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Course Guidebook

John McWhorter

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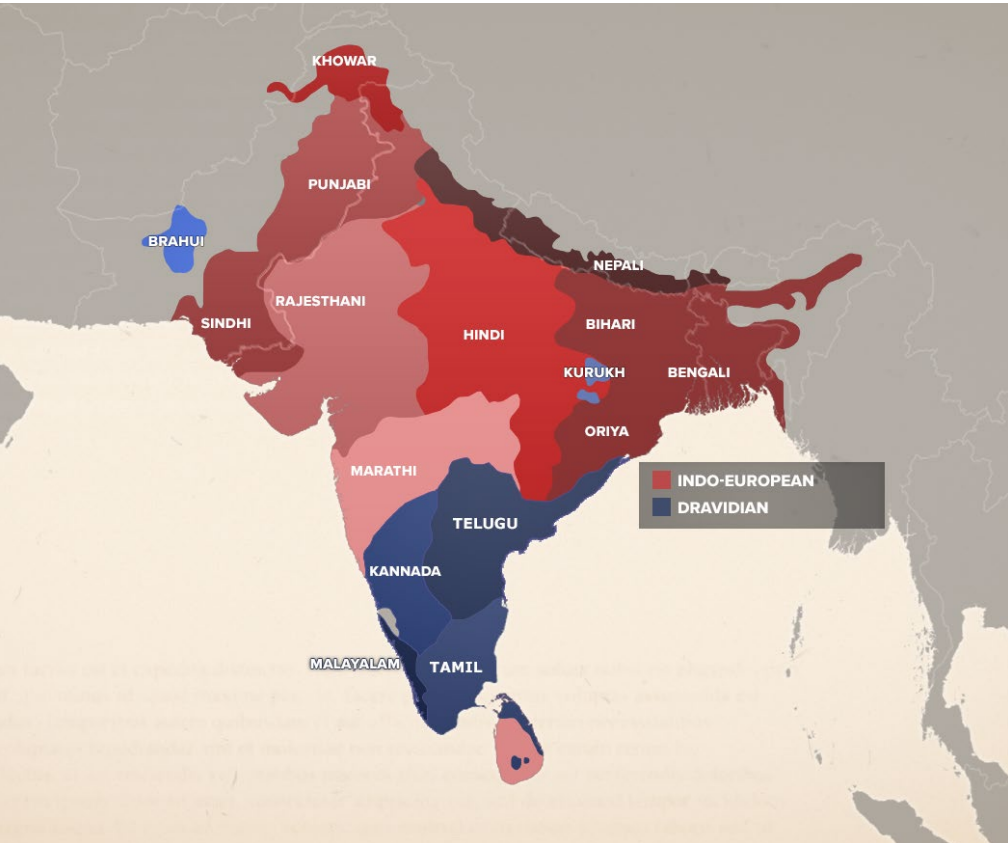
1 The Nature of Writing

We tend to take books, and writing in general, for granted. We have a language that we speak, and we have a way of storing and retrieving it later, and we don't think much about it beyond that. But compared to language, which is maybe 300,000 years old, writing is relatively new, more like 5,500 years old. Writing has its own story, its own history. This course shares the story of how writing began worldwide and how scholars have deciphered ancient writing systems. It explores the invention of the alphabet and its spread eastward. Along the way, it dives into the interesting histories of several letters that can explain why English spelling is so difficult. The course concludes with a discussion about the evolution of punctuation. Lecture 1 kicks off the journey with a look at the development of the first writing in the world.

Ancestral Languages

➤ We'll begin in India. There are many languages spoken in India, and there's a crucial difference between them. For example, Hindi, Bengali, Gujarati, and Marathi are Indo-European languages related to languages like German and Russian as well as Persian. But Tamil and Malayalam are languages of the south of India; they're from a completely different family. They are not genetically related to Hindi and the others. Many speakers of Tamil celebrate it as the world's oldest language, because the first writing in Tamil is from the 3rd century BCE, and it's still written today. Many people think that means that Tamil is older than English, and in that sense, it is, because English's first written documentation is in the middle of the 400s CE.



- But people didn't start speaking Tamil when they started writing it. They spoke it long before they committed it to paper. And beyond a certain point in the past, as you keep going further back, Tamil would have been some completely different language, some language ancestral to Tamil. And then that ancestral language would trace back to some other ancestral language, and you could keep going back all the way to the world's first single language—or maybe there were several first languages. That's how things go with language as it's spoken, and that would also be true of English.

- There's no logical sense that Tamil is older than English or that any language is older than another one. English is not older than any other language in any logical sense. There are some languages that do come into existence suddenly—for example, creole languages or sign languages—but they're the exception. Most languages trace to an original ancestral language or maybe a few ancestral languages. And between those first languages and what we have now, people were always speaking some stage of those languages. It may seem that a language starts when people first write it, but it's actually the other way around. Writing is not the beginning of language; it is an artifice.

- Many people think that when *Homo sapiens* emerged 300,000 years ago, language was the defining trait of the species. Although it's not known yet, it's becoming increasingly clear that language probably emerged with the precursor *Homo* species, *Homo erectus*, which goes back about 2 million years.

If human history wasn't 300,000 years but was just 24 hours—just one day—then writing would have emerged a little before 11:30 pm. If we include the history of *Homo erectus* in that one day, then writing would have emerged around 11:56 pm.

Writing's Emergence

- Writing's emergence is an interesting invention. There have been whole civilizations where there's no writing, or at least it hasn't been discovered. The Aztec of Mesoamerica, the Inca of South America, and other societies

such as Çatalhöyük in Turkey and the Cahokia in North America demonstrated great sophistication, social stratification, and achievements of cosmological wonder, but nobody needed to write anything down.

- It's not an accident that only a few times worldwide has writing emerged. And when it did emerge, it wasn't so that people could write down stories, shopping lists, or histories of people. Usually, it starts as something not intended for the ordinary person, but as a kind of scribal device that only an elite few would use. For example, the Egyptian hieroglyphs are baroquely complex and, in some ways, even vague. You can see that, even from just a quick glance, hieroglyphic writing is not just some alphabet with a couple dozen symbols for sounds. There's much more going on, and it took serious training to be able to make sense of hieroglyphs and to use them. Chinese writing was not designed to be used by vast numbers of people in a modern society. It originated as a kind of a scribal exercise. Learning a writing system like that is quite challenging. That's how writing systems start.

- The truth is that writing is not natural. As central as it is to us, it's not what we evolve for. A writing system is a magnificent invention. Imagine what it would be like to invent a writing system when none had existed before. Probably the first thing you'd do is draw pictures of things, and that's the root of how writing evolves. But drawing pictures can only take you so far.

- Suppose you want to draw the sentence "I can't even imagine what that other world would be like." How do you draw *can* as inability? Maybe you start with a tin can. How would you draw *not*, *can't*, or *even*? What about *like*? Is it going to be a heart, even though you don't mean "like" in that sense? It's hard to transcribe language just drawing pictures, and really you can't. The obvious solution might seem to be to write out each word with something called letters that correspond to sounds. But as utterly ordinary as that feels to us, that has never occurred to any people on record when they were developing their writing systems. Instead, people divide words into syllables. So, what happens with writing systems is that, once it becomes clear that we can't just draw pictures, next, it goes to syllables. The question then becomes, "How are we going to indicate these syllables as the sounds in the words?"

- In Mayan hieroglyphs, there was one glyph that meant "fish fin," because it was one: *ka*. But then they began using *ka* to mean not "fish fin" but just *ka* in some other word that's difficult to draw. This syllable principle—the rebus principle—is used when people realize that what is written down can correspond to the sounds of the language rather than what the language is expressing. Only after that do people start thinking about having a picture that corresponds to only one sound. But even then, they don't use it exclusively. The idea that you would only use those letters doesn't come naturally, especially if the mixture of pictures and rebuses has become traditional.

- Egyptian hieroglyphs had letters, but they're only one part of a system that also uses pictures. The alphabet, in fact, was only invented one time—and it was in Egypt. It's not something that occurs to people naturally, and it's not hard to understand why. Think of the English spelling system and how *cough*, *bough*, *through*, and *rough* are spelled. Why is that? And yet we're

The invention of the alphabet is just the tail end of a larger, grander narrative that includes the invention of writing in general. To start with the ABCs would be unwise. It would be like telling the history of cartoon animation by starting with *Toy Story*. You have to go back much farther.

stuck with it. We're never going to change our spelling system. We are conservative creatures. Once you come up with the alphabet, you're going to keep using it because you're used to it.

Mayan Hieroglyphs

- The Mayan hieroglyphs offer a handy introduction to how writing develops. For example, they had a glyph that meant "jaguar," and it looked like a jaguar. You can imagine that. But that can only take you so far if what we're talking about is language. You can't just draw jaguars and trees. It took a lot of effort to figure out this Mayan writing system in modern times, because the Spaniards' conquest of the Maya included destroying as much evidence of Mayan writing as they could to encourage their conversion to Catholicism. This writing system wasn't actively used after the 1500s.

- Bishop Diego de Landa was actively participating in the destruction of all evidence of the Maya's writing system. But he was also interested in the writing system that he was destroying. He thought that it was a combination of pictures and an alphabet. To assume that it was an alphabet was an advanced view at the time, but he thought if it isn't a fox or a bird or a mother or a jaguar, then it must be a letter. He worked with some of the Maya people who still knew the system, and they thought that he understood that it was about syllables. Eventually, everybody involved had died, and there remained this idea that there was a Mayan alphabet, and that meant that nobody could figure out what exactly was going on with this writing system for a very long time.

- The general idea was that the Mayan writing system was decorative, that it was perhaps giving prophecies, saying things about religion, or giving dates, but that it wasn't encoding the Mayan language. There is

no one Mayan language. There are many, including Yucatec, Huastec, Ch'ol, Tzotzil, and Tzeltal. Mayan languages are still spoken today. But this writing system was writing an early Mayan language. It was only in the late 20th century that it was gradually figured out that the beautiful symbols were actually encoding running Mayan speech. And that was because it can be hard to decode these things.

➤ We now know that there are glyphs that are pictures—a jaguar, for example—but just as often there are glyphs that indicate syllables. One way to indicate a jaguar is to have a glyph that's a picture of a jaguar. But you can also write out "jaguar," *b'alam*, by spelling out the syllables. The glyphs are *b'a*, *la*, *ma*, because there weren't any glyphs for just a single sound like "m" alone. There were no letters, just syllables. But if you can say *b'a-la-ma*, that's close enough to *b'alam*. There wasn't a pressing need for an alphabet to be more precise. This system worked very well from the 3rd century BCE, the same time as the first Tamil writing, to the end of the 1500s CE. And it could have kept going. Many writing systems have the same history. All of it started in what is today the Fertile Crescent and Egypt, and the whole world ended up taking on the idea.

The Mayan Alphabet

2 Cuneiform: The World's First Writing

What would compel people to invent writing, to go from purely oral communication to a system that captures speech on tangible objects, like clay or parchment paper? The path from no writing at all to the books we can't imagine life without is not as straightforward as you might think. This lecture looks at the development of cuneiforms—how they began, how they evolved, and how they were used by many languages before disappearing. It also tells the fascinating story of how modern scholars connected the dots to decode cuneiforms, shedding light on the writing system itself as well as unknown languages.

