

**THE HISTORY OF ENGLISH PODCAST  
TRANSCRIPTS**

**EPISODE 135:  
A HOUSE OF CARDS**

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## EPISODE 135: A HOUSE OF CARDS

Welcome to the History of English Podcast – a podcast about the history of the English language. This is Episode 135: A House of Cards. In this episode, we’re going to turn our attention to printing. We’ve spent many episodes discussing the important role of scribes and nature of handwritten manuscripts. But in the 1400s, those scribes suddenly faced a new source of competition – the printing press. In this episode, we’re going to examine the history of the printing press, but we’re going to take a broader look and explore the larger history of printing. And that story requires us to look at another innovation which also appeared in Europe around this same time period, and that’s the popular pastime of playing cards. The appearance of playing cards and the printing press around the same time wasn’t really a coincidence because in many ways, the two innovations are directly tied to each other. So this time, we’ll explore those developments, and we’ll see how both of those innovations shaped the English language.

But before we begin, let me remind you that the website for the podcast is [historyofenglishpodcast.com](http://historyofenglishpodcast.com). And you can sign up to support the podcast and get bonus episodes and transcripts at [Patreon.com/historyofenglish](https://Patreon.com/historyofenglish).

Now let’s turn our attention to some important developments that were taking place in the early 1400s, and let’s begin by picking up where we left off last time. In the last episode, we explored the rise of the House of Lancaster. As we saw, the Lancastrian dynasty began when Henry IV essentially overthrew the prior king Richard II. But Henry wasn’t next in line to the throne at the time.

When the Lancastrians seized the throne, they interrupted the normal line of succession. The Lancastrians were descended from John of Gaunt, but Gaunt had an older brother named Lionel who had a couple of living descendants at the time when Richard was deposed. Those descendants were his great-grandson Edmund and his great-granddaughter Margaret. They preserved Lionel’s line, and the young boy Edmund was technically the next in line to the throne.

Because of Edmund’s potential claims, he was initially placed under a type of house arrest, but he was eventually given a reprieve and allowed to maintain his own household. We don’t know very much about young Edmund, but we do have the surviving financial records from his household. And the records from the year 1413 reveal something very interesting about him. It turns out that he was a big gambler. The expense ledgers show that he incurred a lot of gambling debts which had to be paid out in that year. The debts were incurred from a variety of games, including games involving playing cards. [SOURCE: *Lords and Lordship in the British Isles in the Late Middle Ages*, R.R. Davies, p. 96]

Those financial entries are fascinating because that reference to Edmund’s gambling debts is one of the first references to playing cards in all of England. And it may actually be the very first mention of playing cards since the references in other sources are difficult to date.

Edmund's accounts were written in Latin, and they refer to the debts incurred with *cartys* and *cardys*. One reference spelled the word with a 't' and another spelled it with a 'd,' suggesting that the word was probably pronounced both ways at the time. As we saw in an earlier episode, the word *card* was ultimately derived from the Greek word *khartes* meaning a layer of papyrus. It passed to Latin where it became *carta* as in Magna Carta. It meant a document, or more specifically a *charter* – which is a French version of the word *carta*. From there, the word passed into English as *cart* and *card*. *Cart* with a 't' survived in Scotland, and it still survives in the French term *cart blanc* literally meaning a 'blank card.' But most of England quickly settled on the pronunciation with a 'd' sound at the end. And when the word *card* made its first appearances in English documents in the 1400s, it specifically referred to playing cards.

The fact that young Edmund spent his spare time playing cards is actually important to our overall story because it means that playing cards had made their way to England, and wherever you have playing cards, you have evidence of printing. Most playing cards from the 1400s were printed using block stamps, so those cards confirm that people knew how to mass produce items using a very basic form of printing.

Now even though playing cards were new to England in the early 1400s, and relatively new to the rest of Europe, they actually had a pretty long history by that point. Like so many innovations that we've seen before, they had their origin in East Asia, and they spread westward over time to the Near East then to Europe, eventually reaching England in the early 1400s.

In fact, many of the key elements required for printing have their origin in China. Back in Episode 123, we saw that paper had its origins there about two thousand years ago. Then about 1500 years ago, the Chinese started using wooden stamps for printing. Stamps were used by many ancient societies. Some cultures pressed them into clay, but others figured out how to apply ink to the stamp. That way the stamp could reproduce the same image over and over again.

It took a little work to make one of those stamps, but the idea was very simple. You simply took a piece of wood or stone or metal, and you drew an image on it. Then you carved out the empty spaces around the lines of the image so that the image stood out in relief. At that point you had a stamp that could be dipped in ink, and then you could press that image on fabric or parchment or paper over and over again.

The Chinese used stamps like many other cultures. But what made the Chinese innovation so important is that they had also developed the ability to make paper. And that combination of stamps and paper allowed them to engage in an early form of printing by the 600s. [*SOURCE: The Book: a Global History, P. 131*]

And this points to a very basic and very obvious point about early printing. It involved a fixed object like a stamp that was pressed into paper or some other material. And that was the key. The pressing of the stamp over and over again. This is why the printing press is called a *press* – because it worked by applying *pressure* to press the image into the material, thereby leaving an *impression*. And if that impression is stamped in your mind, then it might leave a different kind of impression. And if it leaves a positive impression, you might be *impressed*.

*Press, pressure, impression* and *impress* are all derived from the same Latin root word. And of course, this is also where we get the term *press* as a generic term for newspapers and other related media. That's why we refer to 'the freedom of the press.' It all relates back to the basic idea of pressing an image into paper or some other material over and over again.

Now all of that may seem pretty obvious, but what you may not realize is that the word *print* comes from the same basic root as the word *press*. The Indo-European root word *\*per* meant 'forward or through.' And it not only produced the Latin word *press*, it also produced the Latin word *print*, which had the same basic idea. 'To *print*' literally meant to make an impression. And that impression might also be called an *imprint* from the same word. So the term 'printing press' is actually a bit redundant. Both *print* and *press* are cognate, having the same Indo-European root and similar underlying meanings.

A Greek word for an impression or imprint was a *typos*, and that gave us the word *type* which originally meant an image left by pressing or striking. Of course, those images came to be used as symbols for various things, and those symbols helped people to distinguish one thing from another. And that's how we got the more extended sense of the word *type*, as in 'different types of things.' And of course, we still associate the word *type* with printing when we refer to the actual stamps or levers used for printing as in a *typewriter*, which of course gives us the verb 'to *type*' meaning to write using a mechanical device, as opposed to writing by hand.

