THE HISTORY OF ENGLISH PODCAST TRANSCRIPTS

EPISODE 18: KEEPING TIME WITH THE ROMANS

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Welcome to the History of English Podcast – a podcast about the history of the English language. This is Episode 18: Keeping Time With The Romans.

Last time we looked at the emergence of the ancient Celts who once dominated much of central and western Europe. And we looked at the defeat of those same Celts by the Romans in the region known as Gaul which is basically modern-day France. And the Latin dialect spoken in this region eventually evolved into an early form of French known as Old French. And it was this version of French which the Normans brought with them to England in 1066 and which radically transformed English into the language we have today.

Now this time, I want to talk about time. Or at least the Roman concept of time. Because, not only do many of our time-related terms come from Latin, but also because it helps to illustrate how the language of the Romans permeates Modern English. It also makes for some good etymology.

So let's return to where we left off last time, with Roman Gaul – the region that would eventually become known as France. At this point in our story, Gaul was a newly conquered Roman territory. And the conqueror was Julius Caesar. And Caesar was also now the dictator of what would soon become the Roman Empire.

Now Julius Caesar was a historical figure who has impacted the English language in many ways. His name exists in modern English as the medical procedure known as the Caesarian Section or C Section. This is supposedly because Caesar himself was born by this method. By the way, that's probably a myth because during the time of Caesar, babies were only surgically removed from the womb when the mother died in childbirth. And Roman medicine wasn't capable of surgically removing a baby in the way modern medicine can. So it was basically a last-ditch effort to save a baby when the mother died or was destined to die in childbirth. But Caesar's mother was alive during Caesar's lifetime according to recorded sources, so Caesar himself was apparently not born by that method. Now, some historians have noted that Caesar had a somewhat prominent relative who was also named 'Julius Caesar,' and this other Julius Caesar was apparently born by this method. And so there is some speculation that the similarity of names caused the confusion and that's why the 'Caesarian' has generally been attributed to the more famous Caesar.

Now I should note that the Modern English pronunciation of 'Julius Caesar' is quite different from the way the name would have been pronounced in Latin during the time of Caesar. And I mention this in part because a few listeners with a background in Latin have asked me about the name of the god Jupiter. In an early episode, I noted that the name of the god Jupiter developed from an original Indo-European word meaning 'sky father.' Technically, Classical Latin didn't have the 'j' sound. So Jupiter was pronounced /yoo-piter/ during this period of Latin. And the 'y' sound in /yoo-piter/ was represented by the letter I. And the same was true of the name 'Julius.' It was actually pronounced /yoo-lee-us/ during the period of Classical Latin. And again it was spelled I-U-L-I-U-S.

The ‘j’ sound actually developed in very late Latin beyond the Classical Latin period. And one place where it developed was in Gaul. Many parts of the Roman Empire has a local Latin dialect which are sometimes called Vulgar Latin dialects because they were the dialects of the common people of that region, and those local dialects weren’t the standard Latin dialect of the Classical period. In Gaul, the Latin dialect developed several new sounds. I have already discussed in an earlier episode how the ‘k’ sound began to shift to an ‘s’ sound before certain letters. And the ‘h’ sound also began to disappear from the language, which is why we still sometimes have silent ‘H’s in certain words borrowed from Latin. And the ‘y’ Sound began to shift to a brand new ‘j’ sound in many words. So /yoo-piter/ became ***Jupiter***. And /yoo-lius/ became ***Julius***. These changes were part of the transition from Late Latin into a very early form of French called Old French. These changes would be further impacted by the arrival of a Germanic tribe called the Franks who would eventually oversee the transition of Gaul into the Frankish kingdom, and then eventually into the nation we know today as France. But that is all much later in our story.

So that is how /yoo-lee-us/ became ***Julius***. But what about ***Caesar***? Well, during the period of Classical Latin, ***Caesar*** was actually pronounced /kae-sar/. Remember that the C always had the ‘k’ sound in Latin. And, as I just noted, the ‘k’ sound shifted to an ‘S’ sound before an E and an I in Old French. So from /yoo-lee-us kae-sar/ to ***Julius Caesar*** we can hear the impact of sound changes in late Latin and early French. And we can see how those changes impacted modern English. Modern English may not sound like French, but the way many English words are pronounced is a direct inheritance from French. And it also starts to explain why modern English spellings can seem so random and complicated.

Now after Caesar’s assassination, the name ***Caesar*** was adopted as a general name for Roman emperors. So Rome actually had many Caesars after Julius Caesar. And because of the heavy influence of the Romans, the term ***Caesar*** passed into German and Russian as well where it also meant the top military or political leader. Remember, Caesar was pronounced as /kae-sar/ in Classical Latin. So the term passed into German as ***Kaiser***, and it was still in use in Austro-Hungarian Empire until World War I. The term also passed into Russian as ***czar***. And it too was in use in Russia as late as the twentieth century.