The Birth of Cuneiforms

- The first evidence of writing in the history of our species starts in the ancient town of Uruk around 3500 BCE. Uruk is in what now is Iraq, in what used to be called Mesopotamia. Writing did not begin the way you might expect. It began not as people making pictures and telling stories about themselves, but as an accounting practice to record exchanges.

- People used clay pouches to store tokens that represented what they had been trading—for example, sheep or grain. The number of tokens in the pouch matched the number of items traded. As time went on, people began to impress the tokens on the outside of the pouch as a kind of memory aid. Eventually, people abandoned the pouches and adopted a shorthand version of record keeping that involved making imprints of the tokens on a clay tablet. That's the beginning of what we think of as writing something on a piece of paper, but that's not how they would have thought of it. They would have just thought of it as a tablet with imprints.

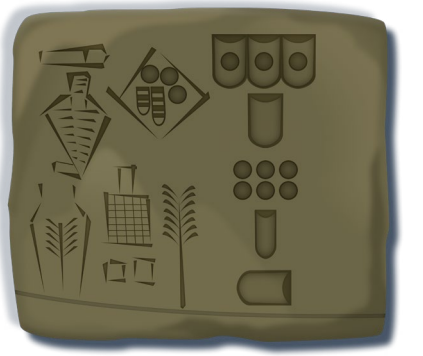
The Kish tablet, which dates to 3500–3000 BCE, is the earliest example we have of a clay tablet imprinted with tokens.

- As time went by, the tokens became more complex. So, instead of making an imprint, people began drawing representations of the tokens with a stylus. The result was a sort of writing, because it involves using a sort of pencil to inscribe clay. The tablets were meant to be temporary recordings of items traded, but they could be preserved by accident. For example, if the village burned, the fire would

Writing began, for the most part, with recording numbers, and then only gradually did people extend it to record information beyond counting. There's a hypothesis that counting is preliminary to writing—that putting numbers on paper was a natural and perhaps inevitable prelude to the mental jump of putting words on paper.

bake the tablets, or if they were stored underground for some reason, they were preserved for future discovery. Today, there are about half a million unearthed samples.

- The Kushim tablet records an inventory. The cuneiforms indicate that it's about a person named Kushim, who is the chief of the warehouse. There's a symbol for barley, and the numbers work out to 29,086. And it's about something that lasts for what we would call three years and a month: 37 months. It's not a history about Kushim or instructions for making beer; it's a record of barley and who is responsible for it, as a kind of a signature.



- Cuneiforms were first written in a language that we call Sumerian, which was not related to any language that we know about today. Later, people started using the cuneiforms to write many other languages, including Akkadian, one of the Semitic languages. It was a leading language for a long time. Old Persian, the original version of the modern Persian language today, was written in cuneiforms as opposed to the Arabic alphabet, which did not exist yet. Hittite is also in cuneiforms, which is interesting because it's an Indo-European language like Persian, English, German, Russian, and Greek. Hittite was unknown until it was discovered through unearthing these sorts of tablets. And because cuneiforms had been decoded, we could see that there was this other ancient Indo-European language that had been recorded.

The Evolution of Cuneiforms

- Cuneiforms reigned for a long time and were very influential. They were last used in the 1st century CE, and then they disappeared. They provide an interesting evolution of how a writing system begins and what happens to it over time. Once these Sumerian speakers who were writing for the

first time made the mental jump from counting on tablets to inscribing language on the tablets, the first result was pictures. Then, as time went on, they started leaning the pictures over 90°. Nobody knows why they did this, but it's the first hint of abstraction. When the script gets passed on from Sumerian to Akkadian, a Hebrew-Arabic relative, the representations grew even more abstract. Instead of line pictures, we see bundles of wedge strokes. The stylus is in the clay, but there's a symbol rather than a picture.

- In the development of cuneiforms, we see the pictures evolve, using the rebus principle, discussed in lecture 1, into signs for syllables. For example, if you want to write *tie-dye*, as in the phrase *a tie-dyed shirt*, you might start with a picture of a necktie, and then for *die*, perhaps a picture of death in some sense, like something lying on its back with crosses for eyes. So, that would mean "tie, die," even though *tie* and *die* don't mean those things in the word *tie-dye*. That's the way writing goes from being pictures to being symbols of spoken language.

- The Sumerian word for "arrow" was *til*, and it looked like an arrow, even when it was abstract. After a while, *til* was also used to indicate the syllable "ti" in any word, including the types of words that would be hard to draw. This process, which includes pictures of things as well as pictures recruited to stand for syllables, makes for an interesting way of writing things down.

- The Epic of Gilgamesh was written in Akkadian, and thus was written in cuneiform. The name Gilgamesh, as written, has one cuneiform that means *gil*—it's *bil* in one form—then *ga*, and there's a *mesh*. But the writers hadn't made the transition to seeing writing as purely abstract like we do. The name itself is preceded by two other cuneiforms, one of them indicating that Gilgamesh is a god, and another one indicating his fierceness, that he's some kind of weapon. It's almost like it's illustrated, like an illuminated manuscript in the medieval sense.

The Decipherment of Cuneiforms

- Figuring out what cuneiforms say can be as much a matter of puzzling something out as just sitting and reading it. Today, there are only a few hundred people who know how to read cuneiforms. They are called Assyriologists, based on Assyrian, which is another one of the Semitic languages. The ability to read cuneiforms was not passed down from antiquity; it was regained in the early 1800s.

- The slow process of deciphering cuneiforms began with inscriptions on monuments in what is now Iran. A reasonable hypothesis was that these inscriptions were in a form of Persian, but Old Persian, written in cuneiform, was a dead and unknown language in the 1700s. There was access only to Middle Persian and Modern Persian.

- At the end of the 1700s, Bishop Friedrich Münter noticed a recurring pattern in the cuneiforms in the Persepolis inscriptions. He figured out that one word meant "king." He knew that in Middle Persian, which was accessible because it was in Arabic writing, there was a formula for how kings were described. Using the modern English names Tyler and Miles, the pattern looks like this: "Tyler, great king, king of kings, son of Miles, the great king." It was a beginning.

- Philologist Georg Grotefend took things further with the Behistun inscription, also in Iran. It chronicles the exploits of King Darius in three languages: Old Persian, Babylonian, and Elamite. The monument is too high above the road to be read by passersby, and few people could read at the time it was written. This inscription was intended for the cosmos. (Darius, by the way, is pronounced "dar-EYE-us," not "DAR-ee-us.")

- The Greek historian Herodotus created a list of the Persian kings. From this list, we know that only two of the Persian kings, Darius and Cyrus, were not sons of kings themselves (their fathers were not kings). This is useful information, because in the "king of kings" part in the Behistun inscription, one king is described as the son of somebody who isn't called "great king" at the end—instead he's called an Achaemenid, somebody of

the empire of that time. Without being able to read all of it yet, we can tell that something's going on here—it must be either Darius or Cyrus. Both Cyrus's father and son had the same name. That was not the case with Darius, which means that this is not Cyrus but Darius. Because Grotefend knew that it was Darius, and he also knew some things about Darius from the Greek chronicles, he could start working out other parts of the inscription.

- Grotefend started the process of working out what these cuneiforms stood for, which also revealed Old Persian for the first time since it had disappeared. Our knowledge of Old Persian is still somewhat fragmentary today, but what is known came from being able to read these cuneiforms. It also makes it possible to go from Old Persian to other languages written in cuneiform, such as Elamite and Hittite.

- The cuneiforms are no longer living, but they almost certainly sparked the emergence of another writing system that we are still using a descendant of today: Egyptian hieroglyphs.

3 How Egyptian Hieroglyphs Work

The path to understanding Egypt's ancient writing system is as much a story about human brilliance as it as about human shortcomings. It's also a story of the roundabout way things evolve—what seems obvious to us now was not always apparent to, or even intended by, those along the way. This lecture explains the complexity of Egyptian hieroglyphs and how scholars pieced together their meanings and structure to reveal a writing system that still challenges experts today.

The Origins of Hieroglyphs

- Egyptian hieroglyphs teach us two lessons about the limits of human cognition. First, the decorative aspect of the hieroglyphs, as with the Mayan glyphs, inhibited scholars from understanding for a long time that this was a writing system representing a language. The second lesson is that this is a writing system in which the convenience of an alphabet was obvious, but basic human conservatism, of which we are all victims, discouraged them from taking the next step.

- It's possible that Egyptian hieroglyphs were an independent invention. However, Egypt was close to Mesopotamia, where the cuneiforms were, and there was a lot of trade between Egypt and Mesopotamia at the time, so the societies had a relationship. The cuneiforms came first, and the hieroglyphs appeared a little bit later, in seemingly full form. It's not like there were earlier hieroglyphs that developed into a system; it's more like a sudden invention. All of this suggests that the Egyptians didn't copy cuneiforms but got the idea of writing from Mesopotamia.

- The language encoded by the hieroglyphs was not Arabic, the main language of Egypt today. Instead, it was the Egyptian language, one branch of the Afro-Asiatic family that includes Arabic, Hebrew, and Akkadian, among others. This Egyptian language survived as the Coptic language, which was spoken until about 1700 and is still used liturgically today.

The Elements of Hieroglyphs

- Hieroglyphs naturally started with pictograms with basic meanings such as "sun," "house," or "reed." The rebus principle then came into play, but the hieroglyphs took it further than the cuneiforms did. They extended these elements—pictures used as both pictures and syllables—to cover more of the language with the help of other signs called phonetic complements, or letters, for consonants only. The letters tended to be smaller than the other elements.

- The Egyptian language had vowels, because all languages do, but the idea here was to use consonants to give crucial information, not to transcribe every sound that was spoken—because, from their view, the pictures and syllables were taking care of that. This system was starting to be an alphabet, but they didn't need it to be an alphabet.

- Imagine something that looks like half of a staircase, and by itself it can mean either *st*, *wss*, or *khtm*. If it's followed by the letter *T*, then it means *st*. There are different indicators for *wss* or *khtm*. But there are two *st* words, one that refers to a seat and one that refers to the goddess Isis. Depending on the determinative that was placed afterward—a bench representing a seat, or an egg representing a woman's fertility—one would know which word was correct.

- This writing system was not used by the masses; it was meant for a small group of people. A lot of context was necessary. In many ways it was very telegraphic. It only approximated running speech. It corresponded to it—that's what it was based on—but there was also a lot of guessing involved.

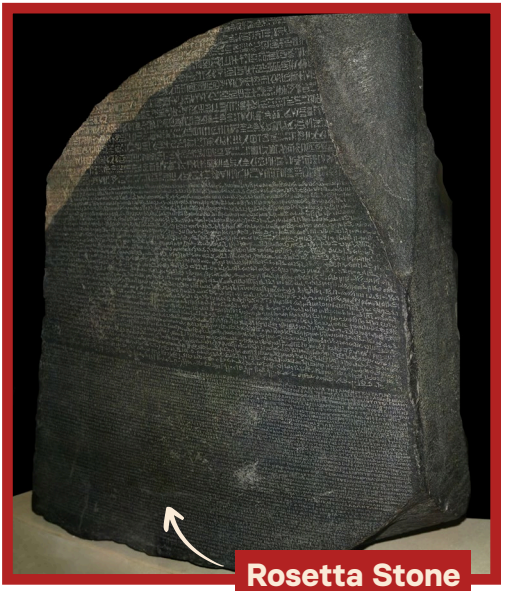
With hieroglyphs, the consonants provide cues, and other symbols indicate which word is intended.

