**Mark:** [00:00:00] Welcome to the Endless Knot Podcast,

**Aven:** where the more we know,

**Mark:** the more we want to find out.

**Aven:** Tracing serendipitous connections through our lives

**Mark:** and across disciplines.

**Aven:** Hi, I'm Aven.

**Mark:** And I'm Mark.

**Aven:** And today we're talking about arrows and time and the arrow of time, exactly. And metaphor and a bunch of other stuff, but we'll get to that in a moment. First, we want to say thank you to a couple of Patreon supporters who have joined us since the last time we talked about it.

So thank you very much to Ian H and Chris for your new support. Woo-hoo. And of course, as always, we really appreciate Patreon support. It helps us a lot and makes us feel all warm and happy inside that people are interested in what we do. And you can find us by going to [00:01:00] patreon.com/endlessknot. Probably.

And if you wish to support us, we will be making some changes to Patreon fairly soon when we get to it. And we'll update you on that when that happens. Next, because we're talking about arrows, our cocktails are pretty on the mark as it were this time. But we've chosen two different cocktails because they appealed to us differently.

So Mark, you are drinking a Bow and Arrow cocktail.

**Mark:** Mm-hmm.

Hmm. Oh, this is nice, nice and fruity. A little bit of smokiness

**Aven:** a little bit!

Sorry. This is one of the places Mark and I differ. I tasted a little bit of it when I poured it and it was. Horrible because it was so smokey as far as I was concerned. So what you have is bourbon, mescal, a little pineapple juice, a little lime juice and some sugar syrup.

And the mescal is what's giving it that smoke. [00:02:00] And I'm glad you enjoy it because boy do I not.

**Mark:** I love mescal.

**Aven:** I know, which is good. It's fine. I don't. So I am having a Blue Arrow, which is a much less threatening cocktail though very shiny and blue because it is lime juice, triple sec gin, and blue curacao with a cherry garnish.

Must be

**Mark:** quite sweet with both the triple sec and blue curacao.

**Aven:** Yeah, though it's got a fair amount of lime in it too, right. So I find it balances it pretty well and that it's got more gin, so it's like an ounce of lime, triple sec and blue curacao each and then two of gin. So, okay. It helps. Hmm. So it's, I mean, it's very much like other drinks I've had with blue curacao, citrusy and nice, not a challenging drink, shall we say.

Great. But a pleasant one that I like just fine. So, Mark, why are we drinking arrow themed cocktails and what are we going to be talking about today?[00:03:00]

**Mark:** Well, this podcast is based on a video that I did a number of years ago now. The jumping off point is the word arrow. But that's specifically because we're gonna talk about the arrow of time and which way it points, and this connects to my Original scholarly research, which I've been engaging in this particular research project now for, ooh, quite a few years at least five years.

And have been giving a number of conference papers at academic conferences on this topic specifically which way the arrow of time points in languages and how the, that sort of metaphor of time having a direction because of course time doesn't actually have any physical reality, right?

Mm-hmm. It's a sort of abstract thing but how we use the metaphor of physical [00:04:00] space to talk about time and to think about time. And there have been a number of researchers who've been looking at this concept. It's, it's quite a, a hot topic over the past, maybe decade or so.

but no one had specifically done a diachronic study of this phenomenon. So people had looked at comparing different languages that exist in the world today, but no one had looked at how this phenomenon in language changes over time, over the history of a language, ironically enough.

Yeah. And so that's what I set out to do. Looking at the, the metaphor of time as space. So how time is figured in physical space using metaphors of physical space and. And, you know, all the way from the earliest examples in old English all the way up to modern English. And so in addition to looking at this phenomenon in English I had to also of course look at the languages [00:05:00] that influenced English over the years.

specifically languages like Latin or Old Norse or French. This is ongoing research. I have not finished this project yet. I'm, maybe halfway through or a little more than halfway through. So there's still more to come, but you know, when I did that video originally a few years ago, I was only really at the very beginning of this project.

**Aven:** So maybe before you get too far into explaining, it you do explain it in the video, but you explained it in the video. So let's listen to the video and then you can come back. I will have a few sort of side roads to take us down before we turn to you catching us up on what you've done since that video came out.

Yeah. All right. So let's listen to that.

**Mark:** “Time flies like an arrow”. We all know that’s not literally true, but it’s easily understood by any English speaker. It’s a way of talking about an abstract--time--in terms of something more [00:06:00] concrete--space. Why do we push meetings back, look forward to tomorrow, fall behind schedule, wait a long time, and take a short break?. These ways of understanding the world, known as spatio-temporal metaphors, are introduced to us so early that they seem completely natural and objective truths, but in fact they’re different from culture to culture, and looking at them closely can open up all sorts of fascinating avenues to explore.

The phrase time’s arrow was coined by English astronomer, physicist, and mathematician Sir Arthur Eddington in 1928 to describe the asymmetry of time, always flowing from the past to the future, though the similar phrase arrow of time had already been used in 1917 colloquially to refer to the ever-flowing nature of time. Eddington had noted that at the microscopic level processes could be time-symmetric operating in either direction without breaking any physical laws, but at the macroscopic level things operated in one direction only, toward the future. For Eddington this was the result of entropy and the second law of thermodynamics: [00:07:00] the total entropy of a closed system never decreases over time, or to put it another way a closed system always moves from order to disorder. Why this asymmetry exists, and why it doesn’t on the microscopic level, is still an unsolved question in physics. This arrow of time can be seen in many areas of science, including psychology. We perceive time in only one direction. We know the past, not the future. So the cognitive arrow of time, and the language we use to describe it, points in one direction. However, as we’ll see, that direction is variable. And since we’re using an arrow, something that points a direction in space, as a metaphor to describe which way time points, we should first have a look at the word arrow, and the arrow as a physical object, and see how it became a symbol, and eventually a metaphor used in both thought and language to construct our understanding of time.

The word arrow comes from Old English forms earh and arwe [which may have been influenced in form by Old Norse], which go back to Proto-Germanic \*arkhwo and Proto-Indo-European \*arku-. The curious thing about [00:08:00] the root \*arku- is that it seems to have meant bow and/or arrow. In the Germanic languages, like English, it produced words with the sense “arrow”, but in Latin it produced arcus meaning “bow”, which came down through French and into English giving us archer and archery, but also arc and arch because of the bow-like shape these words describe. The word bow, on the other hand, comes from the Proto-Indo-European root \*bheug- “to bend” because of its curved shape. The Latin word for arrow is sagitta, of unknown origin, possibly from a pre-Latin Mediterranean language, from which we get the word Sagittarius, the zodiac constellation representing a centaur with a bow and arrow. But we’ll come back to this word and astrology and other forms of predicting the future.

The bow and arrow is a very ancient technology. The earliest archaeological evidence of the arrow, which may or may not have been shot from a bow, was found in the Sibudu cave, located in what is now South Africa, in which were also found a number of other technological firsts, such as the earliest bed, the earliest needle, and the earliest compound glue. This arrow dates to about [00:09:00] 64,000 years ago, but the earliest conclusive evidence of an arrow meant to be shot from a bow, shown by the groove in its base, dates to about 10,000 years ago. The technology spread worldwide--except perhaps Australia--and was widely used for both hunting and warfare. In terms of archery in warfare in the western tradition, it can be found in Greek mythology--Herakles and Odysseus are both associated with the bow, and it appears in Homeric battles, but by the later classical period, when formation fighting was predominant, archery in warfare fell out of use in many Greek cities, and was even associated with foreignness; for instance the Persians used archers. Initially archery wasn’t really a part of Roman warfare either, but later in the history of the Empire, the Romans gradually used auxiliary archers drawn from parts of the empire that did have a history of archery in warfare. And it could be said that one of the factors of the collapse of the western empire was the threat posed by the devastatingly effective mounted archers of the Huns. During the European middle ages archers became important on the battlefield but there was a class distinction: the nobility were knights, [00:10:00] heavily armoured mounted cavalry, because maintaining the equipment for this, including the horse, was very expensive, and all the famous stories of chivalry involved the noble class of the knights, whereas the archers were of the lower classes; Robin Hood and his gang were outlaws so their weapon was appropriately the bow and arrow. But eventually the archers won the day, being the decisive factors in battles between the English and the French such as the Battle of Crécy and the Battle of Agincourt, made famous in Shakespeare’s Henry V, with the English longbow marking the beginning of the end of the age of chivalry.