The term ***czar*** has also been borrowed into English as a term for certain top political leaders. So the ‘drug czar’ in the United States is the person responsible for enforcing US drug laws. Again ‘drug czar’ literally means 'drug Caesar' in its original sense.

There is something else that we typically associate with Julius Caesar, and that’s the Julian calendar. This calendar was developed at the instruction of Caesar, and it is the direct ancestor of the calendar we use today.

So let’s talk about time, and how the ancients measured it. Last time, I discussed the ancient Celts, and I explained how Caesar conquered the Celtic territory of Gaul. And I mentioned that the ancient Celts didn’t have a written language. And that is generally true. But as the Celts began to encounter other literate people, like the Greeks and the Romans, it does appear that they began to adopt some very limited writing, like for inscriptions. And this occurred around the

same time the Romans invaded Gaul. Caesar actually noted that the Celtic tribes had adopted some very limited writing for inscriptions.

And this was confirmed about 150 years ago when the remains of a Celtic calendar dating from the first century BC was discovered in France, which, as we now know, was once the Roman territory of Gaul. So given that date, the first century BC, it means the calendar was being used by Celts in Gaul around the time Caesar invaded the territory. And the writing on the calendar used Roman lettering and numerals, but it was written entirely in a Celtic dialect. The calendar highlights several dates which were important to the Celts for ceremonial or agricultural purposes (or perhaps for both). And that makes it the oldest surviving document in a Celtic language, and it confirms that the Celts were not the barbarians the Romans considered them to be. As I said, the calendar predates the Roman occupation, and it shows a sophisticated series of astronomical calculations which is completely independent of the calendar developed by the Romans.

Now I mention this Celtic calendar for two reasons. First, to make the point that shortly before the languages of the continental Celts died out, they had begun to adopt some limited writing for inscriptions and notations. But the other reason is to talk about the importance of ancient calendars and time-keeping. Many of our modern English words related to dates and time-keeping come from the Romans. In fact, many of them come indirectly from Julius Caesar himself. For example, the name of the month of ***July*** comes directly from the name ***Julius*** in Julius Caesar. And as I said earlier, the so-called 'Julian Calendar' comes from certain reforms to the calendar implemented by Caesar himself. So let's take a closer look at the ancient Roman calendar.

In ancient times, the most important measurements of time were days, months and years. Today, we spend a lot of time focusing on hours, seconds and minutes. But that is largely a product of modern technology and our fast-paced culture. But to the ancients, it was much more important to keep track of days, months and years. Seasonal measurements were essential to an agricultural society. Determining when to plant and when to harvest was essential for survival in ancient agricultural societies. And that is why ancient monuments like Stonehenge, which predate both the ancient Celts and the Romans by many centuries, probably had an astrological function at least in part. And seasonal measurements were also important for military purposes. Military campaigns were generally avoided in the colder climates of Europe during the winter months.

So the three basic forms of time measurement for ancient people were days, months and years.

Now a day is very simple. As we know that is the length of time it takes for the Earth to make one complete rotation on its axis. Or as the ancients would have viewed it, the length of time it takes for the Sun to make one complete revolution around the Earth. So since the day was measured by the perceived movement of the Sun, the Sun was closely associated with the concept of a day.

The original Indo-European word for 'sky' was something like ****diēu***. This word also meant 'to shine' – like 'sun shine.' So it came to be associated with the concept of a day. And you may remember this word as part of the original Indo-European word for 'God' which was 'sky father.'

It produced Sanskrit ***dyaus pitar***. It also produced Greek word ***zeus pater***, which was later shortened to ***Zeus***. And it also produced the name of the Anglo-Saxon God ***Tiu*** which gave us ***Tuesday***, another time-related term, but more on that later. And that same original Indo-European word produced the Latin word ***dyu-pater***, which became /yoo-pater/, and then ***Jupiter*** in late Latin and early French as I mentioned earlier.

Well this Indo-European word for 'sky' or 'shine' – ****diēu*** – it ultimately produced two other words in Latin. One word was ***deus*** which came to be a generic term for God. And we see that word in Modern English words borrowed from Latin – for example, in words like ***deity*** and ***divine***, and even in the French word ***adieu*** which literally meant 'to God' and came to mean 'God be with you' as in a standard way of saying 'goodbye.'

The other word which developed in Latin from that original Indo-European word ***dieu*** was ***dies*** – which meant 'day' in Latin. So there we can see how that original Indo-European word for 'sky' or 'shine' developed the Latin words for both 'god' and 'day.'

Now with regard to the Latin word for 'day' – which remember was ***dies*** – it produced Modern English words like ***diary*** which was a journal of the day's events. And it produced a word like ***dial*** as in the part of a sun dial that marks the daylight hours. And it produced the word ***diet*** which was how much you ate each day. And it also produced the word ***adjourn*** which meant to put off to another day. Now during the Middle Ages, it was common for calendars to set aside two days of each month – so 24 days total for the year – as 'evil days' or 'unlucky days.' In Latin, the term 'evil day' was ***dies malus***, combining the Latin word ***dies*** for 'day' and ***malus*** for 'evil.' Well, an 'evil day' – or ***dies malus*** – became Anglicized during the period of Middle English, and it became known as the 'dismal' days. And from this, we get the Modern English adjective ***dismal*** meaning 'dreary or unfortunate.'