- Around 650 BCE, a different form of hieroglyphs emerged, called the demotic script. It was easier to write and was written with ink on papyrus. Unlike the classic hieroglyphs, written in Middle Egyptian, which was no longer the spoken language, the demotic script was in the actual Egyptian spoken at the time. Classic writing was used for monuments and ceremony, and the demotic script was used for business and more casual purposes. While the new writing system seemed to be poised on the brink of becoming an alphabetic system, its users did not see it that way. They still thought of letters as aids—and that's where it stopped.

Deciphering Hieroglyphs

- One might think that the decipherment of Egyptian hieroglyphs would have been easier than that of cuneiforms because there was a key: the Rosetta stone. Unearthed by Napoleon's troops in 1799, it had a message written in hieroglyphs, the hieratic script (similar to the demotic script),

and Greek. Although many people knew Greek, it took a long time for them to realize that, like Greek, the hieroglyphs were the writing of a language. There was a sense that the Egyptians were subordinate to Greeks, so prejudices, assumptions, and biases got in the way. So even though the Rosetta stone includes a passage of hieroglyphs right over a passage of Greek, the assumption was that the hieroglyphs were just decorations and not an expression of a language.


Rosetta Stone

- Thomas Young, a scientist, examined the hieroglyphs in the Rosetta stone and figured out that the cartouches—recurring capsule-like shapes that contain writing—corresponded to the names of Greek figures mentioned in the Greek text. The symbols in the cartouches corresponded to sounds. For example, a cartouche naming Alexander the Great contained the writing "alksindrs." So, Young figured out that that part was writing. But despite his brilliant insight, he did not make the connection that the rest of the hieroglyphs were also writing.

- Later, Jean-François Champollion, a brilliant, young linguist, built on the work of Thomas Young. He noticed that cartouches occurred in hieroglyphs before Egypt had contact with Greece, suggesting that the cartouches were not connected to Greek. He also noticed in one cartouche something that looked like a sun. In Coptic, which Champollion knew well, "sun" is *ra*. Using this information, he realized that one cartouche was the name Ramesses, "rah-meh-sess." He figured out that, in addition

to letters, syllables were being identified, and therefore the hieroglyphs were indicating speech. That speech was an earlier Coptic language—the Egyptian language.

- The Unas pyramid is bedecked with some of the oldest passages of running Egyptian hieroglyphs. For a long time, it was thought that one passage about the moon was making unusual references to the hindquarters of a baboon—not something that we might consider poetry or that belongs on the walls of an important person's crypt. Susan Brind Morrow, an expert on hieroglyphs, has shown that if we apply a more poetic and sensible approach to what these hieroglyphs are saying, we find that these people had the same kind of poetic sensibility that we do. In Egyptian culture, baboons were considered noble, symbolic, and even holy. The passage is poetic and reflects people expressing profound sentiments. It reads, roughly, "Unas becomes the baboon of the desert hills of old. The rising disc of light is Unas. The wise face is Unas. The shining one is Unas. The face, the head, is Unas. The eye is Unas. Rejoice!" Nevertheless, it can be hard to see that aspect of things in a writing system that might seem, in some ways, almost willfully impenetrable. But it's not that. This was a system made for specialists to write, for specialists to be able to decode. It was, in its way, a priestly writing system.

4 The Invention of Alphabets

Sometimes, brilliant innovations come about by accident, and the inventors may not even realize the significance of what they've created. The invention of the alphabet was that kind of accident. This lecture discusses how the first alphabet emerged from the Egyptian hieroglyphic writing system. What began as a complex system understood by few led to a simpler one accessible to many. The resulting alphabetic system was a useful tool that quickly spread, being adapted to serve the languages that used it. In time, it became the alphabet that's most familiar to us today.

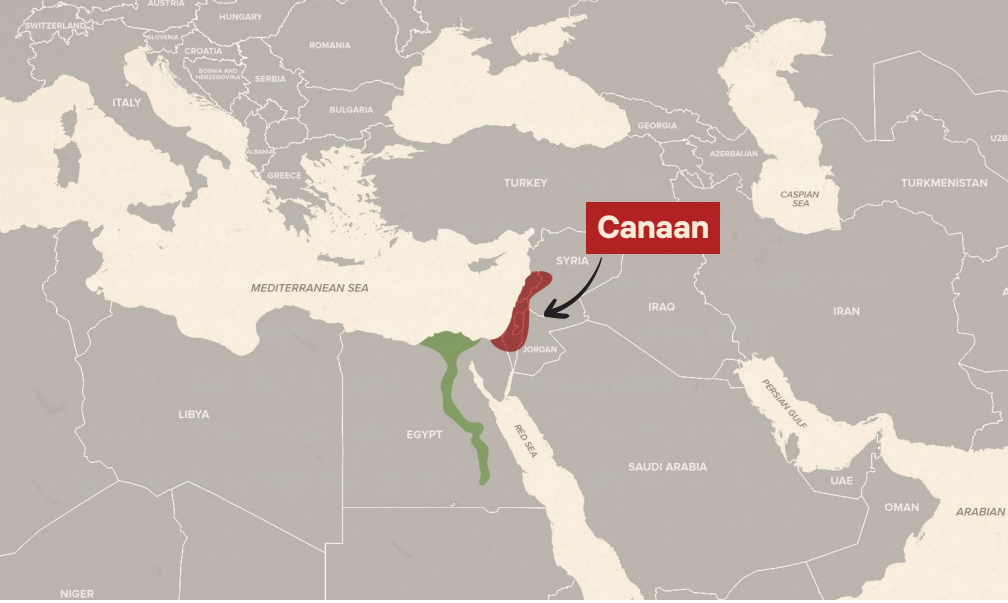
From Hieroglyphs to Letters

- In the mid-19th century BCE, laborers under the Egyptians were building pyramids. Like the Persians, who brought people from far and wide to complete works like the Behistun inscription, the Egyptians brought in workers from other areas for large-scale projects. These workers, generally men, wrote on the walls, using hieroglyphs in their graffiti.

- But these laborers in Egypt started using the hieroglyphs in a new way. They were likely speakers of Semitic languages that were related to the Egyptian language but not very close to it. So, because they didn't speak Egyptian, or even a language much like Egyptian, the hieroglyphic system would have been hard for them to use. Yet they wanted to write. Perhaps they spoke different languages and were trying to create some sort of writing lingua franca. We can't know.

- They would use a glyph to indicate the first sound of what something meant in Semitic. For example, in Egyptian hieroglyphs, one symbol for "house" could also mean "h." In Semitic, the word for "house" is always something like *bet*. So, they used the Egyptian "house" symbol to indicate what for them was "b," the *B* sound. They used the raw material of the hieroglyphs, and what they came up with was an alphabet. They clearly knew at least the basic outlines of the system but couldn't handle the whole thing. They wanted something abbreviated that was user-friendly.

- You can see the transition in the Serabit sphinx, discovered on the Sinai Peninsula. On one side of the sculpture, written in ordinary hieroglyphs, is a dedication to the goddess Hathor. On the other side, there are also hieroglyphs, but they don't make sense when read like regular hieroglyphs. Instead, it's an alphabet that's spelling out Ba'alat, which means "to the lady" in terms of the god. This is another name for Hathor. They're writing in hieroglyphs and in a hieroglyphic alphabet. So, it seems that it took semiliteracy for people to make the leap to an alphabet. These workers came up with a crude version of an alphabet because the original system was too hard. At the time, they probably didn't realize what they had created.

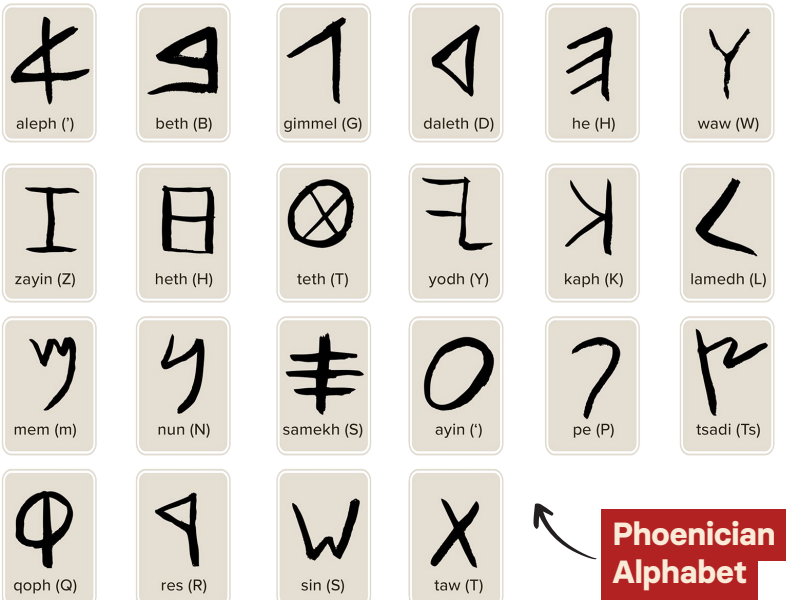


- This alphabet spread not only in Egypt but across the Red Sea to the Canaan region. Most of the evidence of it is there. For a long time, it was thought that the alphabet version of Egyptian hieroglyphs emerged in the Canaan region, in the Fertile Crescent region, possibly stimulated by the cuneiforms, because they were already being used there. But research has confirmed the oldest attestations of this alphabet are in Egypt, which means that the alphabet was invented in Africa.

The alphabet was invented in Africa. It began in Egypt, stimulated by the hieroglyphs, which were stimulated by the cuneiforms in Mesopotamia.

The Phoenicians

- With the invention of this new, user-friendly system, suddenly writing is something that ordinary people can use. It's easy, something no one would have ever expected. The people who used it the most at first were the Phoenicians. They were people of Canaan, and their language was in the Semitic group, close to Hebrew.



- The Phoenicians were successful maritime traders. They did not have a cultural center but instead had various settlements around the Mediterranean coast. There's evidence that they reached Iberia and possibly even Denmark. And around 1100 BC, they adopted this Egyptian alphabet and froze it—institutionalized it, so to speak. They made it into a 22-letter set. This is the first formal alphabet known. They used it to conduct their business.

- The Phoenician letters look like Greek letters, but they're different. Like the Egyptian hieroglyphic system, the Phoenician alphabet used only consonants, no vowels. The idea of having symbols to correspond to every sound was not intuitive. It's just encoding the sounds of the language.

Variations of the First Alphabet

- The Phoenician alphabet developed in two main ways, one way being that it became the Aramaic alphabet. Aramaic is one of the Semitic languages, like Hebrew, Arabic, and Akkadian. Today, Aramaic is a minority language

spoken in various dialects by small populations of people who function mainly in other languages such as Arabic. For a long time, however, Aramaic was the lingua franca of empires in the millennia straddling BCE and CE. There are Aramaic passages in the Hebrew Bible, and it is thought that this is the language Jesus spoke. In the Persian Empire that we've discussed, Old Persian was the language people spoke, and it was written on monuments, but when Persia was administrating a region that at times stretched as far west as Greece and as far east as what's now India, the language they used was Aramaic.