The key to all of this is the basic idea of leaving a fixed impression on paper or some other material. And in its most basic form, it is a very old idea. As I noted, the Chinese combined stamps and paper at a very early date, and they also developed very large and elaborate stamps for printing entire pages. These stamps sometimes included writing as well. Of course, the writing couldn't be altered once it was carved into the stamp, but it was another step in the direction of the printing press.

The Chinese used those large block stamps to produce images on all kinds of paper-based products. They created books or scrolls made up of several of those block images. Some of those printed images date back to the 700s [*SOURCE: Paper: Paging Through History, Mark Kurlansky, P. 99*], and the oldest surviving book printed in this way is called the Diamond Sutra from the year 868. [*Ibid, p. 102*] Those techniques soon spread to Korea and Japan as well. [*Ibid, P. 104*]

The Chinese also used block printing to make other products like paper money. I mentioned that in the earlier episode about paper. And they also used those block prints to make something else – playing cards. Both paper money and playing cards could be mass produced with pre-cut stamps, and they both appeared in China in the 700s. But those early Chinese playing cards were not like modern Western playing cards. They actually resembled the paper money, and in fact, some scholars think that the paper money and the playing cards were basically the same thing at first. Essentially, people devised games that could be played with the paper money, and the winner would keep the money that was won. Through this process, the money became an early type of playing cards. [*SOURCE: The Fireside Book of Cards, Jacoby and Morehead*]

And interestingly, as those playing cards developed in China, they were eventually divided into four distinct suits – each based on units of currency. The most basic unit was coins. One card had one coin, another had two coins, another three coins, and so on. The second suit consisted of strings of coins. So one card had one string of coins, another had two strings, another had three strings, and so on. The third suit consisted of groups of those strings called myriads. And the fourth suit consisted of groups of myriads. So the result was a deck of playing cards divided into four distinct suits, each based on units of money.

So by the 11<sup>th</sup> century, the Chinese were routinely using block printing combined with paper to produce all kinds of objects like paper money, playing cards and even scrolls or books. But as I noted, block printing had one major drawback. Each page was printed from a pre-cut block, and that block couldn't be changed or altered. So if the block included writing or text, that text was always the same.

But in the 11<sup>th</sup> century, a Chinese inventor named Pi Sheng had a novel idea. He realized that he could create a series of individual stamps with a different Chinese character on each one. Remember that China didn't use an alphabet. It used thousands of individual characters. But by creating stamps for many of those common characters, Pi Sheng could then line them up to create a sentence. He could then place ink on those stamps and use them to print that sentence on a piece of paper. Then he could move those stamps around or switch them out with different stamps to create an altogether new sentence. What he had discovered was moveable type. I mentioned this early invention back in Episode 75. It was the same fundamental idea that led to the printing press in Western Europe, but it wasn't the printing press, and interestingly, the idea never really took hold in China. So why didn't moveable type become common there?

Well, the answer appears to lie in the characters required to write Chinese. China didn't use an alphabet. It used thousands of individual characters. So in order for this idea to reach its maximum potential, Chinese printers needed thousands of individual stamps or blocks, each one with a different character. And in fact, they needed multiple stamps for common characters which might appear several times on a given page. But that really nullified the main advantage of printing. Printing is supposed to be quicker and easier than handwriting, but for a written language like Chinese, printing didn't offer much of an advantage. In many cases, it was easier to just write out the text by hand. [*SOURCE: The Gutenberg Revolution, John Man, p. 108*] Also, Chinese culture put a strong emphasis on calligraphy and the artistic aspects of handwriting. So that may have created a cultural barrier. But either way, China never really adopted printing with moveable type beyond its initial stages. And it appears that the later Europeans who came up with the same idea did so independently of this earlier invention in China.

Even though the idea of moveable type didn't really spread to the West, paper and playing cards did. Cards were apparently traded and played along the Silk Road, eventually reaching Egypt by the 1200s. In Egypt, the cards continued to be divided into four distinct suits, but the suits were changed to reflect Egyptian culture. One suit was gold coins, apparently retained from the original Chinese cards. The other three suits were cups, swords, and polo sticks. Polo was a popular sport at the time in Egypt.

The deck also featured three court cards within each suit in addition to the number cards. There was a king, a deputy king, and an under-deputy. So we now have four suits made up of distinct objects, and three court cards within each suit. So we have a deck that is starting to resemble the deck of cards found in much of the English-speaking world today.

By the mid-1300s, those playing cards had made their way across the Mediterranean and were becoming common in southern Europe in places like Italy and Spain. Though there were some minor differences between the cards used in Italy and Spain, they were generally the same, and those cards are sometimes collectively referred to as the Latin deck. The Latin deck kept the four suits used in the Egyptian deck, but since polo was not common in Europe, the polo sticks were changed to simple sticks or batons. And keep that little change in the back of your mind because it probably explains why one of the modern suits is called *clubs*. The other three Latin suits were coins, cups and swords, just like the Egyptian deck.

The Latin deck also converted the court cards into more familiar European royalty. It featured a king, a knight, and a knight's servant or knave. So despite some slight modifications, the Latin deck retained many of the features of the older Egyptian deck.

Also, the European playing cards from this period were hand-painted. So they could be very elaborate, but they also tended to be very expensive. That meant that they were mostly found among the upper classes.

By the mid-1300s, playing cards were starting to be found in central Europe. There are a couple of ways to trace the spread of cards during this period. One way is through references to cards in surviving manuscripts and written records. The other way is through the laws that were adopted during this period that were designed to restrict or outlaw the playing of cards. Church officials hated playing cards because it was thought that cards promoted gambling. So during the 1360s and 1370s, various European cities and countries started to ban them or restrict them. Those proclamations provide further evidence of the spread of cards throughout the region.

The earliest of those restrictions were adopted in Bern, Switzerland in 1367. [*SOURCE: The World in Play: Luxury Cards, Timothy B. Husband, p. 13.*] And that was a sign that cards were spreading northward at a rapid rate. Within another decade or so, we find references to playing cards in Germany and the Netherlands. And in Germany, we find a couple of more important developments.

First, German card makers modified the design of the deck. The four Latin suits of coins, cups, swords and batons were replaced with four new suits. The new German suits were hearts, bells, leaves and acorns. It isn't entirely clear why they changed the symbols, but the leaves and acorns may simply reflect the more rural and agrarian culture of Germany at the time. And as we'll see, those German hearts, leaves and acorns were probably the origin of the modern symbols used for hearts, spades and clubs. But again, more on that in a moment.

So the German card makers made some important design changes. But they also made another decision that's very important to the history of printing. Rather than painting their cards by hand, they decided to start printing them with wooden stamps or wooden blocks in much the same way that the Chinese had done about six or seven centuries before.