Of course archery too became obsolete as firearms were developed, and this is only the briefest of historical accounts of the bow and arrow, which could also have included for instance archery in Asia or the Americas or anywhere else in the world. And there are places named arrow, companies named arrow, and vehicles named arrow, such as the ship Arrow which was detained in 1856 sparking the Arrow War between Britain and China, better known as the Second Opium War, and the Avro Arrow fighter jet prototype which was designed by a [00:11:00] Canadian company in the 1950’s but ordered destroyed by the Canadian government in favour of US-designed fighters amid much controversy and even conspiracy theories. But we’re going to leave these aside and take aim at the arrow as symbol, specifically a typographical symbol.

As a symbol the arrow shape mimicked the shape of a real arrow, a shaft with a triangular arrowhead at one end and the fletching, the feathery stabilizing fins, at the other, but gradually over time the shape became abstracted and streamlined. There were of course precursors to the arrow symbol that served the same role of pointing to something, such as picture of a footprint next to a woman’s face carved into the pavement in the ancient Greek city of Ephesus in the first century CE: follow the direction of the footprint and you’ll find the local brothel. Moving on from feet, if fingers are more your thing, medieval manuscripts are the place to look. The image of a pointing finger, called a manicule from Latin manus “hand”, was frequently used in manuscripts to mark or divide sections in the text, a practise that dates back to the 12th century. Similarly the Portuguese cartographer Pedro [00:12:00] Reinel seems to have established the use of the fleur-de-lis on the compass rose pointing the cardinal directions, north, south, east, west.

But the arrow as a typographical symbol really only dates back to the 18th century. For instance in 1737, the French engineer and pioneer of hydraulics Bernard Forest de Bélidor published a treatise called Hydraulic Architecture which included technical diagrams with arrows to indicate the flow of water in the machines. Interestingly, one of Bélidor’s other claims to fame was that he worked for a while on calculating the arc, that is the curvature, of the earth, and the word arc as we’ve seen is related to arrow. Similarly the German illustrator and engraver Friedrich Bernhard Werner began to use arrows to indicate the direction of the flow of rivers in his maps and illustrations.

And over time as the arrow symbol became more abstracted it could be put to more and more uses. In the 19th century English cartographer Emil Reich used triangular arrowheads along curved lines to show the movement of troops on maps of battles that accompanied John Richard Green’s A Short History of the English [00:13:00] People. And in the 20th century arrows began to be used in logic and mathematical notation, such as German mathematician David Hilbert’s 1922 introduction of the arrow to indicate logical implication, and a decade later Albrecht Becker’s use of the double-headed arrow to indicate logical equivalence. And in 1976 mathematician Donald Knuth introduced up-arrow notation for indicating very large numbers. And in linguistics, angle brackets or the greater-than and less-than symbols can be used as arrows to indicate etymological relationships indicating that a word or sound developed into another over time.

And of course in this very video I’ve used the famed red arrow in the thumbnail, which popular You Tube belief has it will increase the views of the video--we’ll see if it works. So ultimately the arrow can be used as a symbol to indicate or point to something, to show direction, or to represent some other type of relationship that at least metaphorically has some sense of directionality to it. So let’s pause for a moment and consider the words symbol and metaphor.

Symbol comes, through Latin, from Greek symbolon [00:14:00] “sign or token”. The word originally came to English with a religious context meaning “creed or religious belief” as the Creed was a “mark” distinguishing Christians from pagans, only gaining its modern senses of something that stands for something else in the late 16th century and of a written character in the beginning of the 17th. The Greek word is made up of two elements, syn “together” and bole “a throwing”, from the verb ballein “to throw”. So a symbol is literally “a throwing of things together”, which thus came to mean a “comparison” and therefore a “sign of whether something is genuine” or “outward sign”. This idea of comparison is even more evident in the related word parable, which comes from Greek parabole “juxtaposition or comparison”, literally a “throwing beside”. And fittingly for our purposes, Greek ballein is related to the Greek word belos, which means “arrow”. And from Greek belos we get the English word belomancy, which is a form of divination or fortunetelling using arrows. This was a common practise in a number of ancient civilizations including the Greeks, the Babylonians, the Arabs and the [00:15:00] Scythians, and could be performed in a number of ways, such as tying possible answers to a given question to arrows and seeing which one flew the farthest. And this of course brings us back to fortunetelling again and that astrological symbol Sagittarius, so let’s take a quick look at the word fortune as all our arrows converge on the target. Fortune comes from Latin fortuna meaning “chance, fate, good luck”, which was also personified as Fortuna the goddess of fate with her Wheel of Fortune. The word fortuna is derived from another Latin word, fors meaning “chance or luck”, which seems to come from the Proto-Indo-European root \*bher- “to carry”, a root which also gives us the English verb to bear and the Latin verb ferre “to carry”. So how then did a root meaning “to carry” produce a word meaning “chance or fate”? Well if this etymology is correct it would be from the notion of “that which is brought”, so then fortune would literally mean “what fate brings”. And interestingly, that same Proto-Indo-European root also came into Greek as pherein “to carry or bear” which when combined with meta meaning “over or [00:16:00] across”, leads to the verb metapherein “to transfer or carry over”, especially in the rhetorical sense of transferring a word to a new sense, and the noun metaphora “transference”. So in a sense, the word metaphor is a metaphor, from physically carrying something across to metaphorically carrying over a meaning. And a metaphor is another type of comparison like a symbol. So finally let’s now return to the spatio-temporal metaphors I mentioned in the beginning, and see how languages talk about time by comparing it to space.

Because the important thing to realise here is that metaphor is not just a literary technique, but is in fact a way of thinking. This was an idea most famously pioneered by George Lakoff and Mark Johnson in their 1980 book Metaphors We Live By. We use metaphor to map understanding from one more concrete domain of experience onto another more abstract domain. It’s how we get around the problem of thinking about, and speaking about, abstractions. For instance we borrow from the concrete experience of space to think and speak about time. What’s particularly interesting about this is that different cultures and [00:17:00] languages use different spatial metaphors to think and talk about time, a fact that in recent years has been explored by cognitive scientists and linguists, such as Lera Boroditsky. And as it turns out, that arrow of time can be pointed in a number of different directions.

For instance, if you were given a set of pictures that showed different temporal states, like say a whole apple, an apple with a bite out of it, a half-eaten apple, and an apple core, and were told to put them in order, if you’re an English speaker you’ll probably line them up in front of you from left to right. But if you’re an Arabic speaker you’ll probably lay them out right to left, so in this case it seems that writing direction influences the direction of that arrow of time, and this seems to hold true for many other languages as well. These metaphors may even begin before literacy, given that even pre-literate children are aware that the story in a picture book progresses from left to right as they are read to. But they don’t necessarily map onto other types of temporal thinking, or the language we use to describe them—for instance, we would never say that Friday is to the left of Saturday. Instead, in that sort of situation, in English we use a front-back metaphor when speaking of [00:18:00] time: the past lies behind us and the future lies ahead, we think back on our past and look forward to the future: Friday is before Saturday.

But the arrow can also point vertically, as Boroditsky found. In Mandarin, the past can be viewed as up and the future as down. So for instance the “up month” is “last month” and the “down month” is “next month”. And when given the same task of ordering pictures, Mandarin speakers were much more likely to arrange them in a vertical column in front of them.