- The Aramaic alphabet, which still exists, was based on the Phoenician. They looked similar but were different. That Aramaic alphabet is what Hebrew speakers adopted, and that is the genesis of the Hebrew writing system of today. At first, Hebrew speakers took on the Phoenician alphabet more directly, but that version died. The Aramaic offshoot of Phoenician is more familiar to us, at least visually, in terms of the Hebrew alphabet nowadays than the Aramaic alphabet. But the Aramaic one was extremely influential at the time because Aramaic was.

- The Greeks took up the Phoenician alphabet as well, and they changed it, turning it into the kind of alphabet that we think of as the real one if we're used to what we now call the Roman system. The Greeks added the vowels

"ah," "oh," and "eh." They took the Phoenician glottal and pharyngeal stops, throat sounds that the Greeks didn't have, and made them into vowels. The result was that the Greek system encoded vowel sounds as well as the consonants, covering much more of what speech actually is.

Advantages of an Alphabet

- Creating an alphabet as part of a writing system has certain advantages. One is that there are fewer characters, which makes it easier to learn than a system that requires people to learn thousands of pictures. Even if a system uses syllables instead of pictures, there are still a lot of different potential syllables. For example, in Japanese, people need to learn 46 characters to take care of its syllables. That's in addition to the kanji, the Chinese characters that people have to learn. And Japanese is somewhat slim in terms of the number of its sounds compared to English.

> An alphabet needs about 30 sounds, unless it's more honest like English, which has 44 sounds, 26 letters. It's not an accident, therefore, that the alphabet is used in most places on earth. East Asia, with Chinese and the adaptation of Chinese by Japanese, is an anomaly. The Mayan hieroglyphs, though beautiful, are no longer used.

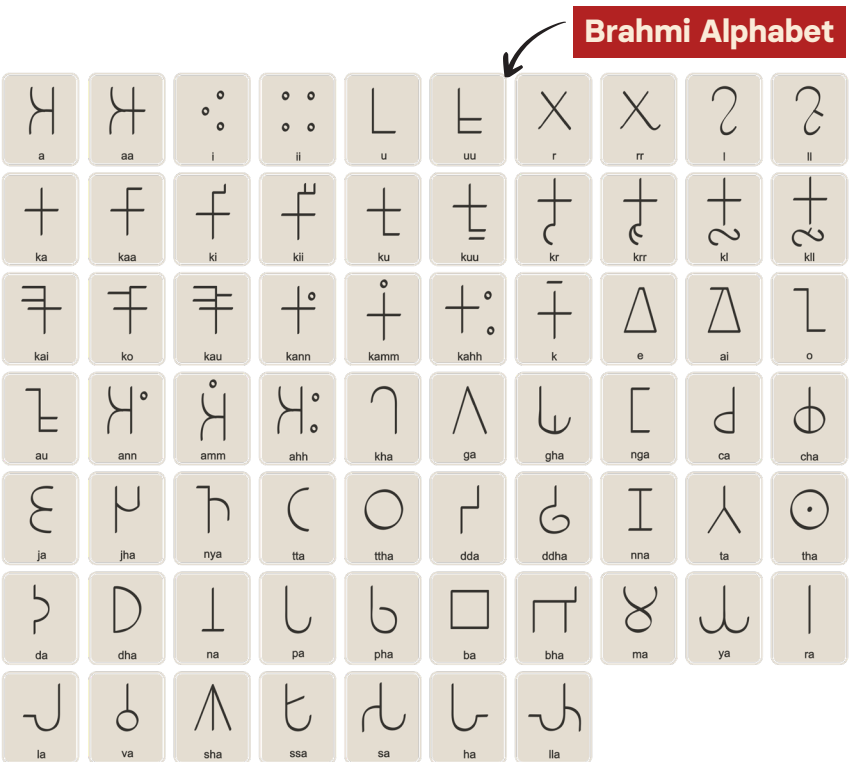
- Most people use some form of alphabet—and not necessarily the Roman alphabet, by any means, but an alphabetic system where symbols correspond to sounds rather than syllables, of which there are going to be many more, and rather than pictures, of which there will be an infinite number. Having an alphabet has an advantage. It is more inherently democratic. It's easier to learn. It's more likely to become part of the everyday life of a population. But it took humanity a long time to get to that step because, even though it has advantages, it isn't absolutely necessary. It's kind of an accident. But in this case, it's an accident that really caught on.

5 The Alphabet Goes East

Many of us are taught that the Phoenician alphabet sparked the Greek alphabet, which became the Roman alphabet, which became the fount of all the scripts of Europe. At some point, we may have even learned that a writing system was also invented in China. But that's not the whole story. What about the rest of Asia? This lecture fills in that gap by telling the story of how the invention of writing spread not only westward but also eastward.

The Brahmi Script

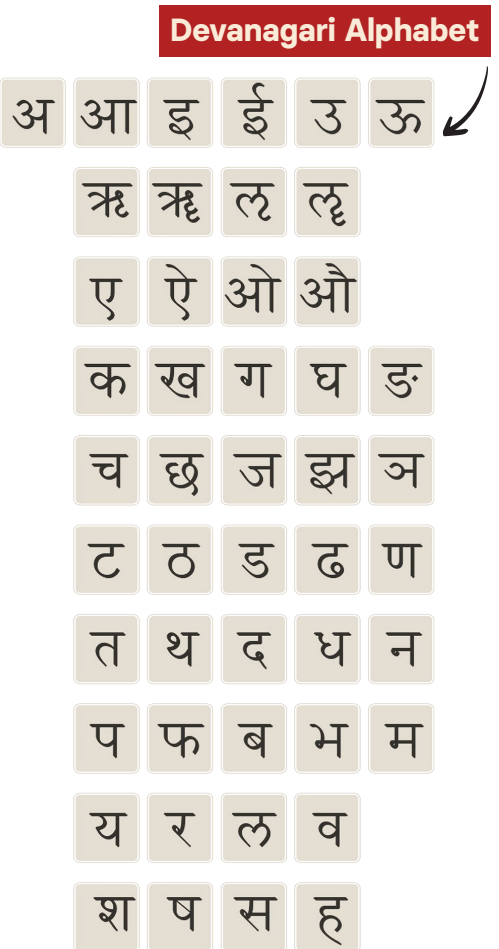
- Recall from lecture 4 that the Aramaic script was influential because Aramaic was a lingua franca in Asia and beyond in the millennium before CE, roughly. It modeled not only Hebrew and Arabic but also the Brahmi script, which may not be familiar to many people. The Brahmi script is first attested in any real way in the 3rd century BCE under the Mauryan empire, which was ruled by Ashoka. This script is a transcription of the Prakrit language, a descendant of Sanskrit. Sanskrit is the Indo-European language that was the source of Hindi, Bengali, Marathi, Gujarati, and all the Indo-Aryan languages of today. But Sanskrit first developed into just Prakrit, and that's what the Brahmi script is. But there's evidence of this script going all the way back to the 6th century BCE in Sri Lanka.



- The Brahmi script is not a direct copy of the Aramaic or Phoenician system, and it's not obvious that that was the source. But if we look at the Brahmi system, we can see from the first four and the last two of its letters that there is a Semitic model. That doesn't mean that a Phoenician or an Aramaic system was simply carried to India; rather, it seems that, like the Egyptian hieroglyphs and the cuneiforms, the Brahmi script was based on an idea that they got from seeing the writing systems of the Middle East. This kind of influence is called stimulus diffusion.

- The Brahmi script has evolved into a great many scripts in South and Southeast Asia. One widely used example is Devanagari, which is used for Hindi and as many as 120 speech varieties. That makes Devanagari the fourth most widely used writing system in the world, after Roman, Chinese, and Arabic.

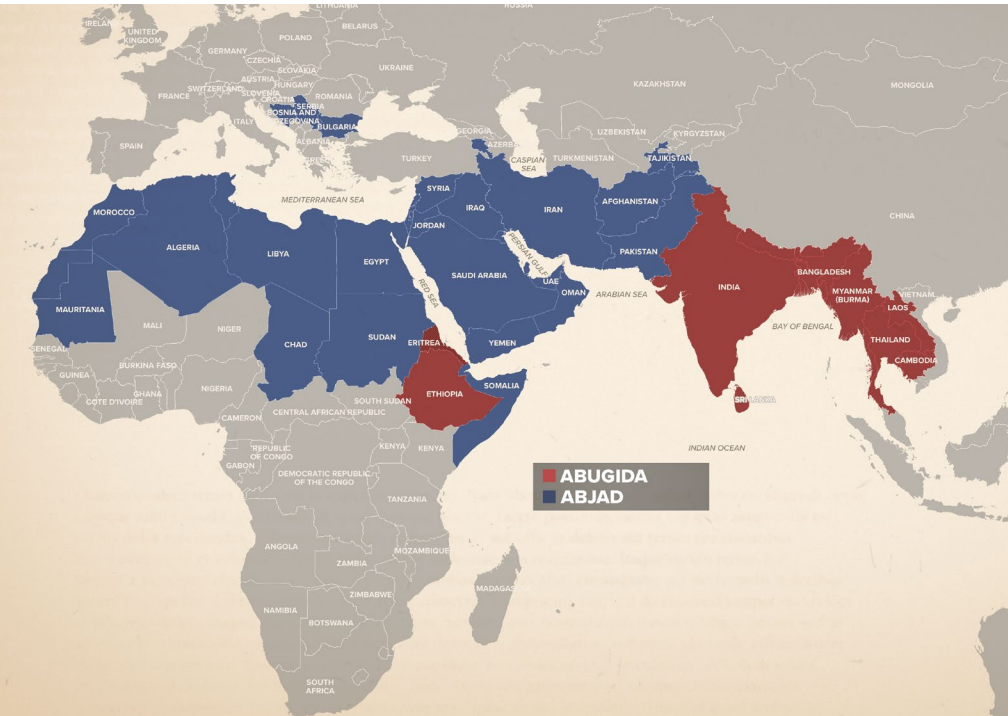
- The differences between the ancient Brahmi system and the modern ones are vast, but the lineage is clear. For each system, there is a certain way of arranging things. There are consonant letters that are modified with symbols to indicate what vowel comes next. Changing the vowel can change the word. This type of system is called an abugida. In many languages, speakers



can also make a new word by changing how long the vowel is. For example, in Hindi, *kam* means "less." *Kaam* means "work." The difference between the short "ah" sound and the long "ahh" sound is important. The Brahmi script did things the same way, which is how scholars know that it created today's Devanagari script.

- Writing systems like Devanagari are called abugidas. They are common not just in South and Southeast Asia but also in Ethiopia, where Semitic languages were and are spoken, including Arabic, Hebrew, Aramaic, Akkadian, Amharic, and Tigrinya. And

Technically, the term *alphabet* refers to a specific type of letter-focused writing system that uses symbols to indicate both consonants and vowels, as in English writing. An abjad system also uses letters, but only to indicate consonants, as in Phoenician. An abugida system, like Devanagari, uses consonants that are modified with other symbols to indicate the vowel that follows.



there's a relationship with the writing systems. The word *abugida* comes from the Amharic writing system, in which the first four elements in the way it is recited are "*a*, *bu*, *gi*, *da*."

