpowder weaponry during the fourteenth century was far less than that of both England and the Low Countries. Nevertheless, references to France’s use of guns in this century almost always refer to a local use. For example, gunpowder weapons appear in accounts of arsenal holdings in Rouen in 1338, in Bioule Castle in 1347, in Paris in 1351, in Tours in 1358–9, and in Harfleur in 1369.\(^11\) And when used in military actions, French


gunpowder weapons continue to retain their almost sole local usage; for example, at the attack of Southampton in 1338, the employment of gunpowder weapons comes in a raid of Norman ‘pirates’ on the English coastal town; at Poitiers in 1369, the fortress was defended by local militias using gunpowder and non-gunpowder artillery; and at the battle of La Rochelle, guns were used on board Spanish ships hired by the French.\textsuperscript{12}

Further evidence for the local possession of gunpowder weaponry during the fourteenth century is found in the construction of gunports in the town wall of Mont-Saint-Michel and at the castles of Blanquefort and St Malo,\textsuperscript{13} in the almost continual trade in gunpowder weapons by merchants and garrison masters seemingly without royal restrictions,\textsuperscript{14} in the appointment of local ‘masters of cannons’ (as they are most often called) at Rouen in 1369 and at Saint-Sauveur-le-Vicomte in 1370–75,\textsuperscript{15} and in the fact that the Duke of Brittany, defending his duchy against the English after 1375, was almost always forced to rely on his own gunpowder artillery resources.\textsuperscript{16}

All of this is not to say that the fourteenth-century French kings were completely unaware of the new gunpowder technology, or that they did not desire its use in military conflict. Although there seem to be no references to Philip VI’s or John II’s interest in gunpowder weaponry, it is clear from numerous documents that Charles V (1364–80) and Charles VI (1380–1422) were well aware of the military capabilities of gunpowder weapons and wished to incorporate them into their arsenals. But it should also be noted that in almost all the references to French royal use of gunpowder weapons before the beginning of the fifteenth century, these kings worked with the local owners to acquire these weapons, and seemed unwilling either to construct or to


\textsuperscript{15} See \textit{op. cit.}, p. 205; L. Delisle, \textit{Histoire du château et des sires de Saint-Sauveur-le-Vicomte} (2 vols, Paris, 1867) t, p. 185. Saint-Sauveur-le-Vicomte had both a ‘master of cannons’ and a ‘master of large cannons’.

obtain their own gunpowder weaponry holdings.\textsuperscript{17} Even the guns brought to the royal siege of Saint-Sauveur-le-Vicomte in 1374–5, which were used to bring down the walls of the English-controlled castle, were supplied by the local \textit{baillis} and operated under the direction of the local ‘master of artillery’.\textsuperscript{18}

Even as late as the composition of Christine de Pizan’s \textit{Le livre des faits d’armes et de chevalerie}, written (it is believed) c. 1410, there is no concerted royal effort towards the acquisition of gunpowder weapons, for it is one of Christine’s purposes to convince Charles VI and his ministers and generals in charge of military acquisitions that they should direct their efforts towards this goal.\textsuperscript{19}

But if Charles VI was unable to recognize the value of gunpowder weaponry, his son, who would become Charles VII (1422–61), did, and developed a strong programme of gunpowder weapon acquisition and development. Charles increased the royal budget to procure a larger number of new guns, and he added heavier new taxes to his kingdom’s inhabitants to pay for this increase. He also took a special interest in the construction of new and often unworkable inventions related to his gunpowder weapons.\textsuperscript{20}

But perhaps the most important feature of Charles VII’s gunpowder artillery train was its intricate organization and superior leadership. Under masters of artillery Jean and Gaspard Bureau, the French artillery holdings grew in number and efficiency. Duties of cannoneers were established, officers were appointed, competence was improved and pay was increased. This allowed Charles’s military leaders to take his artillery on every military expedition – which led to numerous victories including those at the sieges of Orléans, Jargeau, Meung, and Beauagency in 1429, at the sieges of Creil, Pontoise, and Harfleur in 1449, at the battle of Formigny and the siege of Caen in 1450, and at