So the Latin word ***dies*** meant 'day.' So did the Modern English word ***day*** come from this Latin word ***dies***? Well, according to most modern linguists, the answer is actually 'no.' The English word ***day*** comes from an Old English word ***daeg*** which has a different Indo-European root. And you may think there is a connection between the English word ***day*** and the word ***date***, but again linguists tell us that each of those words are not actually cognate. The word ***date*** comes from a Latin word unrelated to those I have mentioned earlier and having an altogether different Indo-European root.

So I have discussed the ancient concept of a 'day,' which was directly connected to the concept of the Sun, the sky and sunshine or daylight.

So let's consider the concept of a 'month.' And as you may suspect, just as a 'day' is connected to the Sun, a 'month' is connected to the moon. A month was based on the movement of the moon around the Earth. Specifically, one complete orbit of the moon around the Earth represented a month. For the ancients, this cycle was based on observing the changing phases of the moon. So from one new moon to the next, you had a month.

Now we can easily see the connection of ***moon*** and ***month*** in Modern English because both words come from Old English, and ultimately from the same Indo-European root word. The Indo-European root word was ****men(s)es***, and it produced the original Germanic word ****menon*** for 'moon' and ****menoth*** for 'month'. And that Germanic language gave us the Old English word ***mona*** for 'moon' and ***monath*** for 'month.' So ***moon*** and ***month*** have a direct lineage and they still closely resemble each other because they have both come to us via the same sources – Indo-European to Germanic to Old English to Middle English and then to Modern English. Words that do that tend to maintain a close resemblance over time, and we still see that in those two words – ***month*** and ***moon***.

Now Latin also developed a word from that same original Indo-European root word ****men(s)es***. The Latin word was very similar – pronounced ***mensis***. And this word is the root of ***menstruate*** and ***menstrual*** in Modern English, again referring to a monthly cycle.

The Romans also used this word ***mensis*** to represent a period of 6 months. They combined the Latin word for six which was ***sex*** with this word ***mensis*** to create the word ***semester***, which originally meant a period of six-months or half a year. Of course, it has evolved in Modern English to mean half of a school year.

So ***month***, ***moon***, ***menstrual***, and ***semester*** are all cognate. All relate back to the original Indo-European word for 'moon.'

But Latin also developed a separate word for 'moon.' And that other word is the more familiar Latin word in Modern English. That word was ***luna*** which gives use the Modern English word ***lunar*** as in 'lunar eclipse' or 'lunar phase' or as we will see shortly 'lunar calendar.'

Now there is a direct connection between the Latin words ***mensis*** and ***luna***, both meaning 'moon.' And that's because the ancient Romans had a Moon Goddess named 'Luna.' So the Romans eventually associated the term ***luna*** with the moon itself. And so ***luna*** came to refer to the Moon and things associated with the Moon.

Now this Latin word also came from an original Indo-European word which was something like ****leuk*** and meant light or brightness. And this Indo-European root word gave us a Germanic word which came into Old English as ***leoht***. And that is the original version of the word ***light***. So ***light*** came from the same root word which produced ***luna*** in Latin. This Indo-European root word ****leuk*** actually produced several words in Latin. And from those Latin words we get Modern English words like ***luster*** referring to the way certain bright things look. We get ***lucid*** which originally meant 'shining.' We get ***illustrate*** and ***elucidate*** which meant 'to shine a light on something.' We get ***translucent*** which is 'something that light can shine through.' We get ***luminous*** and ***illuminate*** which again refer to the brightness of something. And as I said earlier, we get the Latin word ***luna*** which produced both ***lunar*** and ***lunatic***. So what is the connection between ***lunar*** and ***lunatic*** you ask?

Well, since the Roman Goddess Luna was the goddess of the sphere which was closest to the Earth, the Romans thought that she had a great deal of power. The phases of the Moon were thought to reflect changes in her mood. And they also thought that her changing mood was responsible for many mental conditions. So people who acted abnormally or crazy were thought to be under the influence of Luna. And again this was thought to be connected to the moon in some way. So this condition has come to be known as ***lunacy***, and a person who suffers from it is sometimes called a ***lunatic***.

Of course, the idea that the moon makes people a little crazy has passed into our modern culture as well. We still speak of people acting a little strange on a full moon. Some of this is an inheritance from Germanic culture which had notions which were similar to the Romans. The Germanic culture developed the concept of a 'werewolf' which was a human who turned into a wolf on a full moon. Remember from an earlier episode that the Old English word for man was ***wer***, and a 'man-wolf' was a ***werewolf***.

And we still have notions of someone going crazy and howling at the moon. Again, it was a common belief in ancient cultures that the Moon affected the mental and psychological condition of people. So we see that reflected in Modern English as well.