This appears to have been a completely separate and independent development in northern Europe. Wood block printing had initially been used by artisans to print religious scenes on fabric. But by the early 1400s, this same technique was applied to the new fad of playing cards. [SOURCE: *A Short History of Technology*, p. 231-5] And that allowed German printers to mass-produce playing cards for the first time in Europe, thereby making them cheaper and more accessible to the average person. That also helps to explain why the new German designs had such a strong influence on the development of playing cards going forward. People throughout northern Europe suddenly had access to those relatively cheap German cards. So in places like France and England, people were familiar with the terminology and symbols of both the German deck and the Latin deck. And as we'll see, the modern English deck is essentially a blend of those two earlier decks.

Now this takes us back to where we began – with young Edmund, the disputed heir to the English throne, playing with cards in England. I noted earlier that his household accounts list his gambling debts from playing cards, and those accounts confirm that the cards had reached England by the year 1413. We don't know what kind of deck he had, whether it was a fancy hand-painted Latin deck or a cheaper printed deck from Germany. But whichever it was, he probably should have thrown it away because it was costing him a lot of money in gambling debts.

While Edmund spent his time playing cards, his cousin Henry V continued to rule England as the second Lancastrian king. As we saw last time, Henry defeated the French at Agincourt in 1415, and that victory completely turned the tide of the Hundred Year's War. For the first time in nearly half a century, the English took the upper hand in the war. One French town after another fell to Henry's forces. He soon recaptured Normandy, and then added much of northern and southwestern France. He was quickly re-assembling the old Angevin Empire, but his ultimate goal was the complete conquest of France.

Remember that the Hundred Year War had been launched because the English kings were in one line of succession to the French throne. The line passed through a female ancestor, so it wasn't recognized under French law, but the English kings still felt that they were entitled to both thrones, and Henry V almost made that a reality.

You might remember from the last episode that the French king was Charles VI, but he became known as 'Charles the Mad' because he suffered from dementia and mental illness. With his decline, France became divided into two factions – those loyal to the Duke of Burgundy and those loyal to the Duke of Orleans. Those two factions fought against each other, and in 1420, the Duke of Burgundy entered into a formal alliance with England. The Duke probably saw the writing on the wall, and he decided to go ahead and throw in his lot with Henry.

The alliance between Burgundy and England was a devastating development for the French king and his advisors. They knew they had no chance of victory against that alliance, so they entered into negotiations with Henry for a final settlement to the war.

The resulting treaty ensured that the next King of France would be English. Whenever Charles the Mad died, the French throne would pass to Henry of England. If Henry was dead, it would pass to Henry's heir. But Henry didn't have a heir, so it was agreed that Henry would marry the French king's daughter Catherine. That way, Henry's future son would be half English and half-French, and he would rule as both King of England and King of France. The treaty was enacted, and Henry married Catherine as everyone had agreed. She gave birth to a little boy a short time later. The little boy was also named Henry. But little Henry had a problem that nobody knew about at the time. Whatever was causing the French king's mental illness, it was apparently genetic, and that gene passed to the little boy. He didn't show the symptoms of mental illness until he was an adult, but he eventually suffered many of the same problems as his grandfather.

So, at the time, it looked like this treaty would bring an end to Hundred Years War, but there was one major problem with this whole arrangement. The treaty said that Henry or Henry's infant son would be the future King of France, but the French king already had an heir. He had an adult son named Charles who was commonly known as the 'Dauphin.' That was a French term that basically meant the 'heir to the throne,' and he wasn't interested in giving up his inheritance to Henry of England or Henry's son.

All of this came to a head late in 1422 when both kings died within a few weeks of each other. The death of Charles in France was not really a surprise given his overall mental and physical condition, but Henry V of England was still a young man, and his death did come as a surprise. While besieging a town in France, he contracted dysentery – the condition that killed so many soldiers in their prime in the Middle Ages. Interestingly, Henry died a few weeks before Charles, so he never actually became the King of France. But when Charles died a short time later, both thrones passed to Henry's infant son – who became Henry VI.

The new king was only nine months old, so a council had to be appointed to run the country on his behalf. Meanwhile, back in France, the mad king's eldest son, Charles the Dauphin, refused to recognize the English baby as king. He established a rival court at Bourges in central France. And that meant that France was now effectively split in two.

The River Loire runs through the middle of France, and generally speaking, the English or their Burgundian allies controlled the area north of the river, as well as Gascony in the far southwest. But the rest of the country south of the Loire remained loyal to the Dauphin – the dead king's son. He was still considered by many to be the rightful heir to the French throne. [*SOURCE: The Wars of the Roses, Alison Weir, p. 67*] However, he was weak and penniless. So it seemed to be only a matter of time before the English forces completed their conquest of France.



The biggest obstacle for the English was the Loire itself. There were only a few major bridges spanning the river which the English could use to transport their forces across to the south into the regions still held by the Dauphin. One of those bridges was at the city of Orleans in the center of the country. So the English laid siege to the city in 1428. If they could capture the city, the English planned to move their forces south across the river and complete the conquest of France. For the Dauphin, this appeared to be inevitable.

But it was at this point that one of the most fascinating events of the Middle Ages took place. A teenage peasant girl in the northeast France starting having visions of saints and she started hearing the voices of angels. At least that's what she claimed. Supposedly, those visions and voices told her to go to the Dauphin, and lead him to the city of Reims where French kings were normally crowned. He was to be crowned there as the rightful king of France, and then she was to help him expel the English and reclaim the country. She said that it was all ordained by God.

The young girl was Jeanne d'Arc, or as she is known in English, Joan of Arc. Over the next few weeks, she made her way to the Dauphin, and she eventually managed to get an audience with him. She told him of her visions and her divine mission. She was examined by doctors and theologians, and it was determined that she was not insane or a witch. [*SOURCE: Wise and Foolish Kings, Anne Denieul-Cormier, p. 271*] This was all the confirmation the Dauphin needed. He agreed to send her, together with a contingent of French troops, to Orleans to help relieve the city and to repel the English.