\textsuperscript{19} C. de Pizan, \textit{The Book of Fryettes of Armes and of Chyvalrye}, trans. W. Caxton, ed. A.T.P. Byles (London, 1932). That Charles VI was not completely ignorant of the value of gunpowder weaponry can be seen in his interest in building new anti-artillery fortifications for Paris and Limoges in 1420 (see Secousse, \textit{Ordonnances des rois de France} xi, pp. 79–80, 84–85), the placement of cannoneers under the control of the Marshals of France in 1411 (see \textit{op. cit.} v, pp. 589–90), and the successful use of gunpowder artillery by royal forces at the sieges of Fontenay and Dun-le-Roi in 1412 (see L. Bellaguet, ed., \textit{Chronique du religieux de Saint-Denis} (6 vols, Paris, 1899–52) iv, pp. 652–54).

\textsuperscript{20} An example of this is recorded in 1449/50, when Charles requested the design of a new carriage for his artillery, the object of which ‘was to create a gun-carriage which was not drawn by horses’. See M.G.A. Vale, \textit{Charles VII} (Berkeley, CA, 1974), pp. 127, 141.
the battle of Castillon in 1452 – and ultimately contributed to the eventual French victory over the English in the Hundred Years War. Moreover, after Charles VII’s death the French artillery holdings grew consistently larger, improving both under Louis XI, who used them effectively against rebellious lords in the War of the Public Weal (1465–69) and the Franco-Burgundian Wars (1465–77) and against a futile invasion of France by Edward IV of England in 1475, and under Charles VIII, who used them to invade and easily conquer Italy in 1494.

**Burgundy**

The numbers of gunpowder weapons in the Low Countries during the fourteenth century were far larger than in France, and they were used far more frequently, but they too were locally controlled. Gunpowder weaponry can be found in arsenals in St Omer in 1342, in Bruges in 1346 and 1362, in Lille in 1347/48, 1358, and 1365, in Mons in 1349 and 1378, in Binche in 1362–64, 1394 and 1396, in Valenciennes in 1363, in Ponthieu in 1368–69, in Arras in 1369, in Malines in 1372/82, in Ghent in 1380, in Ypres in 1383 and in Avesnes-le-Comte in 1384.

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Local ‘masters of cannons’ can be found at Lille in 1341 and at Malines in 1365.\textsuperscript{25} And guns were used by local Low Countries militias at the sieges of Quesnoy, Mortague, Saint-Amand, Marchiennes and Tournai in 1340 (in conjunction with English gunpowder artillery), in defence of Ghent in 1380, at the siege of Oudenaarde in 1382 and Damme in 1385, and at the battles of Bevershoutsvelt and Rosebeke in 1382.\textsuperscript{26}

As well, although Philip the Bold, Duke of Burgundy (1363–1404), began acquiring parts of the Low Countries in 1384, it is clear that he, like Charles V and Charles VI of France, also at least initially treated the local ownership of gunpowder weapons with respect. It is also clear that he allowed the local Low Countries owners to retain their control of these weapons at least until the end of the fourteenth century and perhaps into the fifteenth century and the reign of Philip’s son, John the Fearless (1404–19).\textsuperscript{27} However, somewhere during these decades a subtle ownership transformation was effected from local to ducal control. As Claude Gaier notes: ‘To all intents and purposes the dukes were able, in time of need, to requisition the machines of war and cannons from the towns.’\textsuperscript{28}

Outside the Low Countries before the end of the fourteenth century, and the total Burgundian ‘kingdom’ after this, there is no question as to the interest of Philip the Bold and his successors in gunpowder technology. In many ways because of this interest it is the Burgundian dukes who can be credited with causing the rapid evolution of gunpowder weaponry during the last half of the Hundred Years War. The Burgundian dukes amassed large quantities of gunpowder weapons, and they used them on almost all their numerous expeditions, during which they were almost always successful. They also refused to allow their gunpowder technology to remain stagnant, and they experimented with different sizes of weapons, methods of manufacture, modes of transportation, metallurgy and powder chemistry. In some
instances, Burgundian guns were even painted different colours, although the reason for this is unclear.