So I've talked about the connection of a 'day' to the Sun, the sky and sunlight. And I've discussed the connection of a 'month' to the moon and moonlight. So what about a year?

Well, like a day and a month, a year was based around astronomy. A year was the length of time it took for the seasons to complete a full cycle. So in modern astronomical terms, it is the length of time it takes the Earth to make one complete orbit around the Sun. Now ancient people didn't really understand that the Earth moved around the Sun, but they did understand the concept of seasons like Summer, Autumn, Winter and Spring. And they understood that those seasons came in regular cycles. And they were able to measure those cycles by the trajectory of the Sun's movement across the sky at various points during the year. And also by measuring the length of the days and the nights. Long days meant more heat and therefore good conditions for planting. Long nights meant more cold and a time for harvesting and storing food.

And of course, the Sun's trajectory and the length of the days and nights vary because the Earth is titled on its axis. When the northern hemisphere is titled toward the Sun we got longer days and thus Spring and Summer. But when the earth moves around the Sun as part of its natural orbit, eventually the earth is located on the opposite side of the Sun, and now the northern hemisphere is titled away from the Sun. So the days become shorter, and we get Autumn and Winter.

But twice a year the night and the day are the exact same length, or almost the exact same length if you want to be technical. This occurs when the Earth reaches the two transition points in its movement around the Sun.

The Romans called these two dates the 'equal night' since the night was equal to the day on those dates. The Latin term for 'equal' was ***aequus***, and the term for 'night' was ***nox***. So when these two words were combined, they gave us the word ***equinox***.

Now one equinox occurs in March, and its called the 'vernal equinox' from the Latin word ***ver*** which meant 'Spring.' And this marks the point when the days start to become longer than the nights. So it marks the beginning of Spring. And the other equinox occurs in September, and it marks the transition point at which the days start to become shorter than the nights. So in other words, it marks the beginning of Autumn. And this was called the 'Autumnal Equinox' by the Romans from the Latin word ***autumnus*** meaning 'Autumn.'

Now, similar in concept to the Equinox was the solstice. The solstice also occurs twice a year, and it is basically the opposite of the equinox. The first solstice is the day when the daylight is at its longest and the night is at its shortest. This longest day of the year occurs in June and is called the Summer Solstice and it marks the beginning of Summer. And the other solstice is the day when the daylight is at its shortest and the night is at its longest. And this shortest day of the year is the Winter Solstice, and it marks the beginning of Winter.

Now the trajectory of the Sun through the sky – that trajectory moves over the course of the year. And on the Summer Solstice, the Sun reaches its highest trajectory, and on the Winter Solstice, the Sun reaches its lowest trajectory.

And ancient people could very easily measure the beginning of Summer and Winter by keeping track of the Sun's trajectory. When it reached its height, it was Summer. When it reached its lowest, it was Winter. On the two dates when it appeared to stop for the day before changing directions, it was a 'Solstice', which combined the Latin terms for 'Sun' (which was ***sol***) and 'to stand still' (which was ***sistere***). Thus, since the trajectory of the Sun appear to stand still on those two days before it changed directions, those days were called a ***solstice***.

So by keeping track of the Sun's movement in the sky, and by keeping track of the length of the days and nights, ancient people could predict the seasons. So these transition dates were easy to measure and they were very important. As I noted earlier, for agricultural purposes alone, it told the people when to plant, and when to harvest, and when to begin storing food for the winter. Remember even the stone age people who build Stonehenge understood these concepts because the stones at Stonehenge are arranged in a way that they actually measure the movements of the Sun for these purposes. And like the Romans who associated the Sun with God, the builders of Stonehenge also apparently used the monument for both astronomical and religious purposes. And the Celtic druids who eventually migrated to Britain, also recognized this purpose because they too used Stonehenge for both astronomical and religious purposes.

So we can really see the connections here between the heavens and the ancient concept of 'heaven.'

Now even though ancient peoples may not have understood that the Earth revolves around the Sun, they did understand how to measure the movement of the Sun's trajectory in the sky and how to measure the relative length of the days and nights. And they understood these events occurred at fixed intervals, and that they marked the changing of the seasons. So they had a definite concept of a year.

Now the English word ***year*** comes from Old English, and it actually goes back to the original Indo-European language. The Indo-European root word bears a remarkable similarity to the Modern English word. It was something like ****yer*** and it meant 'year' or 'season' in the original Indo-European language. It also produced a Greek word ***hora*** which originally meant 'season' in Greek and it produced the word ***horoscope*** in Modern English.

Now the Greek word ***hora*** later came to be used to refer to a part of the day – like morning, noon or night. And it eventually evolved into our modern word ***hour***. Here's what happened. The Greeks had encountered the Babylonians who were using sundials, and the sundials were divided into 12 segments. Remember from an earlier episode that I mentioned that the Indo-Europeans tended to count in increments of 10 as is reflected in our modern numbers. But the Babylonians tended to count in terms of 12s and 60s. And that tendency was reflected in the Babylonian sundials. So the daytime was divided into these 12 equal segments on the sundial. Since these were sundials, they didn't really measure the nighttime. So initially it was only the daytime that was divided into 12 segments.