Joan was accompanied by a few prominent knights who also believed in her and supported her cause. After they arrived in Orleans, they were able to repel the English and maintain French control of the city. It was a surprising victory, and very soon, people throughout France heard of Joan's visions and her victory over the English. And it sparked a renewed sense of nationalism throughout France. The English were never able to stop the momentum that gathered around Joan in the weeks and months that followed. She and her French troops secured another victory at Patay north of Orleans a month later. That allowed Joan to accompany the Dauphin to Rheims where he was crowned as King Charles VII of France, just as she had envisioned. But France was still divided, so he had to flee back to the south as soon as the ceremony was over. Joan remained in the north and continued to lead the increasingly patriotic French troops against the English. [*SOURCE: The Story of Britain, Fraser, 221-2*]

Now you probably know Joan's fate. A few months later, she was captured by the Burgundian troops who were allied with the English. They turned her over to the English who accused her of heresy and witchcraft and put her trial. The tribunal found her guilty, and she was burned at the stake. The English may have removed Joan from the picture, but they made her a martyr in the process. She continued to inspire the French people and the French troops. Over the course of the next decade, the French forces reclaimed one town after another. Joan's life and death marked the beginning of the end of the Hundred Year's War.

Now earlier I mentioned that Joan was accompanied by several prominent French knights during her military campaigns. They believed in her mission and helped with the logistics since Joan wasn't a trained soldier. One of those knights was named Etienne de Vignoles. But he was better known by his nickname La Hire – literally 'the ire.' It was a shortened version of La Hire-Dieu – 'the ire or wrath of God.' That name reflects his fierce reputation. He accompanied Joan at Orleans and Patay, and he was one of her most loyal knights and commanders. And the reason why he is so important to this story is because a French legend holds that he was the person who designed the deck of playing cards that most of us still use today. [SOURCE: *Encyclopedia of Occult Sciences*, p. 220]

In fact, it soon became common in France to associate each of the court cards in the deck with a prominent historical figure. The Queen of Spades was thought to represent Joan of Arc, and the Jack of Hearts was actually named La Hire after the loyal knight who supposedly designed the deck.

Now the story that La Hire designed the deck is probably more of a legend than fact. According to the legend, the prior king Charles the Mad had banned playing cards soon after they appeared in France because they were thought to promote gambling. Supposedly, La Hire wanted to bring the cards back into favor, so he devised a new card game to entertain the king. The game was called piquet. That was the first really popular card game in France, and it even achieved a degree of popularity in England. And it actually gave us a very common English word. If a player lost all the tricks or rounds in a hand, it was called 'etre capot' – literally 'to be capot.' That phrase passed through German into English and gave us the term *kaput* (K-A-P-U-T) meaning 'finished or useless or destroyed.' So if you say that something "went kaput," you're actually using a term from the card game of piquet.

Well, anyway, French legend held that La Hire invented the game of Piquet and modified the design of the deck to better fit the play of that game. Now most historians doubt that story, but it is true that a new modified deck of cards appeared in France around that time, and that French deck is the basis of the modern deck that many of us still use today.

I have already alluded to one important change. I noted that the Queen of Spades was often associated with Joan of Arc. Well, this new French deck adopted the queen as part of the three court cards within each suit. The queen replaced the knight that had been used previously. Now to be fair, there are Latin and German decks from this same period that also use queens, but the queens became a standard fixture in the new French deck. So the four knights were out, and they were replaced with the four queens.

That gave the French deck four kings, four queens, and four valets. Those valets were originally the like yeomen or squires or attendants to the knights, but when the knights were removed from the deck, their meaning and purpose became somewhat obscured. In English, the valets were called *knaves* using the Old English word *knave*. So the English deck had kings, queens and knaves.

*Knave* meant ‘a boy’ in Old English, but over time, it developed a broader sense as a male servant or attendant – especially a knight’s attendant. That sense of the word continued to evolve in later centuries when feudal knighthood came to an end. Much like the word *villain*, it acquired a negative and pejorative sense over time, and that’s generally the way people use the word *knave* today. But it once meant a knight’s attendant. And that’s why the lowest court card was called a *knave* in English, and it continued to be called a *knave* until the late 1800s. But of course, today, we call it a *jack*. So why did the name change?

Well, believe it or not, it had to do with spelling. In the 1800s, card makers in America started putting little indices or symbols in the corner of each card to make it easier to identify the card when you were holding several cards together in your hand. Imagine the cards being held together at the bottom and spread out at the top like a fan. Well, by putting those symbols in the corner of each card, you could easily tell what each card was in the hand. So for a six of hearts, the card maker would put a little heart and a little number 6 in the corner. For the court cards, the manufacturers just put the first letter of each card’s name. So a K for the king, and a Q for the queen. But what about the knave – K-N-A-V-E? It also began with a K just like the king. And even if they used the first two letters – KN – it could still be confused with the king. So those card makers in the 1800s had to come up with another option. At that point there was another popular card game called ‘All Fours,’ and in that game the knave was sometimes called a *jack*. That name may have derived from the general sense of the word *jack* as common man which I discussed in a prior episode, like in the term ‘Jack of All Trades.’ At any rate, through that association, the knave was sometimes called a *jack*. So those American card makers just adopted that term *jack* since it began with the letter J. That allowed them to put a little J in the corner of the card, and that avoided any confusion with the king. And that’s how the lowest court card became known as a *jack* in English. It was mostly a spelling issue.

Now that explains the king, queen and jack, but you may be wondering about the joker. Well, there was no joker in the deck at this point in the 1400s. The joker was added in the 1800s by those American card makers. It was the name of the highest card in the game of Euchre, and some scholars think the name of the joker was actually derived from a common mispronunciation of the game of Euchre. Some people referred to Euchre as /jucker/. And the highest card in the game was sometimes called the ‘Jucker card.’ And some people may have misinterpreted the ‘jucker card’ as the ‘joker card.’ But whatever the etymology, the joker is a relatively recent addition to the deck.

So the modern court cards – the king, the queen and the knave or jack – all took their modern form in France in the 1400s. But just as importantly, the new French deck also adopted the four modern suits – hearts, diamonds, clubs and spades. And the deck also adopted the symbols that we use for those respective suits today.

Now with respect to those four suits, the details are obscure, and there are a lot of different theories about their origin and meaning. For example, it is often said that each of those suits represented a different class of medieval society, like the clergy, the knights, the archers, and the peasants. But playing card historians haven’t really found any evidence to support those theories.

Today, most of those historians think they the four suits were actually a blend of the suits used in the earlier Latin and German decks. So here's what apparently happened.

First, with respect to hearts, it seems pretty clear what happened there. Remember that the German deck used hearts as one of its suits. So hearts were borrowed directly from the German deck. And the symbol was also borrowed. English simply used its native word *heart* in place of the French word *coeur* with the same meaning.