It was also during the reign of these dukes that gunpowder artillery became an official part of the military organization. They accompanied nearly every ducal conquest. Philip the Bold used his gunpowder weapons at the sieges of Rochefort-sur-le-Doubs in 1372 and of Odruik in 1377, the walls of the latter being successfully breached by cannonfire.29 He also supervised the construction and testing of guns, and organized their use in war under the leadership of an artilleur.30 In particular, in 1377 Philip brought into his employ two ‘fondeurs de canon réputés’, Jacques and Rolant Mayorque, commissioning them to build seven new cannons for use at the siege of Ardre. One was a very large weapon, which could discharge a stone cannonball of 450 lb, although this gun eventually and without explanation failed to work. The Mayorques were later commissioned to build six more cannons for use against the invasion of the Bishop of Norwich in 1383 and still more, this time an indeterminate number, for use against the Duke of Berry in 1386.31

John the Fearless further increased the number and quality of the Burgundian gunpowder weapons which he constantly used in military engagements: at Calais in 1406, at Tongres, Othée and Maastricht in 1408, at Rougemont and Ham in 1411, at Bourges in 1412, at Arras in 1414 and at Paris in 1417 and 1418.32 Moreover, John appointed Germain de Givery as the first ducal master of artillery, and ordered him to bring all the gunpowder weapons of the duchy ‘which were not actually in use in his castles’ together at a special arsenal in Dijon, the duchy’s capital. Also during John’s reign artillery operators were even given separate and distinctive ‘uniforms’, including a blue hat, for use in ducal processions.33

Philip the Good (1419–67) continued the artillery programmes of his father and grandfather, adding even more gunpowder weapons to

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30 Vaughan, _Philip the Bold_, pp. 124, 204. On Philip’s interest in gunpowder weapons, see Garnier, _L’artillerie_, pp. 6–15.
the Burgundian artillery stores. Philip fought against the French, English and Germans, and he was also involved in putting down several insurrections in his ducal holdings, principally in the southern Low Countries. Philip in 1420, in the company of Henry V and the English army, ‘with a great number of bombards, powder and other implements of war’, besieged Melun, where the French dauphin was then living. In 1421 Philip bombarded and then took the town of Saint-Riquier. In 1423 his artillery appeared on the battlefield of Cravant. In 1424, using several large bombards including Griette, Katherine, Cambray and l’Ecluse, he recaptured the Burgundian holdings in the Maconnais which had been lost to the Armagnac supporters of the dauphin by his father. In 1425 he besieged the castle of Braine-le-Comte, assailing the walls with artillery ‘without number’. And in 1426 his bombardment of the town of Zevenbergen caused its surrender.

The 1430s also were years of constant battles and sieges as Philip’s conquests added substantial holdings to the duchy of Burgundy. Among the large number of battles fought by the Burgundian Duke a few are particularly noteworthy for his use of gunpowder weapons. In 1430 Philip, allied with Jean, the Duke of Luxemburg, used five large bombards, two veuglaires, one large and one small, and two ‘engins’ to take the town of Compiègne. The following year he besieged Sancenay in Auxerre using the large bombard Prusse among other cannons, and he also won the battle of Bulgnéville making use of his guns on the battlefield. As well, in 1433, the castle of Mussy-l’Évêque fell to Philip, who used only his smaller weapons to bring about its submission, while that same year the castle of Fortepice also fell to the Burgundians, flattened, it is said, by only a single large bombard, the Bourgoigne. Finally, in 1434 Philip besieged the town of Belleville, a town whose walls he breached easily.

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36 Waurin, Recueil des croniques ii, p. 371; Chastellain, Œuvres i, pp. 250–51.
37 Waurin, Recueil des croniques iii, p. 55; Le livre des trahisons, pp. 169–70.
38 Garnier, L’artillerie, p. 93.
39 Waurin, Recueil des croniques iii, p. 165.
43 Garnier, L’artillerie, pp. 98–99.
44 Liber de virtutibus sui genitoris Philippi Burgundiae ducis in Kervyn de Letennhove, ed., Chroniques relatives à l’histoire de la Belgique sous la domination des ducs de Bourgogne (texts latins) (Brussels, 1876), pp. 35–36.