- Many, though not all, languages of Southeast Asia use writing systems that ultimately trace back to the same Brahmi source. However, the Thai writing system, which is also an abugida, bears little resemblance to Devanagari and the others because Thai was filtered through a system that was once used to write Tamil, which is completely unrelated to Thai. It went through a Cambodian filter as well. The Thai writing system also uses symbols to indicate tones for syllables, which helps determine meaning. It's very user-friendly, but it is quite different from anything that we would think of as a writing system, despite deriving from the same source as our Roman writing system.

The Indus Valley Script

- In the same region where the Brahmi script flowered, there's what seems to be an undeciphered writing system; it's genuinely hard to say. In Pakistan, along the Indus River, are the remains of the Indus valley civilization. Various sites have been found, including Harappa and Mohenjo-daro, discovered only about 100 years ago. Typically, excavations in these kinds of places reveal no writing.

- In the Indus valley, excavations have led to the discovery of about 4,000 seals that seem to have served as stamps. They often include animal carvings and other symbols. One interpretation was that they must be pictures, but that's a little primitive. There are about 400 symbols, too many for an alphabet, which would have only about 35 to 40 symbols. Perhaps they are syllables.

- The seals go from right to left. But if they are stamps, then what you would see on paper would go from left to right. And there are some indications on jars of this same pattern, and it does go left to right. It might be that people used these seals as a kind of signature. So, is it writing?

- We want to avoid assuming that these symbols are decorative and that these people couldn't have come up with a writing system. Scholars have done quantitative analysis and have noticed that the symbols occur in a

patterned way; they're not just random. Some of them are more common at the start, some are more common at the end, and some combinations are more common than others. All of this seems to be beyond what chance would predict. That suggests that it might be a writing system based on some language that's configured in a way where some sounds are more common at the end and others are more common at the beginning.

When attempting to understand an undeciphered script, scholars must be wary of their biases. Assumptions can lead them to make connections that don't exist or to miss patterns and relationships that do.

- There was a rich interchange between this region and what was then called Mesopotamia. There are seals with these symbols in the Persian Gulf. Seals have been found in the city of Susa in Iran. This could suggest that traders from the Indus valley saw writing in Mesopotamia and brought the idea back home with them. The Indus valley system signifies that there might be undiscovered independent creations of writing in other places, and people are beginning to open up to the possibility.

6

The Advent of *A*, *E*, and *O*

When the Greeks adopted the Phoenician alphabet, they needed to change it to better serve their language, which was very different from Phoenician. One important change was the inclusion of more vowels. This lecture explores the letters *A*, *E*, and *O* and how they changed over time. Their stories help us to appreciate the diversity of writing systems and the role vowels play in their creation.

The Evolution of *A*

- Our first letter, *A*, teaches us all sorts of things about how the alphabet relates to language itself. Recall that the alphabet was created by workers in Egypt. The first thing that they drew that became our *A* was a drawing of an ox. And in that original alphabet, it really was an ox.

- Drawing this ox over and over again was inefficient, so when the Phoenicians took up the alphabet from the Egyptians, they made two abstract versions of it. Their ox faced left, because Phoenician writing went from right to left, and it felt more natural to have the ox looking that way. For speakers of Semitic languages, including Phoenician, the word for "ox" is something like *aleph*. Hebrew and Phoenician are very similar languages, and though the modern Hebrew letter aleph looks different from the Phoenician ox, the cursive Hebrew letter looks like the original ox.

- Greek and Phoenician are very different languages, so when the Greeks took up this alphabet from the Phoenicians, *aleph* didn't mean "ox" to them—it didn't mean anything, because the Greeks weren't Semitic. They called it alpha, and because they didn't see it as an ox, they took the letter and set it "on its legs."

- Why was *A* first? For one thing, "ah" is the most basic sound in language; it's the most effortless sound to produce. It is universal to languages. For example, in many languages—too many for it to be an accident—a baby's word for "mother" is something like *mama*, and for "father" it's something like *tata*, *baba*, or *papa*. Notice that the vowel is always "ah, ah." There is no language where the default sound is something like "eh" or "ee." No infant does that. The nature of this sound would have contributed to a sense that it should go first.

- No one knows just how the alphabet transferred from the Phoenicians to the Greeks, but they lived side by side, especially in Cyprus and Al-Mina. The first Greek script dates to about 800 BCE. At that point, the Greeks were a geographically scattered society, with a lot of infighting. They were less powerful and less unified than the Phoenicians.

- Nevertheless, there had been a long-standing impulse among Greek speakers to write. Even in about 1400 BCE, Greek had already been written in a different way in the Mycenaean civilization. That script, called Linear B, has been deciphered, but for some reason, it didn't take off. But when they took the alphabet from the Phoenicians, it really caught on.

- In Semitic languages, aleph was not the sound for "ah." It was a glottal stop used to make the sound "uh." Since Phoenician and Hebrew were practically the same language, both needed the "uh" sound. Greek speakers didn't, so they transformed the glottal stop into a letter to mark "ah" instead of "uh." To say that European languages have fewer glottal stops would be an oversimplification. It's not that European languages don't use glottal stops; it's that glottal stops are more important to communication in Semitic languages. English is full of them—take, for example, the words *apple* and *button*—but we don't think of the glottal stop as a real sound because it alone can't make the difference between one word and another. But in Hebrew, for example, if you want to say "monkeys freeze," you would say, "kofim kof'im," where *kofim* means "monkeys" and *kof'im* means "freeze." Hebrew speakers have to think more about the glottal stop.

- The Greeks passed on their alphabetic system to the Etruscans, a civilization of people who lived on what we now think of as the Italian Peninsula. They spoke a language from a group completely different from

Indo-European: Tyrsenian. The Etruscans, and their language, are gone now, but they shortened alpha to "ah" based on the sound. When the Romans took over, they adopted the "ah" too.

Why do we pronounce *A* as "ay" instead of "ah," the way other languages do? In the 1400s and 1500s, English went through the Great Vowel Shift, which profoundly influenced what we call our letters. As sounds changed over time, "ah" became "aah," which became "eh," and the next thing you know—hundreds of years later—"ah" has changed to "ay." This shift helps explain why the word *made*, as in "Look, I made a hat," was originally pronounced, roughly, "mahd" but now sounds like "maid."

- The uppercase *A* and lowercase *a* look very different. This change begins with the Carolingian minuscule script, the script of the Holy Roman Empire, around 800 CE. *Carolingian* refers to Charlemagne. This is a smaller, writable version of what was inscribed or written very slowly in earlier manuscripts. In this new script, the letter *A* started morphing. At this point, there was no contrast between uppercase and lowercase letters. (That's a different story.) This was just different ways of writing the letter *A* for people who

were in a bit of a hurry. The resulting shape was what we're now familiar with as the printed lowercase *a*. In addition to that version, there's the other lowercase *a*, used more in handwriting.

E and *O*

There are various alphabets, abjads, and abugidas—it depends on how important the vowels happen to be in that language.

- *A* is partly a story of how you get from Phoenician, an abjad system that does not encode vowels, to Greek, a true alphabet that encodes both consonants and vowels. The Phoenician alphabet has grunts (for example, something like "uh, uh"), but the Greeks needed to encode their vowels beyond just "ah."

- English is written with five vowel letters—*A*, *E*, *I*, *O*, and *U*—but it actually has many more than that. The words *pat*, *pate*, *pot*, *pet*, *peat*, *pit*, *pot*, *putt*, and *put* differ only by the vowel sound.

- The Greek letter *E*, called epsilon, came from the Phoenician *he* for *H*. Epsilon was originally "e-psilon." *Psilon* meant "naked," so together it meant "*E* naked." That came along later, in the Middle Ages, because by then, in Greek, what had been the sound "ai" had changed and was now pronounced "e."

- The Greek letter *O*, omega, was created because in Greek there are length distinctions. Recall that, in Hindi, a word can have a different meaning if a vowel is short as opposed to long. Greek is the same way. In Greek, *eros* means "wool," but *erōs* means "love." It's a length distinction. For the long sound, they have omega, "*O* mega," meaning "*O* big," or "big *O*," and for the short sound, there's omicron, "*O* micron," "small *O*."

7 Lost at *C*

Many people wonder why the alphabet has both *C* and *K* to indicate the same sound, as in the words *class* and *kettle*, and *C* and *S* to indicate the same sound, as in *set* and *receive*. The main reasons have to do with how the alphabet was impacted by the different languages it passed through early on, especially French, and how spelling stays still even as language changes. This lecture breaks down the complicated history of how these letters came to exist together in our spelling system.

From *G* to *C*

- The story of *C* starts with *G*. The third letter of the Phoenician alphabet was gimel, which began with the hard *G* sound, "g," and referred to a throwing stick. We think of the order as *A*, *B*, *C*, *D*, *E*, but that comes much later. It started with the sounds "ah," which was really "uh," followed by "b," "g," and "d." Notice that's also the abugida we've discussed in other lectures. But why did *G* come before *D*?

- For now, let's change the order to *B*, *D*, *G*. Try to think of them not as letters but as sounds that your mouth makes: "b," "d," and "g." Those are very basic sounds. They're called stops—when you stop the air—and they follow a kind of architecture in the mouth. For "b," the stop is in the front of the mouth. For "d," it's in the middle, and for "g," it's in the back. You can do the same thing with the sounds "p," "t," and "k." They form in the front, middle, and back of the mouth, respectively. So, "b" and "p" are different versions of the same thing. The same is true for "t" and "d" and for "k" and "g." The one pair to keep in mind for now is "k" and "g."

- The Greeks interpreted the Phoenician gimel as "gamma," so that's what they called it. They also turned it around, making it look more like a crescent than a throwing stick, and that's the beginning of the modern *C* shape.

- The Etruscans had their own language. It was Tyrsenian, not Indo-European, so it was completely different. And although they had a *G* sound, they didn't think of it as a real sound, much like the way we think of the glottal stop in English. So, they reinterpreted gamma as a *K* sound. Recall from earlier that the "k" and "g" sounds are different versions of the same thing. And the reason that the Etruscans would have made it a *K* sound is likely because their language had three different *K* sounds. They already had a letter that they called "ka," so they called this new one "kay."

- The Romans took up the Etruscan "kay," even though they, too, already had a *K*. They abandoned their *K* and turned the new one into a noble-looking shape. And what they're calling *K* is a *C*.

The Sound of *C* Changes

- To begin to understand why *C* is pronounced like *S*, remember that language always changes while spelling systems typically do not, because people get used to them.

- In Latin, there's a "k" sound. Recall that this sound forms in the back of the mouth. Some vowel sounds also form in the back, like "ah" and "oh," and others form in the front, like "ay" and "ee." Consonants tend to change based on the way we subconsciously anticipate what's coming up, such as whether the vowel is in the back or in the front of the mouth. So, if you say "k" and there's an "ay" or an "ee" coming, after a while, you're going to start saying something like "ky." And if you say "ky" over and over, that will become something like "tz," which will probably become something like "ch." This type of shift can be heard between words in Latin, Italian, and French. In French, the "tz" sound can become a "sh" sound, which can easily become an "s" sound, or "tz" can just become "s."