Now all of these left-right, front-back, and up-down arrangements are relative to the body of the person using the metaphor. So in English when we talk about the future being ahead of us and the past behind, we’re using the sagittal plane, from that Latin word sagitta meaning “arrow”. But there are in fact other ways of arranging that arrow without reference to the body, as Lera Boroditsky and Alice Gaby discovered. In the languages of Pormpuraaw Australia, such as Kuuk Thaayorre, body-relative spatial words aren’t used but instead the cardinal directions, north, south, east, west. You wouldn’t, for instance refer to your right leg but to your north leg. People who speak these languages have to [00:19:00] always remain oriented in absolute space in order to use their language. And what’s more, this carries over into their temporal reasoning as well. When given that same task with the pictures, they would always arrange them east to west, mirroring the course of the sun in the sky, so a row running left to right if they were facing north, or a column top to bottom if facing east. And there seem to be a variety of other shapes and spatial arrangements for time as well, such as concentric, near and far, up and down hill, and so forth.

Now in English as we’ve seen, we're accustomed to talking about time in the sagittal axis, back to front relative to our bodies, with the future in front of us and the past behind. But this also isn’t the only direction that arrow can point. There are some languages that locate the past in front and the future behind, due to the fact that we know what has already happened, but can't "see" the future. This has long been suggested of Ancient Greek, with the word opiso meaning “backward” in reference to space but “in the future” in reference to time. A similar claim has been made of the Madagascar language Malagasy, according to Øyvind Dahl, and other languages as well. While there has [00:20:00] been some criticism of these claims, Núñez and Sweetser very convincingly demonstrated that this is the case in the South American language Aymara. The nice thing about their research is that they draw not only on linguistic evidence of this metaphor, but gestural evidence as well.

And there is one last issue relating to our spatio-temporal arrangements: how movement is used to think about the passage of time. One can think either of time moving, as if you are watching a river flow towards you, as in "the holidays are approaching", or ego-moving, as if you yourself are moving along a path, as in "we're rapidly coming to the end of the year". In English, both of these metaphors are available, though this isn't necessarily true in all languages. And it turns out, you draw on spatial reasoning actively, so that if you are already predisposed to thinking of yourself moving in space, by say going on a journey, you are more likely to think of yourself moving through time. This sort of thing can affect how we interpret ambiguous phrases such as the sentence "let's move Wednesday's meeting back two days". Does this mean the meeting is now on Monday or Friday? It depends on whether you are thinking from a time-moving perspective or an [00:21:00] ego-moving perspective.

And as a final treat, I’ll give you a very brief sampling of my own ongoing research on spatio-temporal metaphor in Old English. The full story is much more complex than this, but for now I’ll just focus on a few words meaning past, present, and future, specifically forðgewiten, andweard, and toweard. Let’s start with the word toweard which in terms of physical space can mean “facing, approaching” or “towards, forwards” but when referring to time means “future”, so the toweard tid is future time, or in grammatical terms the “future tense” [though as we know, English doesn’t really have one of those!]. The word is made up of the elements to which means more or less what to does today, and weard which means something like “turned toward” coming ultimately from the Proto-Indo-European root \*wert- “to turn”. We still have that element in modern English words like northward, and of course the word toward itself. The word andweard means “physically present” or “opposite, facing” and in reference to time means “the present”. Literally it breaks down in to the elements and or ond [00:22:00] meaning “against, opposite” and that same weard meaning “turned”. And finally forðgewiten is the past participle of the verb forðgewitan “to go forward or depart”, with gewitan on its own meaning “depart”. That prefix forð means basically what you would expect from Modern English, “forth” or “forward”, so the directionality of forðgewiten is perhaps the opposite of what we might have expected for a word referring to the past. Forð on its own can be used in temporal senses as well, referring in those cases to a future time, much like we would say henceforth in Modern English, or in compounds, such as forðweard literally “forth-turned” used to mean “onward in time, henceforth, or in the future” and forðgesceaft literally “forth-creation” used to mean “future state or condition”. Putting it all to together then, the future, toweard, is approaching or turned toward time, the present, andweard, is physically present or turned against time, and the past, forðgewiten, is the departing time. And what this suggests is that the metaphor being used, in these words at least, is one of arriving, [00:23:00] being present, and departing. There are of course a number of other spatial words used metaphorically to refer to time in Old English, but this gives an idea of what is going on with some of the main ones. What’s important to note here is that the basic words used to refer to the three times in Old English are different from those in Modern English which are borrowed from French, ultimately from Latin, and are thus not native Germanic words. So this raises some questions: do spatio-temporal metaphors change over time as language changes, and if so how and why?

Well, I don’t know the answers to those questions yet, but as time goes by along that forward-pointing arrow, I hope to learn more — and I’ll report back!

**Aven:** Okay. So before we get to what you've talked about at the end there, your actual research Yeah. And carrying on with what you've found since. I just wanted to say something more about arrows. Okay. Because which is really only a minor part, but you know, it's called arrows.

So Well, and I do go, you know,

**Mark:** into [00:24:00] talking about arrows. Yeah. All kinds of other things about arrows

**Aven:** because there's just one little fact about a word for arrows that I find kind of interesting. You talked about the word for arrows in Greek. But there's another word that can mean arrows in Greek that comes in fact from the word for bow.

So as you do talk about in the video, bows and arrows are obviously inextricably linked, and it's often

**Mark:** the same word for

**Aven:** bow. Yeah. And they're connected. So in, this happens in Greek as well, so there's a word for bo in Greek that is toxin. Mm-hmm. And the plural toxa is extended often to mean archery equipment, things to do with archery and therefore arrows.

Okay. That's not particularly surprising. So toxikos then means connected to bozen bows and arrows. Okay. So it's an adjective and that word makes it into Latin as toxic, but by the time it makes it to Latin, it means poison. Mm-hmm. And of course gives us therefore English toxic. [00:25:00] Right. So the word toxic by etymology means a bow.

And the reason is that it comes from the association of arrows with poison arrows with the idea that arrows are often smeared with poison and therefore arrows carry poison. But by the time it's in Latin, that's all it means cuz Latin has another word for arrows. Sagitta, which you talk about is important in your video.

So I just thought that's, it's just a neat little etymology. It's one of these things where toxic means Bow is not immediately obvious why that would come to mean that,

**Mark:** do we know where Toxikos comes from, what the source of

**Aven:** that word is? I don't, I'm not an etymologist. It didn't occur to me to look that one up.

So why don't you tell us where it comes from? Why don't you look that up?

**Mark:** Well there, so one of the suggestions is that it probably comes from a Scythian word. Ooh. That was [00:26:00] also borrowed into Latin as taxus, Yew.

Right, okay. Which I guess is a good bow. A tree, yeah.

**Aven:** Wood. Yeah. Yew. Y E W

**Mark:** I'm not sure. Y e w. So that tree, that wood, I think is, is often used in bow making, isn't it? Because it's a very

**Aven:** pliable, that's the famous the long bows in England were famously made from yew. Right.

**Mark:** Now the etymologist Calvert Watkins who I, I generally quite trust suggests a possible source in an Iranian word.

taxa Or Taksha meaning bow from a Proto-Indo-European root which means to run or flee.

**Aven:** So, okay, so it's all about the Parthian shot then, or maybe, maybe not. Maybe it's like from a hunting word or something like that. But that's interesting the idea that it would come from Iranian or Scythian. Certainly those are cultures very strongly associated with [00:27:00] archery, right?

Both in real world both in real life and in the Greek mind. Mm-hmm. You talk in the video a little bit about how bows and arrows are associated with the oldest forms of heroes in myth and are not a really, so they sort of move away from that as a form of actual warfare in the historical Greek and Roman periods, but they always associated people of the steppes and of Asia minor with bow and arrows.

**Mark:** However, the etymological dictionary of Greek by beaks points out that there are Mycenean attestations of the word, which would therefore Contradict the idea of an Iranian or Scythian loan, right. Because they're rather earlier. and beyond that, basically he says could be of pre-Greek origin, which is, you know, who knows?