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In 1435 Philip changed sides in the Hundred Years War, abandoning the English and allying with the French king, Charles VII, the man whom he had so often attacked in the past. Initially, this policy brought some defeats. For example, Philip failed to captured Calais in 1435–36 despite having a large number of guns present at the siege, and in 1437, at the siege of Crotoy, he lost not only the conflict but also most of his artillery to Lord John Talbot of England. In 1443, however, Philip rebounded from these defeats, attacking the pretenders to the throne of Luxemburg, the King of Bohemia and the Duke of Saxony, by besieging and eventually capturing the castle of Villy. Here he took as booty more than 10 000 lb of bronze which served to found new gunpowder weapons.

Finally, there were several years of external peace for the duchy. Although some internal fighting continued, and Philip always used his artillery in these affairs, it was not until 1465 and the War of the Public Weal that Philip, together with his son and heir, Charles the Bold, again began to attack fortresses outside his duchy. In May 1465, allied with Louis, the count of St Pol, Philip’s artillery assembled outside the walls of Honnecourt, for ‘236 carts loaded with bombards, mortars, veuglaires, serpentines and other cannon’ had been brought from the Low Countries for this engagement. In July, Philip’s artillery was used unsuccessfully at the battle of Montlhery where, although his guns were positioned strongly on the battlefield, he was unable to fire more than ten salvo at the French army. However, a few weeks later his guns were again used, this time to defeat the same French army by bombarding them across the Seine near Paris. From August to September of that same year Philip besieged Paris itself, but the guns of the French defenders eventually caused him to retreat after what may have been the most fearsome artillery duel of the century. As eye-
witness Philippe de Commynes wrote: ‘I have never seen so much shooting in such a few days.’

Nor did Philip stop in 1465. Two years later, at the age of 71, he successfully besieged Bouvignes, Brusthem and Dinant using his gunpowder weapons. In all these conquests he used a large and elaborate artillery train. He also recognized the threat of an enemy’s artillery, and is reported to have kept a spy in England solely for the purpose of assessing the strength of the English gunpowder artillery holdings.

During his reign, Philip also formed an army of crusade around his gunpowder artillery train. In January 1456, with relative peace in the duchy, the Duke planned to avenge the conquest made by the Ottoman Turks against the Byzantines. In this army he included 500–600 gunners, carpenters, masons, smiths, pioneers, miners and workmen, all under the command of his master of artillery.

Philip’s son, Charles the Bold (1467–77), could not follow in the footsteps of his ducal ancestors, for he possessed none of their military or diplomatic skills, nor was he able to defend successfully the lands which he inherited. Yet he was still interested in continuing the now traditional Burgundian gunpowder artillery plan. Philippe de Commynes describes Charles’s artillery as ‘very large and powerful’ and ‘good and beautiful’, and Oliver de la Marche reports that the Duke had more than 300 carts of guns, not counting his culverins or ‘haquebusses’ which were ‘without number’. Charles also continued to use these weapons in many conquests. At the siege of Neuss, for example, one eyewitness recounted: ‘It was pitiful how culverins were fired at [the people of Neuss] thicker than rain . . .’


55 Vaughan, Philip the Good, p. 361. The entire plan for this crusade is translated and printed on pp. 360–65.


57 Commynes, Mémoires i, p. 16 and ii, p. 10.

58 La Marche, Mémoires x, pp. 535–54.

59 Quoted from a letter sent by Jehan Baugey to the mayors and échevins of Dijon on 16 Sept. 1475. See Vaughan, Charles the Bold, pp. 322–3. See also Chastellain, Événements viii, pp. 262–3; Haynin, Mémoires i, p. 251; La Marche, Mémoires x, pp. 295–6; Roye, Chroniques ii, p. 7; de Mandrot and Samaran, Dépêches des ambassadeurs i, p. 107; and Jean de Margny, L’aventurier, ed. J.R. de Chevanne (Paris, 1938), pp. 59, 83–84. For an inventory of Charles’s gunpowder weapons at this siege, see Garnier, L’artillerie.
But Charles’s enemies, the Germans, Swiss, French and Liègeois, had also increased the numbers of their artillery pieces, equalling the quality and quantity of the Burgundian gunpowder weapons. Eventually, they used these weapons to aid in their defeat of the Burgundian forces and to end Burgundian power. 60