- French plays an important role in English's vocabulary, because English took on thousands of French words, including their spellings, after the Norman Conquest. In French, the *C* sound was pronounced not as "kay" but as "say." English takes on the letter from French, but during the Great Vowel Shift, the "ay" sound became "ee," and the pronunciation of "say" became "see."

The Old English spelling system was influenced by French, which was influenced by Latin. The Great Vowel Shift led to even more changes and new pronunciation rules in English.

- After the introduction of the French words, new rules emerged for when to use *C* as a "k" sound, as Old English had done, and when to use it as an "s" sound. In Middle English, the new rule was that *C* is pronounced "k" before *A*, *O*, and *U* and pronounced "s" before *E* and *I*. This left words like *cyng*, meaning "king," and *Cent*, meaning "Kent," as exceptions. In these cases, they started using another letter, *K*. And that's why *king* and *Kent* are spelled with a *K*.

K and *G*

- *K* has an interesting history, particularly when it comes to its shape. It looks kind of like a hand. Except *hand* doesn't begin with a *K*. There's a reason for this. The Egyptian *D*, what they thought of as "d," was clearly in the shape of a hand. It was pronounced something like "drt." The Phoenicians took up this hand shape, but *hand* in Semitic languages is something that begins with a "k" sound. So, in Phoenician, they used "kaph" for *palm*. So, what was originally "drt" became "kaph." The Phoenicians also simplified the hand, and that's how we get *K*. At first, it faced the opposite direction that we're used to seeing it, because writing went from right to left. Once people started writing from left to right, the Romans turned the *K* around to face the other way.

- Remember that *G* started as the "g" sound and the Etruscans made it into a "k." So, how did we get *G*? In the original Roman alphabet, *C* was used mainly for the "k" sound, but they also used it for the "g" sound. Around the 3rd century BCE, there arose a practice where if you were indicating a "g" sound, *G*, then you modified the *C*—you hung a little something on your *C*. And if you think about it, that's what *G* looks like. So, *G* is a kind of *C*.

- The lowercase *g* was developed by decoratively extending the "lip" below the staff. The printed lowercase *g*, with its closed loop, is more extravagant.

The story of our letter *G* is interesting because we could have gotten it straight from the original Egyptian alphabet, but instead, it starts as a kind of *C* and eventually develops into our *G*.

8 The History of *H*

How can it be that, in one breath, the letter *H* can be treated like it's not a real sound, and in another breath, it can be handy for indicating other sounds and words? For one thing, it depends on what language you're breathing in. This lecture looks at the interesting story of *H*—how it functioned early on in languages, how both its name and shape evolved, and how speakers and writers have tried to make sense of it throughout its history.

The Evanescence of *H*

- Think about the *A* sound, "ay," and the word *hey*. It's easy to substitute *A* for *hey*, as if *A* is a shortening of *hey*. Have you ever noticed how some people omit the initial *H* sound in words that are preceded by *an*, as in "an historian"? And some Americans say "yuman" for *human* or "yumid" for *humid*, where the *H* can just drop off before that *Y* sound. Why are these things possible only with the letter *H*?

- There's more. Notice that in Spanish, the *H* isn't pronounced. It was pronounced at one time, but it got dropped along the way. Specifically, *H* in Spanish writing indicates that "h" was just a pit stop between *F* in Latin and then nothing today. Take, for example, the Italian word *figlio*, which means "son." The equivalent in Spanish is *hijo*, which looks somewhat like *figlio* but with an *H* at the beginning. But *hijo* is pronounced "iho," not "hiho." Also in Spanish, the word *hacer* means "to do" or "to make." In Italian, the word is *fare*, and that's because *facere* in Latin became "hacere" in earlier Spanish. It happens in British dialects of English. It happens again and again. There's something about *H*.

- The ancient Greeks didn't think of *H* as a normal consonant. They classified it as rough breathing. It wasn't even indicated with its own letter in ancient Greek. Instead, they'd put a mark over the vowel that it preceded.

- Part of what makes *H* seem like it's not a real sound is where it's pronounced in the mouth. Recall that the sounds "p" and "b" are produced in the front, "t" and "d" in middle, and "k" and "g" in the back—the soft palate, the velar. *H* is pronounced even farther back,

The "t" sound is formed with a stop—you stop the air. You can also let the air go in the same place—a hiss, a continuous "s" sound. That hiss is a fricative in that area. Similarly, when you make a "b" sound, you have stopped the airflow. This is called a bilabial stop. But if you make a continuous "f" sound, you are letting the air flow, pronouncing a bilabial fricative.

in the glottal region. But it isn't a glottal stop, like "uh," where the air is stopped; it's a glottal fricative, where the air is let go. It's very different from a fricative that's produced closer to the front of the mouth. It's delicate back there; it's easy not to hear. And we have seen how in English we don't think of a glottal stop as a "real sound," for example, in a word like *apple*. So, the history of the letter *H* is the story of a letter that often isn't as much as it is.

H's Shape and Name

- *H* starts in Egypt as a picture of a gate. The Phoenicians took it up with their word for "gate," which was *khet*. The Greeks adapted the Phoenician letter, calling it "heta." They just smoothed it out to an "h" sound. The Etruscans took it and kept it simple, calling it "ha," as did the Romans.

- The original gate shape was abbreviated into today's *H* by the Greeks, and that was followed by the Romans. Then something interesting happened. Recall the Carolingian minuscule letters, the writing system of the Holy Roman Empire from 800 to 1200 CE. Before that, there was something called the uncial writing system. The uncial letters were the first attempt to have a nicely written version of what previously were the capstone engraving-oriented letters. The idea was to have something that was easier to inscribe on paper. So, to make *H* easier to write by hand, the uncial version got rid of the upper right part, making it fewer strokes. This is what we now think of as a lowercase *h*. Changes like these probably wouldn't have happened if print had come along earlier in Europe.

The *unc* root in *uncial* is where we get our words *ounce* and *inch*. It basically means a small dimension. The uncial letters were majuscule—larger than the Carolingian miniscule letters but not uppercase; they were normal size.

- In Greek, *H* was evanescent, and not only in terms of indicating it is just a breath. In one prestigious dialect of Greek, *H* dropped out in that same way that it has in many dialects of English. "Heta" was refashioned to mark the long *E* sound, eta, in the

same way that omega marks the long *O* sound. There was now a difference between this letter and the letter marking the short *E*, epsilon, the "naked E." The eta symbol, which is based on what had been one version of *H*, is part of what makes Greek so hard for us to read.

- Even the name of *H* is a little peculiar. If the Romans called it "ha," why didn't it go through the normal vowel shifts in English and end up as "hee"? How did it become "aitch"? To get from "ha" to "aitch" is not just some normal process of sound change. It's important to note that in Latin, some letters developed names where the vowel sound came both before and after the consonant sound itself. For example, "fe" for *F* became "ef-fe," and *L*, "le," became "el-le." This is still the case in Spanish. So, some of the Roman letters had that format. In that vein, *H* was the kind of sound that encouraged that, and so "ha" became "ah-ha."

If you are familiar with the Russian language, you might know that what looks like *H* in English is *N* in Russian. And that's because they took the Greek letter nu, an *N*, and made it easier to write by straightening the diagonal stroke in the middle, creating an *H* in a kind of once-removed fashion. But they pronounce it "en" for that reason.

- It would be very natural for this glottal fricative to move forward over time, becoming a fricative pronounced on the soft palate. That would lead to a sound like "kh." That's the sound that we don't think of as a sound when, for example, someone pronounces the name of Bach, the composer. Instead of "Bak," some people say "Bakh." That sound, a velar fricative, is part of many other languages, but not English. So, "ah-ha" becomes "ah-kha." Over time, it continues to move forward, becoming "ah-cha," which is what it was in Old French when it passed to English. As more time passes, "ah-cha" will probably end up sounding like "ahch," because sounds

are always dropping off the end of words. And in English, as a result of the Great Vowel Shift, the "ahch" sound eventually becomes "aitch," the way "mahd" became "maid."

"C-H" and "T-H" Combinations

- Why is the name of the letter *H*, aitch, written with "C-H" at the end? In French, when Latin words with the *K* sound were somewhere between "k" and "sh," speakers felt that there was a difference between a true "k" and the sound that was closer to "s" or "sh." How do you indicate that in-between sound, which involves some kind of breath? Remember that *H* is just some sort of breathing irregularity, as the Greeks thought of it. Putting an *H* after the "k," as in the *C*, suggested a "breathiness." In Latin, *cattus* is a vulgar word for "cat." In Old French, at a certain stage, the pronunciation would have been something like "cyat." In modern French, the word is *chat*, pronounced with the "sh" sound. "Khyuh" would have seemed kind of like the "ch" sound. But it became a convention, and we're stuck with it, because English took in these words from French.

- Then there are words like *chrome* and *chronic*, which are pronounced with the "k" sound. This is because the Greeks have a "kh" sound, and the Romans transcribed it as "C-H," because to them "kh" sounded like "k" with some sort of air disturbance involved, and that of course is *H*.

- To English speakers, the "th" sound is very familiar. It's actually two different sounds. For example, the "th" sound in the words *thick*, *math*, and *throw* is different than it is in words like *though* and *lather*. In Old English, the "th" sound in *throw* was indicated by a symbol called a thorn. The "th" sound in *though* was indicated by a different symbol, called eth.

- French speakers often have trouble pronouncing the "th" sound because it's not in their language, so they'll substitute something like "ts." Anglo-Norman scribes, French speakers who were writing English, interpreted the "th" sound as a softer *T* sound, and to indicate that softness with a puff of air, they added *H*. The shift to using "T-H" for both sounds meant the loss of the distinction indicated by the thorn and the eth.

- Over time, the handwritten thorn symbol evolved. Writers stopped closing the loop, and the loop eventually peeled off, resulting in something resembling a *Y* shape. It also appeared this way in print. Although it still indicated the "th" sound, over time, readers began reading it as a *Y*, and pronouncing *the* as "ye." If you've ever seen an English sign with a *ye* on it, as in "ye olde coffee shoppe," you may have thought that *ye* once meant "the." That is not the case; the *Y* stood for "th" in "the olde coffee shoppe."

9

The Inception of *I* and Its Journey to *J*

A great deal of language change is about something starting as a variation of something else and then becoming a thing in its own right. This is the story of the letter *J*, and to get there, we have to start with *I*, which has its own interesting story. This lecture takes us from *I* to *J*, a seemingly short step that covers thousands of years. It explains why we pronounce and write them the way we do and why it took so long for *J* to reach full letterhood.

Vowels on the Move

- To us, the letter *I* is about the sound "aye." And we're taught that there's a difference between long *I* and short *I*. Those traditional ideas, as useful as they are, make it hard for us to understand the history of the letter *I*. To really understand *I*, we first need to return to the Great Vowel Shift of the 1400s and 1500s.

- During the Great Vowel Shift, many vowels in English started being pronounced higher in the mouth. For example, when "ah" goes to "ay," it's going up. And when "ay" goes to "ee," it goes up even more. So, words that once had the "ay" sound came to be pronounced with the higher "ee" sound: *feed* was once pronounced "faid," and *meet* was once pronounced "mait." They came to be pronounced "ee." For some reason, the general process was that the vowels moved up in the mouth.