**Aven:** It's, it's, it's the Etruscan of Greek etymology. Yeah, yeah.

**Mark:** [00:28:00] Pre-Greek, whatever pre-Greek is. Yeah. So, yeah, so basically we don't

**Aven:** know. We don't know. That's interesting though, that it, there are potential sources in these other cultures. Mm-hmm. Okay. So just to go back to why poison might be associated with arrows.

I mean, cultures that use arrows often put poison on them, so that's not really a big stretch. But in particular, there's a one mythological connection that really would strengthen that, which is Herakles, who famously had poisoned arrows, specifically, he dipped his arrows in the hydra's blood and carried poisoned arrows ever after.

Now, somehow he managed to never use all of the, he must have dipped a lot of arrows. Anyway, myth doesn't make sense. That's important to remember, but that hydra's blood was so poisonous that there are multiple stories of him using those arrows later and causing death. two of them both associated with Centaurs.

One that he ended [00:29:00] up having to fight off some hostile centaurs from his friend Centaur's Cave, and he fought them off with the arrows and at the end, his friend, the one who had been his host, Was wandering over the battlefield and picked up an arrow marveling at how it had managed to kill one of these attackers so easily and dropped the arrow and it grazed his hoof and killed him because that's how toxic the Hydra's blood was.

And then the other is the story of Deianira who was carried across a stream by a centaur who then attempted to assault her and Herakles from the other side of the stream shot him dead with one of these poisoned arrows. And as the centaur lay dying, he told Deianira to dip a shirt in his, some cloth in his blood and that it would be a powerful love charm and if she was ever worried that Herakles wasn't in love with her she could ask him to wear this and it would put him in love with her again.

But actually because the hydra's poison [00:30:00] was so venomous, just the amount of poison that was in his blood as he laid dying in that shirt was enough that that is the thing that killed Herakles in the end.Deianira got him to wear it.

**Mark:** Strength. Sorry. Even with all his strength.

**Aven:** Yeah. Yeah. So really it's sort of basically it's homeopathy that the more diluted, the stronger apparently.

But anyway, he puts it on and it burns him. And the pain is so great that he asks to die. He can't die because he's so strong. So he builds a pyre and throws himself on top of the pyre to kill himself, or Zeus strikes him with the lightning bolt or both, and he goes up to heaven, euthanasia as a God. Sorry, euthanasia.

It's all, it's all quite grim. You know, the, the ending of Herakles's life is, is very grim. But all to say that this trope of the poisoned arrow, poison, therefore is very very strong.

**Mark:** Those Centaurs, I mean, you [00:31:00] know, Centaurs gonna cent, but

**Aven:** yeah, that's a whole, we could talk about Centaurs, there's a whole thing about Cent urs and their opposition to heroes in particular, but. The other thing is Cupid's arrows are not themselves poisoned usually, or not said to be poisoned necessarily.

But there's this whole metaphor, imagery of love as a poison that creeps through the veins that goes under the, under the skin and into the marrow of the bones. And so when Cupid shoots you with an arrow, the imagery is of poison seeping into your body.

**Mark:** I've got you under my skin.

**Aven:** Yeah. And so, and boy hurts.

Yeah. And it's, it's killing me. That's, that's basically love poetry. So again, it's, not technically poison but the, the imagery is there. So this idea that arrows introduce something into the bloodstream is very [00:32:00] prevalent in myth.

And of course, Bows and Arrows, you mentioned in, in the video, that they are associated sort of with an older form and not with actual, hoplite warfare, but there are other famous bows and arrows, Odysseus, of course, with his famous bow that he, he only he can string and then he shoots the arrow through the axed Apollo and Artemis, who are the famous archers and whose arrows kill, I mean, obviously arrows kill, they don't need to be poisoned.

But Apollo in particular, his arrows caused plague too in the Iliad famously at the beginning of the Iliad, when he's mad because his priest has been dishonored, he sends his arrows and they cause plague. So, you know, there's this association of, of miasma and, death with arrows that goes beyond their ability to, you know, puncture a vital organ and kill you.

And then I wanted to end with one bit of Latin poetry, because I'm me. You talk about telling fortunes with arrows. Hmm. And so, belomancy. Yeah, yeah. And I'm, I'm not gonna [00:33:00] talk about that directly, but there is a famous omen involving arrows in the Aeneid, well, famous, famous to those of us who read the Aenid a lot.

It's not maybe the most famous part of the Aeneid, let's put it that

**Mark:** way. It's an, it's an exclusive club, but within that club,

**Aven:** it's very famous. In book five, which is where they have the funeral games for Anchises, for Aeneas's father, there's an archery contest. And so Aeneas ties a dove to a string at the top of a pole, and then people have to shoot at the dove.

**Mark:** No actual animals were hurt in the making of this poem.

**Aven:** Well, there's definitely a dove is killed, but I mean, it presumably wasn't an actual animal. It's just a poem. So I'll give you that. The animal rights people will be

**Mark:** after us don't tell

**Aven:** them. And he says like, whoever can hit the dove gets the, the prize, but the first person to shoot just hits the pole, the second person to shoot.

I mean, that's

**Mark:** pretty good. I know I couldn't hit a

**Aven:** pole at, at quite a distance. Well, the second person fails, but in a fairly spectacular way. He [00:34:00] shoots the, the rope that is holding the dove to the, which surely is a much harder shot than the dove. I'm reading by the way, from the Shadi Bartsch new translation of the Aeneid, which is fairly recently come out and I commend it to you all. "Mnestheus stood and drew his bow. He pointed high, aiming both eye and arrow at the mark. He didn't manage to impale the bird. Bad luck. But he broke the knotted rope around her foot that tied her to the mast.

The dove, released, flew southward to dark clouds", and then the next guy then quickly shoots the dove as he escapes before, before the dove gets to those dark clouds. Yeah, exactly. "She fell lifeless leaving her soul in the stars, returning the lodged arrow." And then there's one last guy who was supposed to shoot.

"Acestes was still there, but the prize was gone. He shot his arrow to the heavens anyhow, to show his veteran skill and ringing bow, and then a sudden miracle took place. Important in the future as its fulfillment showed, when stern prophets at last knew its meaning. Soaring through the empty [00:35:00] sky, the arrow blazed a flaming path, then vanished in the breeze, like a shooting star falling from the heavens that draws its shining trail across the sky.

The Trojans and Sicilians were amazed and called upon the gods. Good Aeneas did not reject the omen. He hugged happy Acestes heaping him with lavish gifts and said, take these Father, the great King of Olympus shows by such signs you'll win honors like no other." And then he goes on to give him a prize and then he gives everybody else a prize too, because they all did well.

The guy whose arrow was in the mast gets the least, but they all win

**Mark:** prizes. See, I think the last guy should have shot the dove as it fell to the ground. Yeah, that would've

**Aven:** been impressive. Splitting the arrow that was already in it. Yeah, that Robinhood shot. So just to point out, you know, it's just one of these things shooting an arrow and it catches on fire and disappears.

The interesting thing about that is it says you know, important as it turned out later when prophets were able to, to, well, it's never mentioned again in the poem, and nobody's actually Sure what it's a reference to.

**Mark:** Well, I mean, if you knew about [00:36:00] belomancy, it'd be

**Aven:** obvious, right? Well, I think it's, it's unclear.

he says, you know, to the guy, Acestes, oh, you'll always be strong. And he is, he goes on to be an important to, well, to have some important role in the Aeneid, but it's quite possible, it's a reference to some family legend. Mm-hmm. Or something in one particular clan. I mean, there's lots of that in the inea and that maybe everybody at the time knew what this was a reference to some later thing in the Republican period, some legend about arrows or about this family or something.

But, He doesn't, Virgil never tells us. We don't actually know, and it never comes up again. Like other, there are other omens that happen and then later on they're called. Mm-hmm. There's a callback to them. There's no callback to this one. So I don't actually know what it's an omen of, but I just thought it's an arrow omen and it does show that sort of the link of, you know, arrows and telling the future, which is really all, all I really wanted to do.