Next up, we have spades. The symbol for spades is another direct borrowing from the German deck. Remember that one of the suits in the German deck was leaves. The leaf symbol looked almost identical to the modern symbol for spades. So it appears that the French card makers simply adopted that symbol from the German deck, but the French card players didn't call them leaves. They called them *piques* – or *pikes* in English. That was apparently because one of the suits of the traditional Latin deck was swords which the French converted to pikes. But why did the French associate the leaf symbol with pikes? Well, many medieval pikes had a fancy iron head or decoration at the top, and that design at the head of a pike was often shaped like a leaf. So it resembled that leaf symbol. French card players knew that one of the suits in the Latin deck represented a sword or pike, and this new leaf symbol looked like the head of a pike. So they just called that leaf-shaped symbol a *pique* – or *pike*.

But when the deck reached England, English card players didn't call them *pikes*. They also made same connection between the Latin swords or pikes and this new leaf symbol. The swords were called *spada* in Italian and *espada* in Spanish. That was the term for swords in those languages. English players were probably already using used those terms since they were associated with the older Latin deck. So those English card players just kept that word, and it became *spades* in English. It also turned out that English had a native word *spade* as well. It referred to a type shovel or digging tool. And that leaf-shaped symbol on those cards sort of resembled the head of a spade or shovel. So that may have also influenced English players to call that symbol a *spade*. So spades is a blended suit. The symbol is based on the leaf from the German deck, but the name is based on the word for swords used in the Latin deck.

Of course, the word for that particular suit also gave us the term “in spades” meaning ‘in abundance,’ as in “He handed out complements in spades.” It's a term derived from the game of bridge where spades is the highest-ranking suit. We also have the phrase “to call a spade a spade,” but that's based on the other sense of the word *spade* as a digging tool. It's actually an English version of a old Greek proverb. So it doesn't really have anything to do with cards.

So that's hearts and spades. The next suit that was created in the French deck was the suit that we call *clubs* today. Just like with spades, it appears that clubs is a blended suit. The symbol was derived from the German deck, and the name was derived from the Latin deck. Remember that one of the German suits was acorns. If you picture an acorn, you'll probably imagine a little round nut sitting inside of cupule or cup. If you turn it upside down, that cup looks like a little hat or beret on top of the nut. Well, in the German deck, the acorn was usually depicted with the cupule or cup on the bottom, and a little stem protruding from the bottom of that. So the design was rounded on top and then it flared out and was also rounded on each side on the bottom.

One theory is that the French designers took that basic symbol for an acorn and made it more symmetrical with three equal circles protruding from the stem. That design change actually made the symbol look like a clover, so French card players started calling it a *trefle*, which meant a clover in French. But English speakers didn't call it a *clover*. They called it a *club*. And that appears to be because they were familiar with the Latin deck which had a symbol for sticks or batons, which the English apparently called *clubs*. *Club* is an Old Norse word, and English card players just kept using that term, even though it no longer matched the symbol. So the symbol for a clover in French came to be known as *clubs* in English. Again, the suit combines a symbol derived from the German deck and a name derived from the Latin deck.

The final suit is known as *diamonds* in English, and that suit is the most difficult to explain. Neither the German deck nor the Latin deck had diamonds as a suit, nor the symbol that we associate with diamonds today. The symbol first appeared in the French deck where it was called a *carreau* in French. That's the French word for a tile. So French card players apparently thought the symbol represented the type of pavement tiles that were used in walkways and courtyards. That tile shape was very common in France in the 1400s. When English card players encountered the symbol, they called it *diamonds*. But why? Well, no one knows for certain, but remember that one of the suits in the Latin deck was coins, so one theory is that the suit of coins was thought to represent money or wealth, and English speakers felt that one of the new suits should continue to represent those things. The French tiles didn't really look like coins, but the shape did reflect the way that diamonds were sometimes cut. So that may be why the suit came to be called *diamonds* in English. But again, no one knows for sure.

So the standard deck of cards that most of us use today took shape in France in the 1400s. Most of those English terms associated with the deck didn't appear in writing until the following century – the 1500s. That was when terms like *hearts*, *spades*, *clubs*, *diamonds*, *deck*, *pack*, and *suit*, are found for the first time in reference to playing cards.

The term *ace* also appeared in reference to playing cards around that same time. Interestingly, *ace* was already in the language. You might remember from an earlier episode that the word *ace* originally referred to the side of a die or dice with one dot on it. Well, the term was extended to playing cards in the 1500s.

The prominent role of the ace in playing cards has actually impacted the English language. It has contributed several common phrases. If you have a secret advantage, someone might say that you have “an ace up your sleeve” or an “ace in the hole.” And if you have control of a situation, someone might say that you're “holding all the aces.”

In fact, the English language is peppered with words and phrases that relate back to playing cards. For example, when ‘the chips are down,’ you might ‘raise the stakes’ or ‘double-down.’ You might ‘call someone’s bluff’ and ‘put all your cards on the table.’ But don’t ‘overplay your hand’ or ‘play your trump card.’ You might have to ‘stand pat’ or ‘play close to your chest.’ Even if someone ‘sweetens the pot,’ don’t ‘fold’ in the face of a challenge or ‘pass the buck’ because ‘the buck stops here.’

All of those phrases relate back to playing cards, and yes, even those last two phrases – “pass the buck” and “the buck stops here.” Like most of those phrases I just mentioned, they derive from the game of poker. It was once common for poker players in America to pass a buck knife to a player when it was his or her turn to deal the cards. If the player didn’t want to deal, he or she would literally ‘pass the buck’ to someone else, which is where we get the phrase “pass the buck.” But President Harry Truman turned that phrase on its head. He assured his constituents that “the buck stops here,” meaning that he took personal responsibility for his office. Like many of the phrases I just mentioned, it began as an Americanism, but it passed into more general usage over time.

So as you can see, playing cards have had a significant impact on the English language. And the deck which so influenced the language had its origins in France in the 1400s. Despite legends suggesting that the French knight La Hire was responsible for that deck, we don’t really know who came up with the design. What we do know is that the deck was soon adopted in England, and from there, it passed on to much of the English-speaking world.

One of the reasons why the French deck became so popular in places like England is that it was mass-produced thanks to block printing, and it was therefore relatively cheap and accessible. That meant that it became popular among common people, not just the upper classes.