**England**

While France and the Low Countries both had local control over fourteenth-century gunpowder artillery holdings, England’s gunpowder weaponry never fell under local control, but was always exclusively a royal possession. It is perhaps fitting, although undoubtedly only a coincidence, that the first ‘trustworthy’ source for an English gunpowder weapon, a manuscript illumination painted in London c. 1326, is found in Walter de Milemete’s *De notabilibus, sapientiis et prudentiis regum* (Concerning the majesty, wisdom and prudence of kings). 61 But it is really to King Edward III (1328–77) that credit for the royal domination of gunpowder weapons in England should be given, for it is he who, it appears, was the first sovereign to see the future uses of guns, stockpiling a number of the relatively new weapons at the Tower of London, at Dover, and at the recently constructed castle of Queenborough. 62 Edward also used these weapons in his frequent conquests of the Low Countries and France during the early part of the Hundred Years War. They appeared at the sieges of Cambrai in 1338, of Tournai, Quesnoy, Mortague, Saint-Amand and Marchiennes in 1340, of Rennes and Hennebont in 1342, of Calais in 1346–47, of Carcassonne in 1355, of Saint-Valéry in 1359, and of Bourdeilles in 1369; 63 they also


undoubtedly were used by Edward at the battle of Crécy in 1340. Edward also felt that it was important to keep his possessions on the Continent, once obtained, well outfitted with gunpowder weapons. He even appointed a royal receiver for the duchy of Brittany to oversee the procurement and placement of guns throughout the duchy. Finally, Edward also set about converting several vulnerable fortifications of England to more effective defence against gunshot by piercing them with gunports, a practice continued by his grandson, Richard II; Quarr Abbey on the Isle of Wight, Queenborough Castle, Asseton’s Tower at Portchester, Carisbrooke Castle, Canterbury town wall, Cooling Castle, Southampton Castle and town wall, Saltwood Castle, Norwich town wall, Dover Castle, Bodiam Castle and Winchester town wall had all received gunports by 1390.

Richard II (1377–99), despite a reputed dislike for the military arts, also carried on other gunpowder weaponry programmes begun by his grandfather, continuing to increase the stores of gunpowder weapons available in England and in English possessions on the Continent. Richard is also credited with the first royal appointment of a ‘master of cannons’ in England in 1386, although Edward III, unknown to us, may have preceded him with such an appointment. Finally, it is Richard who may have outfitted his army with the first handguns.

Richard’s overthrow by his cousin, Henry IV (1399–1413), brought about the initial phase of the Wars of the Roses, and yet surprisingly Henry seems not to have used his gunpowder artillery stores, which still appear to have remained intact after Richard II’s demise, on rebel Englishmen. Only in the campaign against York, Warworth, and Berwick in 1405–1406 did Henry take gunpowder weapons, and then they were not numerous or particularly decisive. Instead, records of Henry’s guns show that he was only interested in using these weapons to protect his marches in England, both Scottish and Welsh, and in ensuring the continued guardianship of English possessions in France. He also seems to have been unable to increase his gunpowder weapon

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69 PRO Enrolled Accounts E101/400/23. This document would bear more study. See also Tout, ‘Firearms in England’, pp. 678, 684–86.
holdings in the manner of Richard II and Edward III, although why this was so for the moment remains a mystery.  

Henry V (1413–22) made up for his father’s gunpowder weaponry shortcomings almost immediately after his ascension to the throne. Preparing for two years for an invasion of France, the new English king constructed and gathered together an impressive artillery train. There is no extant account of how many guns actually accompanied Henry on his attack on France in 1415, but their presence was certainly felt at Harfleur, as that fortified town fell with relative ease to the English King; other gunpowder weapons accompanied Henry to the battlefield of Agincourt, although their presence was less decisive there. Henry continued to construct and use gunpowder weapons even after the victory at Agincourt, and this undoubtedly made a difference in the victories against Boulon in 1416, Caen in 1417, Falaise, Domfort, Cherbourg, Louviers and Rouen in 1418, Montereau and Melun in 1420, Alençon, Chartres and Saint-Riquier in 1422, and Meaux and Saint-Valéry-sur-Somme in 1422. 