- When the "ay" sounds move up to "ee" sounds, what happens to the words that were originally pronounced with the "ee" sound? For example, the word *mite*, as in the insect, was originally pronounced something like "meet." If all the vowels are going up, and you've already gone up as far as you can, what happens? To keep the pronunciations between words different so that you can get meanings across, "meet" has to go somewhere. So, what happened first was that instead of saying "meet," you put a muddy little "uh" sound before the "ee" and started saying it differently. Linguists call that "uh" sound schwa, and it can go before a real vowel. So, "meet" changes to "muh-eet," which, over time, changes to "mah-eet," which becomes "mite." We use a diphthong.

Why *I*?

- In the Phoenician writing system, which was an abjad, vowels were not marked, and *I* began as the *Y* sound. They called it *yod*, their word for the arm and the hand. The original shape depicted a fist that's raised and pointing to the left. When the Greeks adapted this system, they wanted to mark their vowels, and the closest thing to their "ee" sound was "y," which is a very vowel-like consonant; we think of it as a consonant, as in *yo-yo*. It's called an approximant. It's a glide.

- The Greeks made it their "ee" sound, and instead of calling it yod, they called it iota. They didn't think of *iota* as meaning "arm," because it didn't. It didn't mean anything. So, they very quickly started simplifying the shape. First, they made it a squiggle, and then it became a straight line. That's where we get the first thing that we can recognize as an *I*.

- The Romans took it up and did something interesting. To distinguish their letter *I* from their numeral 1, they added serifs. These serifs, while beautiful, became problematic when they were written by hand instead of printed. They could make words difficult to read. This was the case in the uncial and Carolingian scripts. So, there was a tradition of marking the *I* with a small slash to disambiguate it from the number 1. Over time, the slash abbreviated over time, becoming a dot, and that's where we get the dotted *i*. For a long time, the dot just indicated an *I*. Then that was reassigned as what we now think of as lowercase *i*.

The *J* Problem

- *J* is a problem, particularly where there isn't one and then there needs to be one. For example, Latin doesn't have the "j" sound, as in the word *judge*, which actually has two "j" sounds even though they're spelled differently. So, in Latin inscriptions, there is often an *I* where we would expect a *J* because we pronounce the words that way now. In inscriptions, "Julius Caesar" is written "Iulius," with the "ee" sound at the beginning and then another "ee" sound. In a way, they are the same thing. An "ee" at the front of a word and pronounced before a vowel becomes *Y*-ish. So, when you say "Iulius" quickly, it sounds like "Yulius."

- While this might seem to us like the time to create a new letter for the "j" sound, change like this happens gradually. In Old French, there was an "ee" sound that became a "y" sound and then it became "j," and so a word like *justice* was pronounced with a "hard" *J*, as in *judge*. The "softer" "j" sound came later. Spanish speakers who speak English with a Spanish accent might pronounce the word *you* as "dzhu." That reflects a natural sound change process, a natural substitution. Eventually the "j" sound felt different enough that it called for something new. Rather than create a letter from scratch, they modified the *i* by extending a "tail," following the decorative scribal practice in the Carolingian script.

The Shakespearean language is challenging because we still use many of the same words today, but the meanings have changed. So, not only do sounds change over time, as with the Great Vowel Shift, but meanings change too. Spelling is also a challenge in Shakespeare. The folios do not mark *J* consistently. If you look at one of the original *Romeo and Juliet* folios, you'll see the names written as Romeo and Iuliet. Even though people were saying "Juliet," they didn't feel the need to write the *J*.

- Old English had no native *J* sound. It inherited it, and its spellings, from Old French. And because spellings at that point used *I* and *J* inconsistently, English writers didn't have a sense that the "j" sound needed to be consistently marked—it was considered optional.
- In the 1700s, Samuel Johnson published his famous English dictionary, which was more comprehensive than others that had come before it. He included many commonly used words, not just difficult and lesser-

known ones. Interestingly, in the *I* section, he included *I* and *J* words, ordering them as if they all began with *I*. This made perfect sense at the time because *J* was not considered its own letter yet. In the early 19th century, Noah Webster was a proponent of distinguishing American English from British English. With that came the idea of spelling things differently and treating *J* as a separate letter.

The letter *J* used to be called "jye," which meant "the *I* that's the 'j' sound." Some people in the United Kingdom called it that until relatively recently. We call it jay now, not because of the Great Vowel Shift, but because the letter *K* that follows exerts a kind of rhyming effect, which helps to eclipse the sense that it's just a kind of *I*.

➤ So, here we are with J, which started out as a variation on something and then became a real thing. You can often hear that in language in general—everything becomes shorter. But just as language wears away, language renews, and in a sense, it stays the same.

10

The Quirks and Zigzags of *Q* and *Z*

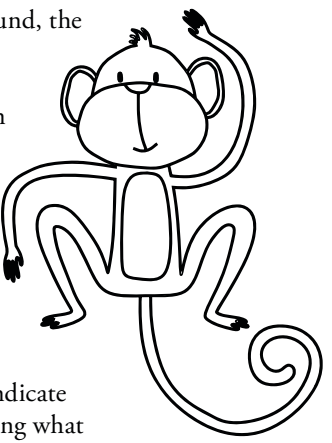
Have you ever wondered why we have *Q* in addition to *C* and *K*, or why some *Z* words seem exotic? Both *Q* and *Z* are odd in that they're latecomers to an alphabet that was functioning well without them. While they come in handy today, especially for their Scrabble value, their purposes were not always apparent. Their stories further demonstrate the interesting way language—and spelling, in the case of *Q*—can change over time.

The *Q* Problem

- The *Q* problem is not unique to English. It was needed in some languages, and then it wasn't needed in others, but it was kept for some reason. It starts for a reason and then it's just kind of there.

- In biblical Hebrew, the words *qof* and *kaf* were pronounced differently. The *Q* sound is produced in the uvular region of the mouth. Recall the other regions where sounds are produced: lips (the "p" sound), alveolar ridge (the "t" sound), soft palate (the "k" sound), and glottal area (the "uh" sound). In the uvular region, you can make a stop, an "ulh" sound. In many languages, including biblical Hebrew, "ulh" is a sound, and there's a difference between "k" and "ulh." For example, *qol* meant "voice" and *kol* meant "all." Today, both words are pronounced "kol," the way we'd expect.

- In Phoenician, there was a letter for the "ulh" sound, the uvular stop, called qoph, which probably meant "monkey." The Greeks took that in as "koppa," but they didn't really need it. The Etruscans then took it, and they could actually use it—not exactly as a uvular stop but as one of their *K* sounds. Recall that the Etruscans had three different *K* sounds. It wasn't a spelling rule. It indicated a distinction between the "kv" sound and their other *K* sounds.



- The Romans could have let it go—they did not need the *Q*. Instead, they kept it and used it to indicate the *K* sound before *U* and another vowel, following what the Etruscans had done. That's why, in Latin, there's a *Q* in *quinque*, "five," or "*Quo vadis?*" "Where are you going?" There's no reason why those words couldn't have been spelled with a *K*.

- Latin became the Romance languages, and this *Q* sound stayed. In French, as time went by, the "kw" sound became just "k," which is why today, "four," *quattuor*, in Latin is *quatre* in French. In both Latin and French, "who" is *qui*, but in French it's pronounced just "kee." English then inherits these spellings.

- Scribes began writing English words with some French decoration, changing words like *cwen* to *queen*. (At this point, French still pronounced the "Q-U" as a "kw" sound instead of a "k" sound.) *Cwen* actually meant "woman," not "queen." Perhaps the "Q-U" made it seem elegant.

- In any language that does not have uvular stops, including English, *Q* is a kind of accident; it's not necessary. It all goes back to the Phoenician language spoken in the Middle East, which did have the "ulh" sound and so had a real need for a way to distinguish it.

Z Gets Real

- For a long time in English, *Z* also was not necessary. It just happened to be carried along because of the strange history of the alphabet in Europe. *Z* started as a weapon. In Phoenician, there was something called zayin, and it was in the seventh spot. There was nothing exotic about *Z*. In Hebrew, the *Z* letter is oddly close to the beginning.

- In Phoenician, it looked kind of like an axe, like a lowercase *l* with a little cap and a little bottom. The Greeks took on this letter for the same sound, but they got the name wrong. Instead of zayin, they took the name of another Phoenician letter, tsade. They then changed tsade to zeta. That random mistake stayed baked into what we call *Z* today.

- The reason the letter *Z* is last is because in Latin, there was no *Z* sound—speakers didn't have what they perceived as a *Z* sound. So, the first Roman alphabet had no *Z*. They didn't want it, and this time they didn't take it. But in the 2nd century CE, the Romans started using a lot of Greek words, many of which have this misnamed zeta, so they decided to take the *Z*. For them, though, *Z* was still considered "other." They thought of it as different, a late addition, so they put it at the end of their alphabet. *Z* was an afterthought for people speaking Latin at a certain point in the history of that language. That gets passed on to us, and so we English speakers still have *Z* at the end.

- English didn't have a "real" *Z* sound either. But recall the way language works, how something often begins as a version of something else, the way *J* started as a version of *I* and then became a letter in its own right. To an

Our *Z* comes at the end of the alphabet because that's where Latin had put it when they started using many Greek words. Those Greek words are what make our *Z* words seem more exotic, like *zebra* and *zoological*.

Old English speaker, the "z" sound probably felt like one way to say "s," for example, when it came between vowels, as in the words *rise* and *close*. It didn't seem like a real sound to them, and when people feel that way about a sound, they don't usually have a letter for it.

- When English took in Greek words by way of Latin, many of the new words used a *Z* that didn't feel like a kind of *S*. They were real *Z*s, because Greek had real *Z*s. So, when English speakers started using words like *zygote* and *horizon*, which clearly didn't originate with an "s" sound, that was a sign that there's supposed to be a letter for it.
- The Phoenician zayin originally looked like what we know as a capital *I*. When the Greeks adapted it, they weren't thinking of it that way, because they hadn't created a capital *I* yet out of yod. They modified the shape so that it could be written in one stroke, with a diagonal stroke connecting the top and bottom strokes—exactly what we would do. At first, it's a very narrow *Z*, and then it gets broader. That's where the modern *Z* shape comes from.
- After a while, no one remembers what the zayin looked like in Phoenician. Interestingly, when the Romans added serifs to the

In England, some people called *Z* "izzard" until the late 1800s, and in parts of India today, some people still do. That name likely came from French students reciting the alphabet, ending it with "*W, X, Y, et zède*"—the last part meaning "and *Z*." We do the same thing in English. To someone listening, that "*et zède*" could sound like "izzard," and therefore *W, X, Y,* "izzard."

actual letter *I* to distinguish it from their numeral 1, they would have had no idea that they accidentally recreated the old zayin shape from Phoenician.

- In the United Kingdom, *Z* is often called zed. That's one way of anglicizing Latin's *zeta*. "Zed" was inherited from French, where it was pronounced both "zed" and "zay." Because of the Great Vowel Shift, "zay" becomes "zee." Recall that Noah Webster wanted America's language to be distinct from British English. His preference for "zee" over "zed" influenced what we call it today.