Around the year 1440, block printing was extended from playing cards to something else very important to our story. Around that time, some European printers began to produce entire books with block prints. The text of an entire page was carved on a block, and then the block was inked and pressed onto a piece of paper or parchment. So the entire page was printed at one time. And those pages were assembled into books. As I noted earlier, this same idea had been implemented in East Asia, but these European block books appear to have been a completely independent development. [*SOURCE: Paper: Paging Through History, Mark Kurlansky, p. 110-11.*] Many scholars think that the use of block-printing for books evolved out the widespread use of block printing for playing cards. [*SOURCE: A Short History of the Printed Word, Warren Chappell, p. 9-10.*]

The major problem with these early block-printed books was the time and effort required to produce the individual blocks or stamps. It took a lot of time and skill to carve a large wooden block with raised text made up of lots of individual letters. And an entire book required a lot of those pages. So even if a book could be mass-produced in that way, it wasn’t an easy task. But there was a simple solution to that problem that was just sitting there waiting for someone to discover it. It was the same solution that Pi Sheng had discovered in China about four centuries earlier.

All someone had to do was create a lot of individual letters as small blocks or stamps. Those letters could then be arranged and re-arranged as needed to produce the text of each page. That method would allow a printer to create an entire page of text in a few minutes. Once that page was printed, the letters could be re-arranged to create the text of the next page. And once all of the pages had been printed, they could be bound together into a book. By printing multiple copies

of each page, the printer could make as many copies of the book as he wanted. He could produce as many books in a week as a scribe could produce in a year.

The reason why this idea would work so well in Europe is because European languages are written with an alphabet. So a printer only had to make a handful of letters, as opposed to thousands of Chinese characters. Of course, the printer needed multiple copies of those letters, but once a mold had been created for each letter, they could be easily reproduced.

By the early 1440s, several people were apparently playing around with the idea, but the first one to fully develop it was living in Germany – the same place where playing cards had been produced with block prints for several decades.

That man was Johannes Gutenberg. We don't know much about his early life, but he pops up in the court records of Strasbourg, Germany in the year 1439. He was involved in a business venture there that came to an end when one of the partners died. A lawsuit was filed to resolve that partner's interest in the business. Unfortunately, the nature of the business isn't clearly stated. The records indicate the Gutenberg wanted to keep the project a secret, and some historians suspect that the secret project was an early version of the printing press. (*SOURCE: The Gutenberg Revolution, John Man, p. 74-81.*) If that's what it was, it was never put into operation in Strasbourg.

A few years later, Gutenberg returned to his home town of Mainz. And once he was back home, he pieced together a prototype of the printing press using moveable type. He may have simply picked up where he left off in Strasbourg a few years earlier, but we can't say for certain. He was a goldsmith by trade, so he knew how to work with metal to create the metal letters required for the moveable type. He also brought in investors, most notably a man named Johann Fust who loaned Gutenberg some money for the project. Fust was a book dealer who sold those new books made with block prints. So he had a particular interest in printing technology. Fust's loan was secured by a lien on Gutenberg's equipment, which meant that Fust could foreclose on the equipment if Gutenberg couldn't pay back the loan. And that would prove to be very important over time. [*Ibid.*, p. 148-9.]

By around 1450, Gutenberg's press was ready to go. Since it was a business enterprise, he needed to turn a profit. So he apparently looked for a book to print that would be in high demand – but also relatively short and easy to print. He settled a widely used book of Latin grammar called the *Ars Grammatica* – commonly known by the name of its author, Aelius Donatus. The book was used in schools and universities throughout Western Europe, and it had the added benefit of being relatively short. Gutenberg's copy was a mere 28 pages. Even though the surviving copies don't contain a publication date, most scholars agree that it was the first book published by Gutenberg. [*Ibid.*, p. 147.]

We don't know if he made any money with that Latin grammar book, but events the following year provided another great opportunity to turn a quick profit. In the southeastern corner of Europe, the Byzantine Empire was under threat by the Ottoman Turks, and it was hanging on by

a thread. The Byzantine Empire evolved out of the old Eastern Roman Empire, but much of it had fallen to the Ottomans, and they were closing in on the capital city of Constantinople.

The Ottomans were also threatening the island of Cyprus in the eastern Mediterranean. The King of Cyprus appealed for help, and the Pope offered to raise money to defend the island hoping that the money could be used to hire mercenaries. And it just so happened that the Church had developed a way to raise a lot of money very quickly. And that was through the sale of indulgences. You may remember that indulgences were basically pardons from sin. The Church would sell you an indulgence, and your sins were forgiven. It was a practice that was condemned by some Church leaders like John Wycliffe, as well as later critics like Martin Luther. But in the mid-1400s, the Church was still making a lot of money by selling them.

As part of its larger effort to raise money for Cyprus, the Church ordered the preparation of 2,000 indulgences to be sold in Frankfurt, just a few miles from Gutenberg's new printing shop in Mainz. An indulgence was a standard form with the name of the purchaser and the date left blank. Normally, a large order of those indulgences had to be written out by hand – a process that could take weeks, but Gutenberg's printing press could produce thousands in just a few days. We don't know exactly how many Gutenberg produced, but some of those printed indulgences still survive. So he clearly took advantage of the opportunity. [*Ibid.*, p. 154-5]

Whatever money Gutenberg made from his grammar book and indulgences, he apparently put most of it back into the business because he once again had to borrow money from his main partner Johann Fust. Gutenberg needed that money because he was starting work on his next project, and that project would end up being his most well-known publication. That new publication was the Bible, known by many people today as the Gutenberg Bible. His goal was to produce multiple copies of the Bible for sale to churches and cathedrals throughout Europe. He eventually decided to print about 180 copies in total. [*SOURCE: The Written World, Martin Puchner, p. 157-8.*]

Now obviously, producing that many copies of the Bible was a massive undertaking. The Bible wasn't a single page indulgence – or a 28 page grammar book. Each copy would require over a thousand pages. It actually ended up being about 1,200 pages in total. [*SOURCE: The Book: a Global History, p. 132.*] That meant that Gutenberg needed more employees and more presses. He also needed to buy all of the expensive parchment that he intended to use for the Bibles. He eventually switched to paper which was cheaper, but he still needed a cash infusion to get underway, and Fust gave him the money he needed.

Gutenberg went to work on the publication of his Bibles, and it appears that he had multiple presses in operation by that point based on the slightly different type used in the surviving copies. [*SOURCE: Printer's Error, J.P. Romney and Rebecca Romney, p. 40.*]

Printing may have been more efficient than handwriting, but that didn't necessarily mean it was easy. The typesetters were literally 'type setters.' They selected each 'type' or letter and set it in place on the bed of the press. They had to make sure that each letter was spaced properly and



turned the right way. They used both capital and minuscule letters, but they needed to keep them separate, so the capitals and minuscules were usually kept in separate cases or trays.