Now the sundial began measuring time at dawn, so that was the first hour. And that meant that darkness came at the twelfth hour. And it is in this sense that we have the term the ***eleventh hour*** in Modern English to mean 'near the very end' or 'the last opportunity before time runs out.'

The Greeks had encountered the Babylonians and had borrowed their sundials, and thus their concept of dividing the day into twelve segments. And the phrase ***eleventh hour*** is actually a phrase used in the Book of Matthew in the New Testament of the Bible. Remember that the New Testament was written in Greek, and it borrowed this Greek concept of time with the twelfth hour being the onset of darkness at night. So the ***eleventh hour*** was nearly at the end of the day. And that's actually the origin of the term the ***eleventh hour*** in Modern English.

Now the Greeks had borrowed the concept of time from the Babylonians. And the Romans borrowed this same concept from the Greeks. And they also borrowed the Greek word ***hora*** which remember came from the same original Indo-European root as the English word ***year***. By this point, the Romans no longer pronounced the initial 'h' in the word ***hora*** so it became /ora/, and eventually in Modern English it became ***hour***. I mentioned earlier that Latin eventually lost the 'h' sound. And we see that here. And that is why the word ***hour*** has that silent 'H' at the beginning – because it was originally pronounced by the Greeks in the original Greek version of the word.

Now I've already mentioned that the amount of daylight varies throughout the year, so a Roman hour was merely 1/12 of the daylight – ever how long that was on a given day. So an hour was

longer in the Summer months since a day were longer then, and by the same token an hour was shorter in the Winter months when a day was shorter. It wasn't until the Middle Ages that the hour was given a precise measurement by allocating 12 segments to the day and a corresponding 12 segments to the night. These 12 segments thus created 24 total segments in the day. And this created our modern concept of an hour. This also reflects the movement away from using the Sun to measure hours. As early mechanical watches began to be developed, the Sun was no longer needed to measure time. And this begins the movement toward measuring time more in terms hours and minutes, rather than days, years and months.

So based on the information I just presented, the words ***year, horoscope*** and **hour** are all cognate, having evolved from the same Indo-European root word. But again, they get to us in various ways. ***Year*** from the Germanic languages, and ***horoscope*** and ***hour*** from Greek and Latin.

But again, just like with the word ***month*** which I discussed earlier, the Roman word for 'year' didn't come from the same root as the English word ***year***. The Roman word came from a separate Indo-European word which was ****at*** which meant 'to go' or 'a period gone through' in the original Indo-European language. This word ****at*** later evolved into the word ****atnos*** in an early form of Latin, and then evolved into the word ***annus*** in Classical Latin. And that is the word which the Romans used for year. Of course, we get that word in English as ***annual*** and ***anniversary*** (meaning once a year), and ***annuity*** (which originally meant a sum that was paid yearly). In finance, we sometimes calculate interest ***per annum*** which again means 'per year.'

So let's take a breather for a second and consider where we are. So far in this episode, I've discussed some words which came from the name of Julius Caesar. And I've explored the etymology of words which we have related to hours, days, months and years. Now I want to put those two together because, as I noted earlier, it was Julius Caesar who oversaw the revision of the Roman calendar and gave us the roots of the calendar we use every day.

Now there has been a lot of discussion in recent months about the Mayan Calendar and the purported end of the world. So even if you don't know a lot about keeping time in the ancient past, you probably know that ancient peoples had many different calendars and many different ways of measuring months and years. I also mentioned a Celtic calendar from Gaul earlier in this episode which had its own methodology. So you may wonder why this was all so complicated in ancient times. I mean, why didn't everybody just figure out how to keep tract of time? After all, everybody was measuring time based on the same basic principles. A day was the period from sunrise to sunrise. A month was the period from one new moon to the next. A year was the period from one Summer Solstice to the next. Pretty much everyone used these same celestial events to keep tract of time, so why couldn't they all get on the same page – the same calendar page in this case?

Well, part of the answer is because these three celestial events – an astronomical day, an astronomical month, and an astronomical year – they don't divide into each other evenly. They're three events which we just happen to use to measure time. But none of them fit neatly and evenly into the others.

So let's take a day. That's the most basic form of measurement. And even in ancient times, everybody generally agreed on what a day was. From sunrise to sunrise.

But the first problem is that you can't divide an astronomical month into an even number of days. There is no perfect division for a month. The amount of time it takes the moon to orbit the Earth (ie, to experience a complete moon cycle from new moon to new moon), is about 29.5 days. Now, as a practical matter, there was no way ancient people could keep track of a precise measurement of 29.5 day. So they had to round it off to the nearest day. And that meant if they were counting strictly by days, over a period of many months, the moon cycles were out of phase. So they had to readjust from time to time.