During the early part of Henry VI’s reign (1422–61), the gunpowder artillery policies of Henry V were continued. Evidence of the construction of gunpowder weapons in England and their transportation to the Continent, as well as an extensive English artillery organization in France, affirms the continued belief of Henry VI’s court that gunpowder weaponry was needed to preserve the foreign holdings of the crown. But soon this royal interest in gunpowder technology began


74 Wylie, Reign of Henry V iii, pp. 159–60; Allmand, Henry V, p. 212. 

75 On Henry’s conquest of Normandy in 1416–22, see R.A. Newhall, The English Conquest of Normandy, 1416–1424: A Study in Fifteenth-Century Warfare (New Haven, CT, 1924); Burne, The Agincourt War, pp. 107–74; Wylie, Reign of Henry V iv, pp. 329–30; iii, pp. 58–59, 70–71, 107–10, 113, 119–35, 209, 212, 313, 317, 334, 340–50, 412; Brooke, Visits to Fields of Battle, pp. 226–7. Allmand (Henry V, p. 215) writes about the use of the gun by Henry: ‘Apart from the bow at Agincourt, the weapon which made the biggest impact on the war was the cannon . . . Henry, as the aggressor, had the full weight of cannon behind him, and both he and his brother, Gloucester, were to use it to good effect.’ 

to wane. For the most part this can be attributed to the losses of English lands in France and with them the losses of gunpowder weapons. After 1435, too, when Philip the Good of Burgundy broke his alliance with England and started to support the French in the war, it was to be expected that the English could not hold on to their continental possessions for too much longer. In fact, they were effectively off the Continent by 1453 (although they hung on to Calais for another 100 years).

But England would not be at peace for more than 30 years after the loss of the Hundred Years War, for even before they had left France, the next phase of the Wars of the Roses had begun with the revolt of Richard, Duke of York and cousin to Henry VI. And before these wars were completed, two dynastic families, the Lancasters and the Yorks, had given way to the Tudors. What is so interesting about these wars from a military technology perspective is how few gunpowder weapons were used during them – a fact which has been remarked by several historians – especially when compared to the almost early modern use of gunpowder weapons on the Continent during the War of Public Weal and the Swiss–Burgundian Wars being fought at the same time.

Historically this is certainly a problem, but one which lies outside the scope of this article and must await further study. Suffice it to say that, after nearly a century and a half of strong royal control over gunpowder weaponry in England, such weaponry had almost completely disappeared by the middle of the fifteenth century and would not reappear until the middle of the sixteenth century.

This is not to say that the English kings during the Wars of the Roses had no gunpowder weapons. In fact these kings, whether Lancastrian, such as Henry VI, Yorkist, such as Edward IV (1461–83) or Richard III (1483–85), or Tudor, such as Henry VII (1485–1509), tried diligently to strengthen their gunpowder weaponry stores and administration. But they simply never had strong royal control over these weapons similar to that held by their continental counterparts.

For example, on several occasions during his reign, Henry VI ordered gunpowder artillery to be constructed at his own expense, and all during the first period of the Wars of the Roses he continued the royal ordnance department and constantly named individuals to the office of chief cannoneer. In 1450 guns were even used effectively to


put down Jack Cade's rebellion in Kent. But when it came to using these weapons in battle against an equally well-gunned Yorkist army, at the battle of Northampton in 1460, poor planning and rain put his guns out of action, and Henry VI suffered an ignoble loss.

In a nutshell, this was the problem with gunpowder weapons in fifteenth-century England. It was not just the King who controlled their supply and use. Henry's loss at Northampton was to Edward, the Earl of March. Edward had inherited his own guns from his well-supplied father, Richard, the Duke of York, who in turn had used them in numerous military adventures against English royalist forces: at the battles of Brent Heath (1452), St Albans (1455), Blore Heath (1459), Ludford Bridge (1459) and Ludlow (1459). Edward himself had fired gunpowder weapons into the city of London in 1460, an incident which caused several disturbances among the citizens after he became King Edward IV the following year.