The cases were laid out for easy access with the case containing the capitals on the top and the case containing the smaller letters on the bottom. And that is actually why we call the capital letters *uppercase* letters and the minuscules *lowercase* letters. [SOURCE: *The 20 Letters*, Oscar Ogg, p. 222-3; and *The Book: a Global History*, p. 135.] The uppercase letters were literally the ones in the upper case, and the lowercase letters were the ones in the lower case.

You should also keep in mind that the text created by the moveable type was the reverse image of the text that was printed on the page. It's the same thing that happens when you look in a mirror. You're actually looking at a reverse image of yourself. So all of the individual letters had to be created as reverse images of the actual letters. And the sentences had to be laid out in reverse order. So that took some getting used to. Even diligent and careful printers made mistakes.

Assume you wanted to print the word *print*. The first letter is P. But the P you would use in the printing press would be the reverse image of a P. So the loop would be on the left side of the stem, not on the right. That made it look like a lowercase Q. And if you needed a lowercase Q, you needed to grab the letter with the loop on the right side of the stem – in other words, the letter that looked like a P. Even a careful printer sometimes grabbed the wrong letter by mistake. So he literally mixed-up his P's and Q's. And according to some scholars, that is where we get the sage advice to “mind your P's and Q's.” In other words, be careful. Now, there are other theories about the origin of that phrase, but the connection to printing is one of the most popular explanations. [SOURCE: *A Hog on Ice*, Charles Earle Funk, p. 199.]

So Gutenberg's employees had to be careful as they laid out the text of the various pages of the Bible. While they were hard in work in 1453, much of the world around them was in turmoil. And the events of that year shaped the future of Europe for centuries to come. In many respects, Gutenberg's press combined with those outside events to set in motion Europe's transition from the Middle Ages to the modern world.

First of all, in May of that year, Constantinople finally fell to the Turks, and the Byzantine Empire came to an end. Those developments interrupted the overland trading routes that linked the East and West. [SOURCE: *The Written World*, Martin Puchner, p. 154.] That encouraged Europeans to find alternate sea routes to the East. And that contributed to the age of discovery and exploration by sea in the years that followed.

The fall of Constantinople also forced the Greek scholars there to find refuge somewhere else. Many of them headed to Italy, and they brought their ancient Greek manuscripts with them. Some of those works were already known in the West, but a lot of them were introduced for the first time. Those new manuscripts dealt with ancient Greek history, astronomy, geography, and philosophy. Those manuscripts would have been largely confined to the universities had it not been for that printing press that was working overtime in Mainz. In a few years, much of Western Europe would have access to a local printing press, and much of that pre-Christian Greek literature was mass-produced. All of that new information created a revolution in thought

and philosophy and art and literature. Today, we call that period the Renaissance, and much of it was sparked by the fall of Constantinople combined with the invention of the printing press. [SOURCE: *The History Book*, p. 154.]

Around the same time that Constantinople was falling to the Ottomans, the Hundred Years War was finally coming to an end. The French had claimed the upper hand in the war when Joan of Arc appeared, and the momentum continued after her death. In 1435, the Duke of Burgundy abandoned his alliance with England, and that effectively sealed England's fate. During the intervening years, England lost control of Paris, Anjou, Maine and Normandy. Two months after Constantinople fell to the Ottomans, the English suffered a final defeat in Gascony. The Battle of Castillon was the last battle of the war. At the battle, the French relied on their cannons and other artillery. The artillery tore through the English infantry. [SOURCE: *The Wars of the Roses*, Martin J. Dougherty, p. 67.] And that proved the effectiveness of gunpowder as a weapon of war. The armored knight was no longer invincible, and the era of the mounted knight soon came to an end. [SOURCE: *This Realm of England: 1399-1688*, 8<sup>th</sup> ed., Lacey Baldwin Smith, p. 25.] Interestingly, the decline of feudal knighthood took place around the same time that French card makers removed the knights from the deck and replaced them with the queens. So maybe those card markers saw the writing on the wall.

With the loss of Gascony, England's only remaining possession in France was the small port city of Calais on the northern coast. The English would never again recover its former possessions in France. And with the loss of those possessions, England would soon shift its attention to maritime exploration, and eventually to the new continent that was about to be discovered on the other side of the Atlantic.

England's infant king Henry VI was now 32 years old. During his largely inept reign, he had lost the French throne, he lost all of the French territories his father had conquered, he lost the Hundred Years War, and he had left England in a state of bankruptcy. People were not happy. And then, about a month after the last battle of the Hundred Years War, Henry suffered the first bout of dementia and mental illness which he had inherited from his grandfather. That meant that political power shifted to those around him, and England soon devolved into a civil war which became known as the Wars of the Roses.

All of that happened within the course of a few months in the Spring and Summer of 1453 – while Johannes Gutenberg was working on the publication of his massive Bible. The first run of those Bibles was finally ready by the middle of the following year. Somewhere between 150 to 180 copies were made available for sale. [SOURCE: *The Gutenberg Revolution*, John Man, P. 180.]

The Bibles were not only printed. They were also beautifully decorated. And it appears that some of the decorations were added by an artist in Mainz who is considered to be one of the greatest playing card designers. During the early 1400s, artisans in Germany had developed a new type of block printing that used engravings on copper instead of wood. Copper allowed the artists to produce beautifully elaborate and detailed designs. In Mainz, one particular artist was using that technique to produce very high quality playing cards that featured images of plants, animals and

other decorations. His identity is unknown, so he is simply known as the Master of Playing Cards.

Well, the illustrations in Gutenberg's Bible featured elaborate images and designs that are identical – or virtually identical – to the designs on those playing cards. For that reason, many scholars think the Master of Playing Cards worked with Johannes Gutenberg on those first Gutenberg Bibles. [SOURCE: *Lehmann-Haupt, 1966.*] And if that's true, those Bibles represent the culmination of the art of card making and art of printing in the late Middle Ages.

But interestingly, Gutenberg's name never appeared on any of his Bibles, and it seems that he never enjoyed the profits or financial rewards of his world-changing invention. And that's because his primary investor Johann Fust finally called all of his loans due while the Bible production was wrapping up. Since Gutenberg had rolled all of his profits into the business, and since he hadn't received the money for his Bibles yet, he couldn't repay the loans. If Fust had waited a few more months, he almost certainly would have been repaid. But he didn't wait. He filed a lawsuit and foreclosed on Gutenberg's equipment in 1455. He then opened his own printing shop with his son-in-law, Peter Schoeffer. [SOURCE: *The 20 Letters, Oscar Ogg, p. 192.*] Two years later, they published a Psalter which was the first book to include a printer's imprint. It read, "[F]ashioned by a mechanical process of printing and producing characters, without use of a pen, and ... completed ... by Joachim Fust ... and Peter Schoeffer." [SOURCE: *Printer's Error, J.P. Romney and Rebecca Romney, p. 29.*] After that Psalter was published, Fust and Schoeffer went on to produce many more works using their foreclosed printing press.