And we encounter the same problem when we look at a year. A year is based on the amount of time it takes the Earth to orbit around the sun. Based solely on this factor: 1 orbit = 365 and 1/4 days (ie. 365.25 days). Again, if you round this off to 365 days, as we do today, every four years you have to re-adjust by adding a day which we call leap day.

The point here is that the three astronomical events which were the basis of days, months and years are three completely different things, and you can't use one to measure the others without using complicated fractions which were impractical in ancient times. And if you round off to the nearest number, then the measurements soon fall out of line without constant readjustments. So these constant fractions and left over hours and days confounded these early calendar makers.

Yet, as I've noted, these calculations were very important to people during ancient time. If you didn't plant and harvest crops and the right times, it was often a matter of life and death. So early people struggled with the proper calculations for these activities. And they devised all sorts of calendars to make the necessary adjustments which were required to make these numbers reconcile and balance out over time.

So how did the Romans handle this problem? Well, if we go back to the very beginning of Rome, around the time Rome was founded, the Romans used a 10-lunar month year with an additional winter period that was not even part of the calendar. So they didn't measure a year by a certain number days like we do today. Instead, it was based on a certain number of months. That is why we call it a lunar calendar.

So let's look at how the Romans did this. Like many ancient peoples, the Romans kept track of the lengths of the days, and they could determine the vernal equinox in Spring when the length of the day and the length of the night were the same. This marks the beginning of Spring, and it was an indicator of the planting season.

So when the vernal equinox occurred, the Romans began counting. This was the date when their 10-month lunar calendar would began. So it ran from modern-day March until around modern-day January. They then waited through the undefined winter period (where they were basically 'off the grid') until the vernal equinox occurred again, and then they began counting the 10 months all over again.

This original 10-month calendar also explains some of the names of the months. If you're familiar with Latin or any of the Romance languages, you probably recognize the Latin prefixes of ***septem*** for 7, ***octo*** for 8, ***novem*** for 9 and ***decem*** for 10. And I've discussed some of these prefixes in earlier episodes, and we see them all the time in English in words like ***octopus*** for a sea animal with 8 legs, and ***decade*** for a period of 10 years. But ***September*** is not the 7th month, it's the 9th month. And ***October*** is not the 8th month, it's the 10th month. And ***November*** is not the 9th month, it's the 11th month. And ***December*** – which is based on the Latin root ***decem*** – well, it's not the 10th month, it's the 12th month.

Part of the reason why these month names seem out of sorts is because the original Roman calendar only had 10 months. And the names of the last four months were based on the Roman numerals: ***septem*** for 7, ***octo*** for 8, ***novem*** for 9 and ***decem*** for 10. And those month names became ***September***, ***October***, ***November*** and ***December***. Those were the months 7 through 10, and just as today they were the final four months of the year. In the original Roman calendar, those months matched.

But what about the first 6 months beginning with the vernal equinox in Spring?

Well, the very first month was called ***Martius*** after the Roman God Mars. Mars was originally a god of agriculture before becoming a god of war. And since the first month came at the beginning of Spring, it meant the time for planting crops and preparing to plant crops. It was also the month in which miliary campaigns were often initiated since the cold weather was starting to break. So that's why this Spring month was named after Mars since he was the God of both agriculture and war. The name of the month became ***March*** in Old French, and English took the name from the French after the Norman Invasion.

The second month was called ***Aprilis***. Historians are not certain where this name originated. Some have suggested an Etruscan origin from the Greek goddess Aphrodite or from Apollo who also had Etruscan origins. It became ***Avrill*** in Old French, and again English took the name from the French after the Norman invasion and eventually converted it to ***April***.

The third month was called ***Maius*** after the goddess Maia who was the mother of Mercury by Jupiter. It became ***Mai*** in Old French, and English took the name from the French after the Norman invasion and eventually converted it into ***May***.

The fourth month was called ***Iunius,*** probably after the goddess Juno (/yoo-no/) which eventually became Juno in late Gallic Latin and early French. Remember this was the same change that made /yoo-lee-us/ into Julius, /yoo-piter/ into Jupiter, and the month /yoo-nee-us/ became Junius. The name later evolved into ***June*** during the Middle English period after the Norman Invasion.

So the first four months, we still have in Modern English – ***March***, ***April***, ***May*** and ***June***. And the last four months we also have – ***September***, ***October***, ***November*** and ***December***.

But what about the two months in the middle of the original 10-month Roman calendar – months 5 and 6. Well these two months used the same Roman numbering system which was also the basis of ***September***, ***October***, ***November*** and ***December***.

The fifth month was ***Quintilis*** which was based on the Latin adjective for 'fifth' (which was ***quintus***) since this was the 5th month at the time.

And the sixth month was called ***Sextilis*** which was based on the Latin adjective for 'sixth' (which was ***sextus***) since again this was the 6th month at the time.