Once king, Edward found that he faced the same problem with the guns of rebellious nobles as Henry VI: he alone did not own or control the gunpowder weapons of his kingdom. He faced the guns of the brothers Neville, Sir John, the Earl of Northumberland and Marquis Montagu, and Richard, the Earl of Warwick, at the sieges of Alnwick, Bamburgh and Dunstanburgh castles in 1464 and again at the battle of Barnet in 1471; at Barnet the two brothers lost their lives. Later in 1471, at the battle of Tewkesbury, Edward also faced the guns of Margaret of Anjou, the wife of the deposed Henry VI. Similar circumstances were encountered by Edward’s brother, Richard III, at the battle of Bosworth, in 1485 when, using his own guns, he fought the usurper-victor, Henry Tudor. Henry had not only gathered his own gunpowder weaponry on his march through England to Bosworth field, but had also brought French artillery with him. Two years later, at the battle of Stoke, the now King Henry VII defeated a final Yorkist


uprising, ending the Wars of the Roses. Again both sides used gun-
powder weapons.87

This was thus the nature of gunpowder weaponry control in England
during most of the fifteenth century: local ownership of gunpowder
weapons almost always equalled if not surpassed that of the central,
royal government. Indeed, so pervasive was this local control that there
are even numerous occasions when these smaller political entities used
t heir gunpowder weapons against each other without ever involving
the king. Such instances include: the 1443 Norwich riots, when the
citizens of the town used guns to attack an abbey, the prior of which
had, they felt, unjustly arrested two of their number;88 the gunpowder
weaponry assault of Sir Robert Wingfield’s house at Letheringham by
Sir John Mowbray, the Duke of Norfolk, in an attempt by the latter to
regain the possession of his manor at Hoo;89 the time when Edmund
Fitzwilliam, unbeknown to the King, seized the artillery of the earl of
Shrewsbury, John Talbot, in 1450 to install it in the unarmed royal
castle of Conisbrough;90 also in 1450, when the Esquire Harry Bruyn,
newly appointed lieutenant of the Isle of Wight, was forced to provide
his own guns for the poorly defended island;91 the 1455 siege of Pow-
erhorn, when the guns of Thomas Courtenay, the Earl of Devon, were
used to conquer the castle of William, Lord Bonville;92 the feud
between the Berkeley and Talbot families which ended in 1469 with
gunpowder weaponry bombardments between the two factions at the
battle of Nibley Green;93 the use of guns again by Sir John Mowbray
against Sir John Paston’s castle at Caister, also in 1469;94 and the feud
between the Stanleys and the Harringtons which ended with the 1471
siege of Hornby Castle, taken by Sir Thomas Stanley using, among
other artillery pieces, the cannon Mile End.95

Conclusion

Historical revolutions are complicated things, and the Military Revol-
ution is no exception. It is frequently difficult to get all the paradigms
to match exactly, and such certainly is the case in considering the role
gunpowder weaponry in determining the rise of the early modern

87 M. Bennett, Lambert Simnel and the Battle of Stoke (New York, 1987), pp. 91–92.
88 Storey, End of the House of Lancaster, p. 223; P.C. Maddern, Violence and Social Order:
89 Storey, End of the House of Lancaster, p. 227.
91 Brooke, Visits to Fields of Battle, p. 233.
92 Storey, End of the House of Lancaster, p. 171.
93 See the document ‘The Battle of Nibley Green, 1469’, in A.R. Myers, ed., English
94 See J. Gardiner, ed., The Paston Letters (7 vols, London, 1900–1908) ii, pp. 397–99; v,
p. 55. The latter indicates that John Paston was forced to surrender his own
gunpowder weapons to the duke of Norfolk once his castle had fallen.
95 Brooke, Visits to the Fields of Battle, p. 238; M.K. Jones, ‘Richard III and the Stanleys’,
state. In terms of gunpowder technology during the late Middle Ages, France and Burgundy do follow a pattern showing the decline of feudalism and the rise of the central state which conforms to that proposed by Geoffrey Parker and others. Local control and ownership of these weapons was removed by the central state, which would later return to use the weapons against those who had once owned them. But in the case of England, the pattern was not followed. While local control persisted on the Continent, in England the king alone had control over gunpowder weapons, and he used them in an almost absolute manner to increase and to protect his kingdom’s holdings in France. He did not, however, use them to control his own subjects; and after almost fifty years of civil war not only had he lost control over gunpowder holdings in his kingdom, he had in fact lost his kingdom.

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