And also gave me an opportunity to read some Latin poetry. So I will always [00:37:00] do that. And that's all, that's all I wanted to talk about with arrows. So now we can turn to talking about them more metaphorically. Indeed.

**Mark:** Now, let me preface this by saying this. This could be a little dense and hard to follow.

I find it hard to follow without seeing. A visual representation at, you know, kind of similar to the, the things that I showed in the original video. I find it easy to sort of, get back to front, so to speak, which is a problem when talking about this. but I'm gonna do my best to, verbally describe how time is mapped out onto space.

**Aven:** There'll be a lot of gestures yes, which will be very unhelpful. Listen

**Mark:** carefully to the sound of my hand gesturing.

**Aven:** I will try to interpret if there are particular elements I think that the audience should know.

**Mark:** Let me say, when I do this research, one of the first things I do [00:38:00] well, the very first thing I do is I just collect up a whole bunch of data, a whole bunch of words and what they mean and so forth.

But very soon after that I start diagramming. Mm-hmm. so, if you get confused, don't feel bad cuz I get confused

**Aven:** and with that auspicious warning.

**Mark:** So from my previous research, there seem to be two main sets of oppositions we see in which time is figured in space In old English. I sort of talked about one in that original piece. But basically it boils down to two different schemata that time can be arranged in space.

So first, there is the before or in front to indicate the past time and after or behind to indicate future time. So you get words like beforan, from which we get modern English before, for and fore which, you know, f o r and f o r e. And they're basically the same in old English and modern, forward In old English it's foreweard but[00:39:00] it's basically the same word and toforan.

So it's like before and to for, right? Not, not two, four as in a two, four of beer. But It's that same second element with, with the word to as the first part of the word. And all

**Aven:** of those words are referring to,

**Mark:** they all mean before or in front in some sense, physically. Right.

And so therefore they represent before and front in time, which means past time. Okay. And then on the other hand, you get old English words like æfter and æftan and bæftan , which is sort of be æftan. So these are all just sort of different forms of after, basically, they all mean after or behind physically.

And thus future time temporarily.

**Aven:** Right. And this is backwards to the way we. Modernly think of a time in English where we think of future as in front and past behind. So here we're seeing a reversal of that.

**Mark:** Yeah. Though, if you [00:40:00] think about it, I mean, we still use the word after to describe something more in the future.

If it happens afterwards, it happens more in the future.

**Aven:** Yes. Though if you ask someone to talk about how they conceptualize time, they don't do that. Mm-hmm. But we are still using those words. Okay.

**Mark:** Now the other schema for time in old English, this is the one that I kind of indicated in, in that original video.

This is the sort of departing, arriving one. Mm. So departing can indicate the past. Arriving can indicate the future. Right. So we see old English words like forþgewitan, which means literally to leave forth. Okay. Like going forth. Yeah. And that refers to the past. Okay. Or you have words like toweard and cuman to come.

Used to refer to the future, and again, we can still do this in modern English, like we can use the word to come, the years

**Aven:** to come. The years to come. Those are the ones that are yet to come.

**Mark:** And in [00:41:00] particular the word forþ in old English at least. And you know how long this persists is kind of the question I'm sort of asking here, but in old English, the word forth indicating direction forward can be used in expressions indicating both past and future, both on its own, just as the word, as the word fourth and in various compounds such as forþgewitan, which I mentioned for the past, and words like forþgesceaft, forþweard, and heonanforþ for the future.

So forþgesceaft is sort of forth- created thing. Okay. And forth-ward. Okay. Forþweard is fouth-ward and heonanforþ is henceforth. Right. And we can still use henceforth in that, in that sense. Right, right. As for the present. So that's, that's the sort of the past and the future. As for the present the usual spatial notion here is presence.

I mean, you know, being here in other words, so with words such as æt or her. Okay. Not really surprising. Not really surprising. And also there's a, [00:42:00] a word herwið, here-with literally and in particular also words meaning against or opposite. Mm-hmm. So not only at and with which both have that kind of, that sense of being against or opposite facing sort of.

Yeah. Yeah. And you know, if you think about the word with. we think of it meaning, well we think of it meaning with Right. But the old Germanic word that has that sense more directly is in, in old English, it's mid. Mm-hmm. It's like Germanic, mit. Mm-hmm. Right. Meaning with with had this kind of oppositional sense more prominent in like you can fight with

**Aven:** someone.

Yes.

**Mark:** So we can still do that. It's still there in modern English. It's not the, maybe the, the primary meaning the primary meaning anymore, but we can still say to fight with someone. Meaning to fight against someone. Yeah. And

**Aven:** it's in fact a source of ambiguity. Cuz I can say I'm fighting with him. Yeah. And it's in fighting on the same side.

Same side. Or fighting against him. Or fighting against, yeah. Yeah.

**Mark:** But also there are various compound [00:43:00] words like andweard, literally meaning, present to be in a place. Mm-hmm. So you can use it in that, that physical idea of presence. But it can also be used in terms of time also words like ongean which means against or opposite.

Mm-hmm. And that can be used in expressions implying the future. Right. Okay. So overall there are two main systems of spatiotemporal metaphor available in old English. There is, the past is in front or before and the future is behind or after. So that's one system. And the other system is the past is departing forward and the future is arriving forward.

Okay. So those are two main, I mean, there's, you know, other little details and Right. But those are the main, those are the two main systems. Okay. So the next set of things that I looked at was Germanic time both from the standpoint of looking at the, language family that old English comes from.

Mm-hmm. So looking at what the comparative language, you know, the, the most closely related languages to old English. Do they do it [00:44:00] the same? Do they do it differently? But also from the, the standpoint of old Norse in particular, having direct influence on old English because of the Viking invasions and settlement in England.

Mm-hmm. And this was particularly important because of one specific book. In his 1982 book, "The Well and the Tree: World and Time in Germanic Culture". Paul C Bauschatz argued for a particular past oriented worldview in early medieval Germanic culture based largely on Scandinavian mythology.

In particular the Eddic myth of the World Tree, Yggdrasil, and the three wells that lie underneath it with time flowing into the past, into the well and with the ego facing towards the past with the unknowable future, thus lying behind, right? So this is very different from our modern conception where we're looking to the future.

Mm-hmm. Right. We've, in terms of our body relative [00:45:00] position, we generally put the future mm-hmm. In front of us.

**Aven:** but it matches what you were talking about in the first section about the, the old English, the old English mm-hmm. Vocabulary. The, the prepositions. Yeah. Yeah.

**Mark:** And the thing is that Bauschatz is basing this argument mainly on literary and cultural evidence, and to some degree some archeological evidence as well, I think but not primarily linguistic evidence.

Right. And when he does bring any kind of linguistic element into the argument, he's considering verb tenses. Right.

**Aven:** Which you've talked about lots in your. Dissertation on things with the future. So if you wanna hear about more about that, go listen to our episode on the future.

**Mark:** So he doesn't take into consideration all these prepositions and adverbs and so forth. Okay. And so he is missing out on a whole really crucial part of this argument, especially when you think in terms of directionality. Right? So what I found then looking at[00:46:00] in particular, I did a full search through old Norris findng all of these constructions and prepositions in adverbs and things spatial adverbs and, and prepositions that could also be used to talk about time when I found that in combining it with the old English evidence that I already had, as well as relevant parallels from other Germanic languages. So I looked a little bit at Gothic and Old High German as well.

Mm-hmm. And, trying to, construct some kind of coherent picture of Germanic time at least as far as that evidence was able to go. Yeah.

**Aven:** Cuz it's a bit piecemeal Yeah. As evidence. Yeah.

**Mark:** So, as I said, the usual terms for past, present, and future in old English show an arriving and departing arrangement with the element forþ indicating a time moving perspective mm-hmm in a forward direction. And in Old Norse I found a similar overlap with the word fram, meaning forward or in front on its own, generally indicating past [00:47:00] time, but in a number of compounds indicating the future. Hmm. So fram it looks and sounds like it's related to modern English from mm-hmm, and it is. Mm-hmm. But the thing to keep in mind is that both the words for and from they, I mean, they all come from the same Indo-European, root, it all comes from \*per-. Of course. Yeah. From which we get Latin per. Right. And so I think the key is to not get too hooked on, what it looks like in, in modern English.