So what happened to Gutenberg? Well, that's a little unclear. Most of what we know about him comes from the records of the various lawsuits he was involved in. When he died about a decade later, he left some printing materials in his Will, so it appears that he either maintained one of his presses or built another one. He probably printed other books before he died, but none of them bear his name. [SOURCE: *The 20 Letters, Oscar Ogg, p. 194, and The Book: a Global History, p. 132.*]

Even though Gutenberg largely disappeared after he lost most of his equipment, his ideas and his invention lived on. By the end of the century, printing presses could be found all over Europe. A decade after Gutenberg's Bible was published, the printing press was in Italy. Some Italian printers came up with a new design for the letters that were used in their press. A popular Venetian printer used a fancy slanted letter style that was much slimmer than the thick Gothic typeface used in Germany. The thinner letters allowed them to print smaller pocket-size books, and that thin Italian style became known as *italics*, which literally meant the Italian letters or type.

About five years after Italy, a printing press was in operation in France. About three years after that, there were presses in Holland and Belgium. And in 1476, William Caxton brought a printing press to England. (SOURCE: *The 20 Letters, Oscar Ogg, P. 210.*)

Since it took a couple of decades for the printing press to find its way to England, I'll discuss the specific consequences for the English language in a future episode when we look at Caxton's press. But for now, let's consider the broader consequences of the printing press for Western Europe.

The first and most obvious consequence was the fact that books were soon to be everywhere. What had previously been a work of art and a valued treasure was now just another commodity. By the end of the century – less than 50 years after Gutenberg – there were about 1,700 printing presses in operation around Europe. [SOURCE: *The Kingfisher Illustrated History of the World*, p. 313.] Those presses had produced about 15,000 different book titles. [SOURCE: *1492: The Decline of Medievalism and the Rise of the Modern Age*, Barnet Litvinoff, p. 32.] And whereas it took a scribe about a month to copy a single book, the printers usually produced 500 copies in a week. [SOURCE: *The Gutenberg Revolution*, John Man, p. 15.] If we do the math on that, 500 copies of 15,000 different book titles means that printers had produced nearly 8 million individual books by the end of the century. [SOURCE: *The Day the Universe Changed*, James Burke, p. 113.] And to put that into some perspective, that is more printed books in 50 years than all of the handwritten books produced in Europe in all of the Middle Ages put together. [SOURCE: *Palimpsest: a History of the Written Word*, Matthew Battles, p. 167.] Those new printed books contained virtually all of the Western world's accumulated knowledge and learning. And the generous supply of books meant that they were relatively cheap, so anyone who could read and had a little extra spending money could suddenly get access to that knowledge.

Modern historians compare this development to the invention of the internet in the 20<sup>th</sup> century. It opened a vast floodgate of information to the general public. Not just the elites, and the rich and the scholars, but everybody. At least everybody who could read, which was another consequence of the printing press. More and more people wanted to read what was in those books, so more and more people learned to read, and they made sure their children could read. So there was a significant increase in literacy throughout Europe over the following century.

Of course, people wanted those books in their own native languages – like English, and German and Italian. They didn't want books in a language like Latin that they didn't understand. So local vernaculars were suddenly given priority over Latin. This contributed to the gradual decline of Latin in the modern era, and it encouraged the use of local languages. In England, that meant that there was less of use of Latin – and the decline of French was further accelerated.

With local languages like English now being used as standard published languages, those languages started to become more standardized. Whereas local vernaculars tended to vary to region to region and town to town, printers started to adopt certain dialect features and reject others. That produced a somewhat standard written language. Specific spellings were also adopted. Once those languages became more standardized, printers started to produce grammar books and dictionaries in those local languages to help people learn how to read and write. That created the notion of a “correct” form of the language, which was really unheard of prior to that for most local vernaculars.

Of course, all of that gave those local languages a prestige that they hadn't enjoyed before. People became more aware and self-conscious of their language and the languages of others. A shared language brought people together leading to a rise in nationalism among those groups.

In matters of religion, a Bible composed in the local vernacular combined with the printing press was an explosive combination. That gave the average person direct access to the Bible. They no longer needed to go through the clergy or the Church. It also allowed Church critics like Martin Luther to spread their criticisms far and wide. That further weakened the status of the Church. In Europe, it also led to the Reformation.

As I noted earlier, the printing press also contributed to the Renaissance by provided people with access to much of that lost pre-Christian literature from ancient Greece. That forced people to rethink the world around them, and it provided yet another challenge to the power of the Church.

The printing press also changed the way people learned about the world around them and the way they contributed to that body of accumulated knowledge. In a world without books, people relied on memory and tradition. That meant that those ideas were often fluid and variable. And those ideas were usually exchanged face to face. Now with much of that information compiled in books, those ideas could be challenged and tested. The ideas could be spread over thousands of miles to many different people even across different generations. Along the way, those ideas could be verified or rejected or modified. That process produced a reservoir of knowledge that could be expanded as younger generations added to the knowledge that had been accumulated over time. Scholars could pick up where others left off without reinventing the wheel each time. That meant the overall body of accumulated knowledge grew at a rapid rate. And it allowed for specialization in many fields.

Fields like architecture, astronomy, geography and mathematics were revolutionized through this process. Of course, it wasn't limited to academics.

Many craftsmen had died during the Black Death, and much of their practical knowledge and skills had been lost over time. Now printers were produced a lot of 'how to' books. That allowed common people to acquire practical skills that were in high demand. And they didn't have to serve as an apprentice under a master in a guild to acquire that knowledge. So the power and influence of individual craftsmen grew, and the power of medieval craft guilds declined.

So you get the idea. The printing press changed the world. And it was a major factor in the transition from the Middle Ages to the Modern era. The medieval world was coming to an end. It was much like the Byzantine Empire, and England's conquest of France, and Johann Gutenberg's printing business. They all came crashing down like a house of cards.

Next time, we'll turn our attention back to the literature of England. And we'll examine the earliest surviving manuscripts that tell the story of a popular outlaw and folk hero. Of course, that outlaw was Robin Hood. And we get the first written accounts of Robin Hood in the mid-1400s. So we'll look at those early stories and the role of outlaws in medieval England. We'll also

examine the texts for evidence of the Great Vowel Shift which was certainly underway by this point in the mid-1400s.

So until next time, thanks for listening to the History of English Podcast.