But as we will see, the names of these two months were eventually replaced. So today, we just pick up the Latin numbering of the months with September.

So that was the original 10-month calendar. Remember that the Romans basically went 'off the grid' after December when winter kicked in. They just waited for the vernal equinox in Spring and they started all over again. And also remember that these months were based strictly on the cycle of the moon. From one new moon to the next new moon was a 'month.' So it wasn't really based on a set number of days. It was strictly a lunar calendar.

Well, at some point during the Etruscan period, the Romans filled in that winter period with two additional months. The first was named ***Iānuārius*** (/yan-war-ius/) after the god Janus (/yan-us/) which at this very early date was the most important God in early Roman culture. Again, thanks to the French 'j' sound, we know the God as ***Janus*** today and the month as ***January***. Janus was actually more important that Jupiter (or /yoo-piter/) early on. But as the Romans encountered the Greeks and they began to align their Romans gods with Greek gods, they came to realize that the Greek sky god Zeus was the preeminent God in Greece. The corresponding sky god in Rome was Jupiter. So Jupiter got an upgrade thanks to his associated with the Greek god Zeus. But prior to that Janus (or /yan-us/) was the preeminent Roman god. So that is why this new winter month was named after him.

The second winter month was named ***Februārius***. This month was either named after the Roman god 'Februus' or a feast of spiritual cleansing called 'Februa' which was held during this time of the year, or perhaps it was named after both. But in either case, the name comes to us eventually as ***February*** in Modern English.

Now remember that these early Roman months were still based on lunar months which required constant revisions to be kept accurate. This was a lunar calendar which meant that each month changed when the moon cycles changed. But that meant that the Romans needed to make constant adjustments by adding days or subtracting days to keep these lunar months in sequence with the seasons. Remember that the movement of the moon around the earth is not tied to the movement of the earth around the sun. So if you counting months based on the moon cycles, you have to readjust to keep it in line with the seasons which are based on the Sun. This wasn't a problem originally with that 10-month calendar, when the Romans began each season with the vernal equinox. At that point, the calendar year was pretty much always in alignment with the seasons. You just started over each year on that date – the vernal equinox.

But now the Romans had filled in that winter gap with two new months. They were no longer 'off the grid' in winter, and allowed to re-adjust when spring kicked in. They were now 'on the grid' all year. But they were using moon cycles to determine when the months changed, not the equinox or solstice. And they weren't making regular adjustments to account for this discrepancy. Occasionally they did make an adjustment when things were really out of sorts. Since February was the last month of this early Roman calendar which began in the Spring, this last month of February was used for adding days to resolve discrepancies (which is why we still use it today for adding the leap day every four years.) It is also partially why it has an odd number of 28 days while the other months have 30 or 31.

Now in 153 BC, the Romans decided to shake things up a bit, and they decided to use January as the official beginning of the year since that was when they installed their consuls. So just as modern businesses can have a fiscal year which is often different from the calendar year, the Romans had an 'official' period which began with the installation of consuls, and they had this separate calendar year which began in basically modern-day March in the spring. So they decided to readjust, and just make January the first month since that corresponded with the beginning of their official or political year.

But this meant that all of those months which were named after Roman numbers were now out of phase. The 5th month, ***Quintilis***, was now the 7th month. And the 6th month, ***Sextilis***, became the 8th month, and so on. And that is how September, October, November and December went from months 7, 8, 9 and 10, to months 9, 10, 11 and 12.

Now let's skip forward about a century to the time of Julius Cesar. Remember that the Romans were not making the regular adjustments to the calendar that they should have been making. And as a result, by the time of Caesar, the whole calendar was completely out of phase with the seasons. It was actually an entire season off. So everything was a mess.

So Caesar employed the Greek astronomer Sosigenes to come up with a plan to revamp the calendar. And Sosigenes proposed that they completely abandon the idea of using lunar months (in other words, the 29.5-day moon cycles) to measure time. And they decided instead to just convert to a lunar year. The lunar year would be 365 days with a leap year added every 4 years to account for the extra 6 hours which accrued each year. And in keeping with tradition, the extra day would be added to February. The lunar phases of the moon would cycle through the year but they would no longer be tied to any particular month. And this is the calendar which Caesar adopted on January 1, 45 BC, and which we know today as the Julian calendar.

But two more revisions were later made to the calendar. In 44 BC, shortly after the assassination of Caesar, the Roman Senate renamed the 7th month ***Quintilis*** as ***Julius*** (/yoo-lee-us/) to honor Julius Caesar who was born in that month. And as you will recall, /yoo-lee-us/ became ***Julius***, and it eventually passed into English as ***July***.

Lastly, the 8th month ***Sextilis*** was renamed as ***Augustus*** in honor of Augustus Caesar – Julius Caesar's successor and the first Emperor of Rome. ***Augustus*** also made its way into Modern English as ***August***.

A few other minor adjustments were made to the calendar by Pope Gregory XIII in the 1500s, thereby giving us the modern 'Gregorian Calendar.' But most of what we know and recognize as the modern calendar comes from the reforms commissioned by Julius Caesar.