Mm-hmm. And instead to realize, well, how is it used in old Norse and in old Norse as a spatial, as a purely spatial word. It, it's used to mean forward and or in front. So that's the overlap. Okay. That's, that's going on there. Now, interestingly, the old Norse Word önd-verðr which means in the earlier or in the former part of a period that stands out from its Germanic cognates in old English Gothic and old High German, which instead indicate the present.

Okay.

**Aven:** so it There are, but in Norse it [00:48:00] indicates,

**Mark:** in Norse it indicates the past. Okay. In the earlier time in a former period or something. Okay. So, there are little messy bits here. It doesn't completely line up. Right, right. different languages have just kind of gone different ways.

Now the association of before or front with the past is pretty relatively consistent across the various Germanic languages that I looked at including modern Icelandic. So in modern Icelandic fortíð, as well as, gothic faúra meaning before they all do sort of seem to line up with that before in front the past.

Okay. Old English toweard, as we saw, means the future, and that lines up pretty well with German zuo-wart. Which, it's basically, element for element the same word. The same word, right? Mm-hmm. Zuo two and wart is the ward. Though the gothic word for future stands out a little bit.

Instead of having that two element at the beginning, it's ana-waírþs. So [00:49:00] slightly different, construction compound. Yeah. Slightly different compound. The old high German prefix ir- which is cognate with gothic us meaning out. Okay. And the old English privative prefix or- indicating origin suggest a going out.

Mm-hmm. And while the use of old high German innana inside and therefore present is perhaps in keeping with old Norse e, which means í, in, old high German gagan-wart means present is sort of out of step with the old English cognate against but with the temporal sense towards though the sense against at least matches old English gothic and old high German.

So in the final analysis there is some evidence for a Germanic sense of time with a back towards the future in keeping with what Bauschatz was kind of saying. But the evidence suggests a reality more complex than a single overarching metaphor. And that's the [00:50:00] main problem that I had with Bauschatz's thing is that he, you know, he's basing it on this one kind of literary metaphor.

Mythological metaphor. Yeah. And

**Aven:** trying to make everything else match

**Mark:** that. And if anything, it would maybe kind of work the other way, or at least that they kind of grew up together.

**Aven:** The mythology develops out of the language at least as much as the language will develop from mythology. Yeah. I find

**Mark:** it hard to believe that one metaphor, And a really detailed worked out metaphor, like, you know, the arrangement of the cosmos mm-hmm.

With the, the ash tree. Mm-hmm. Could be responsible for their entire way of looking at

**Aven:** time. Right. More likely that that metaphor comes out of their way of looking at time. But either way, perhaps they are linked. Yeah. Yeah. So I

**Mark:** have this nice little chart here, which, you know, you can't look at through through your earphones unfortunately, but it lines up all these different languages, old English, old Norse, modern Icelandic Gothic, and old Hy German with the sort of main words for [00:51:00] past, present, and future.

Right. You know, in these various different languages. And maybe we can stick it in the show notes or something so that it'll all look a little clearer.

**Aven:** Possibly. Yeah. We'll see how easy that is.

**Mark:** I think I have it as, a slide on a PowerPoint so we can just, you know, grab the image and. plunk it in there or something.

So having considered the Germanic side of things, then I wanted to see how the various languages the various non-German languages that came into contact with old English might have affected, the development, developed, develop, thought developed. Yeah. so the first one I looked at is Latin, because Latin comes into contact with old English before it starts transitioning to middle English.

Mm-hmm. So that's the earliest sort of external factor. Mm-hmm. And, and of course the thing to keep in mind is that, Latin is coming along with all of the cultural assumptions of Christianity.

**Aven:** Right. And so there again, refer back to your video on future Yeah. For elements of how they conceptualize [00:52:00] time in a cosmological and religious way.

**Mark:** And in that episode I, I look at Boethius and St. Augustine, St. Augustine's Confessions, and He talks a lot about time. And so you, you can get all of that, that Christian influence there. But in terms of the, the specific linguistic evidence, what I did is and this was, I based this not on later medieval Latin, but I wanted to figure out what Latin was doing when Latin was still a living, language.

So the evidence is based on classical Latin. Right. Okay. So if we lay out the sort of temporal schemta available in Latin on a horizontal timeline, stretching between the past and the future, we would see the present indicated by words meaning physical presence or being within something.

Inside something. Okay. Those are kind of the two things that you find there. So words such as praesens mm-hmm. Which obviously present, we get present. Hic, which is [00:53:00] hic, which is basically a demonstrative, it's, it's sort of pointing here. Mm-hmm. Mm-hmm. Means here in that very sort of literal sense or in mm-hmm, inside, inter. Mm-hmm. And also per,

**Aven:** which we would expect given Yeah.

**Mark:** But also we find above and below being used in Latin to refer to present the present time. Okay. So words like super, and sub. So they don't, they're not used oppositionally. They're both used to mean the present. Interesting.

Okay. I suppose that's sort of, if you think about on this day mm-hmm. Or something like that. Mm-hmm. Super kind of has that sense. I don't know why sub necessarily, but it did. Yeah. Yeah. As well as motion towards and limited by the present, so you get these, up till now kind of mm-hmm.

Constructions a lot. Mm-hmm. Yeah. And so that would be sort of up to the middle of that timeline if you're, we're imagining this, this timeline, right. With words such as ad and the compound adhuc, [00:54:00] expressing a fixed point in time, either present to the speaker or present to some other particular point in the narrative that's, you know marker to be established.

Yeah. Right. Yeah. The past would be expressed at one end of this timeline spatially before or in front with words like prae or ante and the future would be indicated at the other end of this timeline, figured spatially as back or behind with words such as post and it's derivatives such as posterior post hoc.

Though curiously retro referring to the past is also figured as behind. Okay, so that's a retro seems to buck the trend. Yeah, a little bit. Yeah. Also in the future, in the future end of that timeline, we see motion away from a fixed point or relative present expressed with such words as ab de ex inde, so time sort of [00:55:00] extending into the future from some fixed point, right. And the various compound words like dehinc, deinde and exinde, though curiously again with abhinc indicating the past as motion away from. Hmm. So again, that one stands out. Yeah. Right. And finally, motion forward can indicate both the past and the future.

And this is the word that I really sort of latched onto as a weird kind of trouble word. Mm-hmm. But more frequently the future. But it can also be used to, show the past. And that word is porro.

**Aven:** Oh yes. Right. Yeah. I remember this. you came and talked to me about it and I was like, ah, I don't have a lot of instinct about that word.

That one's a hard word.

**Mark:** And in my mind it's similar to what's happening in Greek. I haven't done a full study of Greek, obviously. I just have one word in Greek that seems to, be weird. But opiso in Greek. Mm-hmm. Mm-hmm. It seems to indicate that the future is behind us somehow.

So in static [00:56:00] terms then the basic schemata available in Latin include the past is before or in front, and the future is behind or back with the present Here, over or under. Right. Okay. Or in more dynamic terms. The past moves towards the present and the future moves away from the present or more generally forward.

Yeah. Okay.

And so therefore, to summarize the possible relationship between old English and Latin and how there may be some influence here some of the spatiotemporal schemata in Latin and English are actually very similar such as the future in front with Latin words like prae and ante and old English words like fore and beforan and the past behind with Latin Post and English æfter, æftan, and bæftan.

 In both Latin and English, present time is indicated by physical presence. Mm-hmm. As in hic or [00:57:00] in in Latin and æt or her in old English, though the metaphor in Latin can also be before, almost as if before someone's sight as in. In front of Right. Praesens is like before. Yeah.

**Aven:** Cuz price ends, you see, said, standing in front at, you know, in, in your presence.

But prae is before. Is before. Yeah. Yeah. Someone's like in front of your eyes. Mm-hmm. Yeah.

**Mark:** Whereas in old English, the notion can be to be turned against someone or something. as in the word andweard. Mm-hmm. Right. The basic word for present, so right against-ward. Mm-hmm. Latin also uses above and below to indicate the present with super and sub, as I said.

And though Latin and old English regularly employ an absolute notion of time moving from the past towards the future . While old English uses forþ as a forward motion in a sense of arrival and departure, along with other such words as toweard, cuman, forþgesceaft, forþweard, and heonanforð for the future, and forþgewiten for the [00:58:00] past, Latin uses ad to indicate either motion towards the present or to indicate a point in time, sort of at But uses words, meaning from or away for the future as in ab de ex and inde. Mm-hmm. And their various derived forms. While Latin porro might seem to mirror forþ in this respect being used for both past and future.

Mm-hmm. I have found no examples of porro being translated that way in old English. So, so I specifically Yeah. Was looking for where you get a Latin text with old English glosses. Right. Or things that were like a direct directly translation. Yeah. And I found no examples of that.

**Aven:** Right. Did you find examples of porro in Latin translated as something else?

Or just Yeah, no, as other

**Mark:** things. So, but I couldn't find anywhere It was translated with with forþ . Right. Okay. And in any case, I didn't find very many [00:59:00] because porro is only very rarely Well, that's used to indicate the past.

**Aven:** That's why I asked. Mm-hmm. Like, did you just not find it at all or did you find it with other translations?

**Mark:** I found, I found it a lot with future Right. Implications. Right. So that was far more common. So yeah. It's, it's, you know, what survives Yeah. Out of how frequently the word is used in that way. Mm-hmm. Yeah. Who knows? But I didn't find any, so. Okay. Most recently this year. Mm-hmm. I gave a paper I turned to French and I gave a paper.

Specifically I focused on Anglo Norman French. Mm-hmm. Because that's the most direct

**Aven:** impact on

**Mark:** English and, and the first impact on English. I mean, there is influence later on in the middle English period from continental French, Parisian, French, and other dialects. But by then the influences are, are more on vocabulary.

Vocabulary and literature. Right. The really basic stuff I think mainly happened from Anglo Norman. [01:00:00] Mm-hmm. And also it was just a much smaller,

**Aven:** it was more manageable. It

**Mark:** was more manageable, yeah. To, to look at Anglo Norman. It's a smaller corpus of material. And there was a really good recently completed dictionary to work with.

Right. So I started there. So to summarize the available spatiotemporal schemata in Anglo Norman we of course have the basic time words inherited directly from Latin, so preterit, Latin praeterit, preterit, mm-hmm. Though I guess it would be pronounced more like preterit in Anglo Norman. I'm not an Anglo Norman specialist, so my Anglo Norman pronunciation is, I'm guessing that it's somewhere between a Latin pronunciation and a, and a French pronunciation but preterit, present and Futur, futur.

Mm-hmm. So preterit and Futur have no spatial sense in Anglo Norman. They're only temporal words by that point. Okay. So the Latin preterite, praeteritus, could have spatial sense, but it no longer does in, in French.

**Aven:** in the Norman Anglo,

**Mark:** yeah. But as with [01:01:00] its Latin source, present Latin praesens does have a basic spatial sense of here.

Okay. So you can do that in Latin. You can do that in Anglo Norman French. Right. Anglo Norman also has also developed the use of passé, the past participle of passer,

**Aven:** to To pass,

**Mark:** yeah. To go, to go past. And it ultimately comes from Latin, meaning a step. Mm-hmm. Paso. And that is sort of coming to replace preterit in in later French, not only in the sense of past time, but also as the purely grammatical, right.

**Aven:** Which is why we talk about passé composé and passé simple.

**Mark:** We no longer typically use preterit in, in talking about French grammar, right? Modern French grammar. We use passé .

Similarly to present we have words like ici meaning here or at mm-hmm. Referring to present time as well. Does that come from hic? Yeah. That comes from ecce hic. Okay. [01:02:00]

**Aven:** French loves turning phrases into words, doesn't it? Yeah. And, and it's a lot of that. It's crazy little, you know, and dropping, dropping all the, all the syllables.

Yes.

**Mark:** Dropping all the syllables, but also, these crazy vulgar Latin mm-hmm. Constructions that seem like over the top, like, why

**Aven:** would you even, why do you need, "ecce hic", that's why can't you just say it's really

**Mark:** forceful as who would sound like, but yeah. Well

**Aven:** "Behold, here!" Yeah. But I guess hic, especially as the H drops off, is just, eek is just a really little, tiny word, and so you need to, I mean, French does that over and over and over again, right, it adds stuff to, it has to add because the word is becomes so short. I know they drop all the

**Mark:** syllables, the French want to, like, discard most

**Aven:** of, but then they end up with these words that, that you can barely hear. And so they end up adding stuff back in or turning them into phrases. Yeah.

**Mark:** So yes, that one is, quite delightful.

We see also a, basic distinction between spatial words, meaning before or in front and back [01:03:00] behind referring to the past and future respectively. With, and this I thought quite interesting Al and it's related words implying the past and words like aprés, emprés, arere , arrear, basically. Mm-hmm, modern English arrear implying the future. And arere can also be used to refer to the past in the specialized sense of backward in time.

**Aven:** Backward in time. What do you mean by backward in time? So as a

**Mark:** moving backward attack? Yeah. Or, or running through something, I guess, in the sense of recounting something backward.

Okay. In a backwards order. Okay.

**Aven:** Like reversing basically.

**Mark:** Kind of, yeah. And I don't think it's very common, but it can be used that way. Okay. There are a group of present words that have the basic spatial meaning of in such as en, entre, denz, dedenz. Mm-hmm. So literally, [01:04:00] de-en,

Right. The, the de and en meaning in sort of, yeah. So from, compounded together from in, yeah. Mm-hmm. And I particularly like dedenz because it's "from, from in". Right. Seems a bit redundant. Par, which comes from Latin pear which has the basic meaning about in or near, can be used to refer to the present, the past, and even the future sometimes.

So

**Aven:** there's a, so that's not really helping you at all? No. There's a

**Mark:** lot of overlap in French. And so you, I I mean, you get the feeling that it's somewhat a, a language in very much in transition. Mm. Mm-hmm.

**Aven:** And very idiosyncratic. A lot of like, just idiosyncratic, any individual person is context.

Figuring out how to use words in a new way. Yeah. Yeah.

**Mark:** And similarly denz meaning in, can be used to refer to both the present and the past. Okay. We see a system [01:05:00] of to or toward a point in time from past to present with words like avant, jesque, desque, and deci, literally, de ici, right? And sort of forward or from a point in time from present to future with words like, again, avant, enavant, and de, and des.

They probably pronounce the S then. Mm-hmm. Right. Like modern French, French des. Mm-hmm. Spelled with an S. Right. There is a notable overlap here between past and future, therefore with avant. So, I mean, how would you use avant in, in modern French? Would you ever use it

**Aven:** for the future? No, I would say um, "il l'a fait avant"

So he did it before, I mean something else. So in the past, past the relative to something else. Yeah, yeah, yeah.[01:06:00] I mean, maybe I'm missing something, but I can't think of how I would use it to say apres, cause Right. I would use apres to mean apres, but there may be some idiom that I'm not thinking of, cuz of course it's not my native

**Mark:** language.

Right. we've got this weird overlap with avant and words related to avant. Okay. And de and related words referring to both the future and past. Mm-hmm. And so as far as I can see, that's a particular feature of, well, at least Anglo Norman or maybe old French generally. But not in Latin or English.

Right. And not in modern French. Right. So like, I'm really summarizing a Yeah, yeah. No, I'm sure. Million bits of constructions, like de plus something.

Yeah, there's like a million, yeah. Dozens and dozens

**Aven:** of these, these constructions.

**Mark:** Yeah. So it, in, in, in my conference paper, I, you go through a lot of this stuff.

Yeah. I gave every single I, I track down every construction. Yeah.