And since I've discussed the names of the months, let me conclude this episode on time by looking at the days of the week.

Now, I have repeatedly expressed the idea that Modern English is, at its core, a blend of Germanic Old English and Latin. And the way we keep track of time is a perfect example of that blend. Whereas the names of our months came from Latin via French after the Norman Invasion, the names of our days of the week are rooted in the Germanic language of the Anglo-Saxons. But even so, the days were still not immune from Latin influences. Four days are named after Germanic Gods. One is named after a Roman God. And the other two have origins in Latin but were modified by the later Germanic Anglo-Saxons.

So let's begin with the Greco-Roman astronomer and mathematician Ptolemy. Now according to Ptolemy, there were seven planets which revolved around the Earth, and those planets were the Sun, the Moon, Mars, Mercury, Jupiter, Venus and Saturn. So the Sun and the Moon were considered planets at this time. The idea also probably dates back to the Babylonians. And during the pre-Christian era, the Romans adopted the 7-day week, and they decided to name the seven days after the seven planets.

The first day was the Sun's day. Since 'Sun' in Latin was ***sol***, the Latin name for the day was ***solis dies***. The Germanic tribes took the name, but they substituted the Germanic words for 'sun' and 'day.' And thus we get ***Sunday***.

The same thing happened for the next day. The next day was the moon's day. So it Latin it was ***lunae dies***. Again, the Germanic tribes simply substituted the Germanic words for the Latin words, thereby yielding 'Moon's Day' or ***Monday***.

These two translations were easy, because the Germanic tribes had their own words for 'Sun' and 'Moon.' But the other days were named for planets which were named after Roman Gods. So the Germanic tribes just substituted their own Gods.

The next day was named for the planet and Roman God Mars. We know it in modern French as Mardi, as in Mardi Gras meaning Fat Tuesday. Well, the Germanic tribes substituted the Roman god Mars with the Germanic god Tir, or as the Anglo-Saxons knew him – Tiu. And we thereby get ***Tuesday***.

The following day was named for the planet and Roman god Mercury. We know it in modern French as ***Mercredi***. But the Germanic tribes substituted Mercury with the Germanic god Odin, or as the Anglo-Saxons knew him – Woden. So 'Mercury's Day' became 'Woden's Day' in Old English and ***Wednesday*** today. Now Woden was one of the most important Germanic gods. When soldiers died in battle, it was believed that they went to Woden's Valhalla in the afterlife. And I'm going to talk more about Woden and these other Germanic gods when we get to the

Germanic tribes in an upcoming episode.

The next day of the week was named after the planet and Roman god Jupiter. In modern French, it is ***Jeudi***. The Germanic tribes substituted Jupiter with their god Thor – long before he became a comic book and movie hero. And the day became 'Thor's Day' – and is now known as ***Thursday***.

The next day of the week was named after the planet and Roman goddess Venus. Being a female God, the Germanic tribes substituted her with Woden's wife, Frigga, thereby creating the modern ***Friday***. Frigga was closely associated with another female Germanic god named Freya. And it appears that some of the Germanic tribes named the day after her instead. In Icelandic, for example, Freya may be the source of the name for their version of Friday. Some historians believe that these two goddesses may have originally been a single goddess as some very early point, and that there was a later evolution that divided them into two separate goddesses. And this might also account for some of the confusion as to which goddess was used as the source for the name of Friday in the various Germanic languages.

That leaves us with the final day which the Romans named after the planet and God Saturn. Apparently the Germanic tribes didn't have an equivalent god for Saturn, or at least not one that they wanted to use to make this substitution. So they kept the Roman god Saturn, and we ended up with 'Saturn's day,' or as we know it today – ***Saturday***.

The important point with respect to the names of the week is that these names were adopted before the Anglo-Saxons migrated to Britain because these names, or versions of these names, are found throughout the Germanic languages. So these names were adopted by the Germanic tribes while the Romans were still in control of Gaul and before the Roman Empire began to collapse. So these are very old Germanic words which pre-date Old English.

So I hope you have found this discussion of time-related terms interesting. Not only does it make for some interesting etymology, but it also illustrates how Modern English is a blend of Germanic and Latin roots.

Next time, I'm going to look at the period of the Roman Empire in western Europe. I will explore the Roman invasion of Britain and the growing contact with the Celtic tribes in Britain. And I will also look at the growing Roman contact with the Germanic tribes in northern and eastern Europe. And I will continue to look at Latin words which have found their way into Modern English. After that, I'm going to turn our attention to the Germanic tribes themselves. I will explore the emergence of the Germanic tribes in northern Europe, the nature of the original Germanic language, and the spread of those Germanic tribes into western Europe. And the story of the Germanic tribes will culminate with the migration of the Anglo-Saxons into Britain in the 5th century AD. And that will bring us to Volume 2 of this podcast series which will be dedicated to Old English.

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