**Aven:** And I, I'm not [01:07:00] trying to make you do that. I don't wanna make you do that. None of us want that. We'd go, we'd all go mad. No. But, but I'm just, it's, it's just, you know, pinging little things in my head as we go through it. Yeah.

**Mark:** Words meaning, On or above can either refer to the present mm-hmm.

As which we would expect, which we would expect, like desus, which is literally de sub. comes from Latin de sub. or the past with words like parsum and paramont, like

**Aven:** A mountain. Oh, okay. Yeah. Right.

**Mark:** Okay. So on top of like Paramount. Paramount, that's where it comes from English Paramount, which has

**Aven:** come to mean something else

**Mark:** now.

And we don't get, we don't, there's no temporal sense in English paramount, and I don't think there ever has been in English. Right. Okay. So it only came in with either the, the literal spatial meaning or the sense of importance. But not, not temporal. And we have outre meaning above or beyond. And on the other [01:08:00] side of physically, it can mean on the other side of, so like on the other side of a river, right?

 those can be used to express the future and the corresponding deça meaning on this side of expressing the past. So if you're on this side of something mm-hmm. That's the past. If you're on the other side of something, that's the future. Okay? There is no down or under word as far as I could find in Anglo Norman with a temporal sense.

Okay. So all the, the, the down or under words are only used for physical, physical, physical space. Okay. And finally corresponding to the in words meaning present , with the basic sense of out or from mm-hmm. Refers to the future though as, I said can also have the spatial sense of from and it is also seen as a world element in compounds referring not only to the future, but also to the past.

So not on its own, but in some of these compound words, [01:09:00] you know, can have that double sense. Okay. And that is the mess that

**Aven:** is in French. So, so you don't have a, a nice overarching. System of conceptualizing it? No. With those

**Mark:** really don't. Well, I mean, I suppose I could. It would, it's, it's much more

**Aven:** messy.

Mm-hmm. Well, no, I think, I mean, I think that's a finding in and of itself. Mm-hmm. That's fine. I'm not, but I'm just saying to parallel. Yeah. But I do have a

**Mark:** chart. I do have a diagram. Of course, you have a get that horizontal, you know, timeline. Yeah. And up and down and all of these, you know, the different axes and showing, you put

**Aven:** the chart in the, in the show

**Mark:** notes, you can put the charts and the show notes for all the different languages and Okay.

You can see where things map out

**Aven:** onto space. Mm-hmm. So the next step will be to look at middle English, middle English, and to see to what extent this French messiness interferes with interferes the old English system. And to

**Mark:** what extent Old Norse

**Aven:** does, because that's all happening at the same time.

It's all happening at the

**Mark:** same time. I mean, the [01:10:00] Scandinavian influence in England starts during the old English period, but it doesn't really feature in any literary evidence until after the Norman Conquest.

**Aven:** Yeah. So you're having to sort of see both of those things. Mm-hmm. Happening at the same time.

Right.

**Mark:** And what is therefore equally or even more complicated about doing that is that it then brings up the whole problem of dialects. Right.

**Aven:** Are you comparing apples and oranges? Because, are you looking at northern and central and southern and west and east and are they all doing different things that are later gonna coalesce into modern English?

Yeah, early modern

**Mark:** English. And you would expect to get different lot of from the north and the south North influence in northern parts of England. Whereas in the southern parts of England, particularly around London, expect lot more French. French influence. Yeah. And, but of course what wins out in modern English is not just the French influence.

You do get a lot of the Northern [01:11:00] mm-hmm.

**Aven:** Forms winning out. So when you do middle English, are you gonna be able to just do middle English, or are you gonna have to have like a separate discussion for your different texts from different places?

**Mark:** I don't know. I, I mean, I, I, I have this fear that I'm just gonna end up with this huge morass of data and, you

**Aven:** know mm-hmm.

That maybe you'll, you'll have to go in and, and, and disaggregate it by region. Yeah. Yeah.

**Mark:** I'm not looking forward to it. It sounds daunting

**Aven:** middle. You might need to give yourself more than three weeks before the paper's due to work on that one.

**Mark:** Middle English is just, it's, it's terrifying, but, you know, and there's just so many more texts. Old English is easy because basically all you have, most of what you have is West Saxon dialect. Mm-hmm. Little bits of

**Aven:** pieces. So even though you know that there must have been a lot of different things happening in, in different parts of English, survive. So you don't have to,

**Mark:** you just don't have it. Yeah. But middle English is, is hard.

There's just so many Too much survives. Yeah.

**Aven:** There's, there's a lot of it. And go burn some archives and [01:12:00] then you'll be fine. Don't do that. We'd get in trouble. Well, I don't think I have a great summary for all of that, but I think No, but I mean, I think it's, you know, I hope that wasn't

**Mark:** too boring or dense.

I mean, I. Well, I think it's interesting. This is very much in the weeds and this was like a massive simplification Yeah. Of, you know, what I

**Aven:** actually found. Yeah. But I think, I hope anyway that it's been an interesting glimpse at like the process of doing this kind of work. Mm-hmm. You know, trying to, how do we know the things we know about languages in the past?

Well, it, it's this kind of messy data collection and trying to see what it means. And so I hope it's been, I mean, I think it's interesting. I am maybe a niche audience, but hopefully, hopefully our niche audience will also find it interesting. And there is no quiz. That's the important point here. We will not be asking [01:13:00] you to tell us what you learned.

And so you can report back in four years. Yeah. Four or five years when you, I'm starting to run out of

**Mark:** steam on this, but there's still like many interesting things

**Aven:** coming. Yeah. And it would be a shame to stop halfway through because mm-hmm. Like, it would be really nice to make it up to at least early modern English mm-hmm.

If not modern English modern English poses it own problems, but, and then be able to say something at the end of it all.

**Mark:** Yeah. I mean, there's, there's a whole bunch of questions that I have that I'm waiting to see what I find because like expressions like ahead mm-hmm. Haven't even come into play yet.

Yeah. Haven't turned up. Yeah. And I don't, I don't think ahead appears until early modern English. Right. So it's quite late. Right. And also with the, with the French, I came across all these hand

**Aven:** expressions. Oh yeah. Yeah. You're talking Yeah. Lendemain and demain. Yeah. And did we come up with others? [01:14:00] Yeah, there, there're

**Mark:** a bunch of them in French.

Mm-hmm. But

**Aven:** not all of them made it into modern French. No, not, not necessarily. Demain and lendemain. Yeah. Yeah. Which means of the hand, let me just see if I've got, and trying to figure out if any of them have any influence on English or not other than at hand, but that seems like a parallel.

**Mark:** Well, so some development do so beforehand is right.

Common. Right. There are some others that I know of that are not so common. So there is also behind hand. Right.

**Aven:** So at some point, and in some dialects after hand it's, they may have been used, but they're not. So they may

**Mark:** have been more common. And there may be others that I haven't found yet that only that really don't, didn't survive Middle English didn't.

Yeah. So when I start going through middle English, I'm gonna see, you know? Mm-hmm. Am I finding any other hand expressions in here? Yeah.

**Aven:** So I really do think you wanna do this in the long run, but I can understand why it's starting to get scarier and scarier as you move forward to do the work. Yeah. And next year

**Mark:** probably not. The amount evidence just gets bigger and bigger and bigger.

So there's just more to

**Aven:** deal with. [01:15:00] Yeah. And next year's not gonna be a great year for you to do a conference paper. No. But so

**Mark:** yeah. I may have to take at least a couple years to, to get this, to get this next step together.

**Aven:** All right. Well that's in the future, which is how you ended your video too. Ah, because yeah, it's an obvious one.

But for now, let's put this to rest and leave it close at hand.

And yeah, I think it's interesting to see how it develops and I mm-hmm. I look forward to seeing where you get in the end eventually when you've done all the work that this is going to take you to do. Indeed. And we're done our cocktails, so I think we're done. Alright.

Good night.

**Mark:** Bye-Bye.

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**Mark:** Bye.