11 The Ramblings of *R*

If we could start the alphabet over from scratch, we would probably come up with different letters for all the ways *R* can sound. We would not use the same letter *R* for all of them, as we do today. This lecture explores why there are so many different sounds for *R* and how the letter got its shape and name.

Varieties of the "R" Sound

- A question that linguists are asked often is, "Why is there such a wide range of sounds for the letter *R*?" There's the English "r" sound, the Spanish trill, and the throaty French sound. Why are they indicated by the same letter?

- If each writing system more honestly reflected how people talked, then *R* wouldn't be so confusing. But in terms of natural human conservatism, we're not going to have the kind of perfection we seek, so we end up with a letter that sloppily corresponds to actual sounds.

- The English "r" sound is subtle and rather uncommon in languages. It's often the last sound in English that children learn properly, and it's especially hard for non-English speakers to learn. Similarly, when English speakers learn another language, such as French, Spanish, German, or Hebrew, they must learn a new way of pronouncing *R*.

When it comes to language, it's important to realize that what we think of as normal is not always normal. In English, for example, we indicate the difference between *the* and *a*, the definite and indefinite articles. That distinction is not typical of languages around the world. While all people can feel the difference between definiteness and indefiniteness, indicating it is not nearly as common as you might think, especially once you go beyond Europe.

- In western Europe, that throaty French kind of *R* is much more common. It used to be that the default *R* sound in Europe was a trill. In French and German, for example, that's the way it was supposed to be pronounced. One way we know this is from Molière's 1670 play *Le Bourgeois Gentilhomme*, which has a scene where somebody is being instructed in what's supposed to be the proper *R*, which for them was the trilled *R*. It was associated with a certain elegance, perhaps because it's difficult to do, even for some children who are born to languages that use it.

- Over time, the proper French *R* changed, in terms of prestige, from the trilled *R* to the throaty sound. That sound, called a uvular fricative, is produced in the same region of the mouth as the "ulh" sound for *Q*, the uvular stop. The uvular fricative sound is not an *R*, but it's produced where an *R* used to be produced. So, the writing system settles in, and there's an *R*, but after a while, people are pronouncing it differently, with this throaty *R*-ish sound.

- Nobody really knows why that happened. The trilled *R* is one of those hard sounds to master, and children often substitute other sounds for *R*, which might have encouraged the overall change. The uvular fricative pronunciation spread to other countries in the 1800s with the prestige of French. That pronunciation is often considered the standard in Danish, Swedish, Norwegian, and continental Portuguese, and therefore some Brazilian Portuguese. Interestingly, it is most entrenched in parts of Sweden and Norway where French contact would have happened.

Unusual sounds have a way of spreading through areas where there's contact between speakers of different languages. Sounds can sometimes even jump over language families, like the click sounds in southern Africa. They start with the Khoisan languages, and then those clicks jump into Bantu languages like Zulu and Hausa that didn't have the clicks before.

- The uvular fricative also developed in Germany, although that was probably independent from what happened in France. There were varieties of German that had the uvular *R*, including ones that became Yiddish. That sound got passed into Israeli Hebrew when Hebrew was revived as the national language of Israel.

- Even some varieties of English have had the uvular pronunciation, as in Northumbria in the past. In the 1700s, Daniel Defoe, best known for *Robinson Crusoe*, wrote about these Northumberland people. He says:

> I must not quit Northumberland without taking notice, that the Natives of this Country, of the antient original Race or Families, are distinguished by a Shibboleth upon their Tongues in pronouncing the letter R, which they cannot utter without a hollow Jarring in the Throat, by which they are as plainly known, as a Foreigner is in pronouncing the Th: this they call the Northumberland R, or Wharle; and the Natives value themselves upon that Imperfection, because, forsooth, it shews the Antiquity of their Blood.

R's Shape and Name

- *R* begins in the original Egyptian alphabet as the shape of a head. "Head" in Semitic languages is a word beginning with an "r" sound and ending with an "s" or "sh" sound, as in *resh*. In Hebrew, *Rosh Hashanah* means

"the head of the year." In Amharic, also a Semitic language, there's "ras" as in *Rastafari*, meaning "Chief Tafari," as in "head" or "chief" Tafari. Tafari was the birth name of Haile Selassie.

- The Phoenicians retained the headlike shape for their alphabet. The Greeks did, too, though they made it look less like a head, because it didn't mean that to them. They called it rho. At first, it faced left, but when writing from left to right became the custom, they reversed the rho letter, and so the head faced right. The result was what now looks like a capital *P*. So, *P* stood for *R*.

- The actual letter *P* was a different story in the Roman alphabet because of differences in how Greek and Roman handled the letter for "p." The Egyptian symbol for "p" looked like a mouth, and the word for that would have been *pe*. But instead of drawing the whole mouth, they started drawing only half of it. Over time, it looked less like a mouth and more like a cane.

- The Greeks adopted the cane and called it pi. They squared it off and turned it around for left-to-right writing. They then took the hook and extended it down to create two evenly shaped legs, and that's the Greek letter that we know as pi. They needed to create pi because what we see as a *P* had already become an *R*.

- The Romans borrowed the "p" from the Greeks when it was still in the shape of a cane. They let the hook become a loop, and that became the Roman "p" sound. To avoid confusion between this new shape and the *P* shape they already had that stood for *R*, they hung a tail on the earlier *P* shape. That's how we get the *R* that we're so familiar with.

- The lowercase *r* looks so different from the uppercase *R* because of a devolution—an undoing. In uncial and then in Carolingian minuscule script, there was a shorthanded *R*, where the coil and tail became

looser and were allowed to "unhitch." This began as just a faster way of writing *R*. Only later was it thought of as a lowercase *r* in contrast to an uppercase *R*.

- Why isn't the name of *R* pronounced like "air"? If we pronounce *F* as "eff" and *S* as "ess," then it seems reasonable that *R* would be "air," especially since that's how it's pronounced in Romance languages like French and Spanish. The reason is because of something random. In English, there were many words that were once pronounced "air" and changed to "ar." For example, the word *star* sounded like "stair," and "far," as in *far away*, would have been "fair away." In the same way, if you had a letter like "air" that came before a letter "ess," the "air" became "ar."

12

The Unfolding of *U*, *V*, *W*, and *F*

As we've seen throughout this course, the adoption of letters by languages often depends on what sounds they have at the time the letters are being passed to them. The complicated story of *U*, *V*, *W*, and *F* follows this theme, and because of the confluence of many factors, parts of the story cannot be told linearly. This lecture unpacks the common origin of these four letters and how they evolved to be as we think of them today.

One Shape, Multiple Sounds

- The Phoenicians had a letter that was pronounced "w." It didn't look like a *W*, though. It looked like what we know as *Y*. The Greeks took this *Y* letter to represent two sounds: "w" and "oo." For the "w" sound, they transformed the *Y* into what looks to us like an *F* shape. For the "oo" sound, they retained the *Y* shape and put it at the end of their alphabet. This is why our letters *U*, *V*, and *W* are also at the end. Later in the lecture, we'll see what happened with their *F*-shaped letter.

- The Romans took the *Y* shape at the end and used it for their "oo" and "w" sounds. They understood these sounds as versions of the same thing, in the same way that, on some level, we do as well. In Roman, that is, Latin, words that technically began with an "oo" sound were pronounced "w," as in the word *vale*, pronounced

Languages can lack sounds that we take for granted. For example, in Iroquoian languages, there are no sounds that require speakers to put their lips together—there are no "p," "b," or "m" sounds. And French does not have the "th" sound.

"wah-lay," meaning "goodbye." They also used the "w" sound when "oo" occurred before another vowel, as in *quercus*, pronounced "kwair-coos," meaning "oak."

- Over time, the *Y* shape evolves. Writers drop the part that hangs down, and it becomes what we know as a *V*. This new *V* shape continues to be used for the "oo" and "w" sounds; Latin did not have a "v" sound.

The Separation of *U* and *V*

- Sounds are always changing, and in Latin, the "w" sound at the beginning of words became a "b" sound. Over time, the "b" became a "v." So, Latin didn't have the "v" sound at first, but it developed one. For example, the English word *Venus* would have first been pronounced "way-noos" in Latin and then "bay-noos" in Late Latin. By the time it got to French, the word was pronounced "vay-noos." We associate that *V* shape with the "v" sound because Latin developed the sound, not because it had it at first.

- Two things happened at this point. As people were writing more and inscribing less, a looser, easier way of writing *V* developed in the uncial script. This resulted in a *U* shape, but it still meant *V*. So, at this stage, the two were thought of as variations on the same thing. Also, in French, the letter *V* could still be either the "v" or "oo" sound, the way it was in Latin long ago. Latin becomes French gradually. French was just a kind of Latin, and it was the same way with their writing system. At this point, a literate French person thinks of *V* and *U* as variations of the same sound, just as the Romans thought of "oo" and "w" as the same sound.

- Old English speakers didn't have *V* either—they didn't think of it as a real sound. Just as the "z" sound was interpreted at first as a version of the "s" sound, they thought of the "v" sound as just something that happened to "f" in between vowels. For example, they pronounced *lufu* as "loo-voo," meaning "love."

- When French words entered the English language, things began to change, because there were now words that began with the *V* sound, like *valeur*, "value." That sound didn't feel like a kind of "f" sound to English speakers. Around the mid-1400s, a new sense emerged that "v" was a real sound.

- French at that time was using *U* and *V* in print interchangeably, the idea being that "oo" and "v" were the same sound. To an English speaker, though, the "v" sound was used at the beginning of words, and so there emerged this practice of using *V* at the start of a word and *U* in the middle of it, despite the fact that that meant the *V* was the "oo" and the *U* was the "v." So, *under* was spelled "vnder," and *upon* was spelled "vpon," while *save* was spelled "saue" and *live* was spelled "liue." That treatment came from this idea that *V* and *U* were the same thing, but one went at the beginning and the other went in the middle. Only around the 1700s did English assign *V* to the "v" sound and *U* to the "oo" or "uh" sound.

W, as in "Double *U*"

- Recall that in Latin, words that originally started with "w" changed to "b" and then "v." But some words kept the "w" sound because of custom. Those were usually place names, words that were used a lot. The problem was that the letter *V* eventually became recognized as standing for the "v" sound. So newer Latin needed a way to indicate the old "w" sound. The solution was a double *U*. Other languages modeling themselves on the Roman system, like German, adopted double *U* as well. So, it started out as two "oo's," and that's why it's called "double *U*."

- Old English already had its own letter for "w," called wynn. It's something we never see today. It was needed because Old English had words like *water* and *we*, so there was no question as to whether "w" was a real sound. The problem with wynn was that it looked too much like *P* and

When Samuel Johnson's dictionary was published in 1755, his ordering of *V* and *U* words showed that he thought of them as the same thing. Words like *vacant* were followed by words like *ubiquitous*. He had used a similar treatment for *I* and *J* words, which were also thought to be the same at one time, as we saw in lecture 9.

made things confusing. After the Norman invasion, as English took on French words, the wynn fell away and the French-style double *U* was used to indicate the "w" sound.

- In French, to indicate the double *U*, they used "ou," as in *oui*, "yes," and *ouest*, "west." After a while, they adopted the *W*, especially for words borrowed from other languages. By then, however, there was a print tradition of writing the two *U*s as *V*-shaped. English speakers continued to call it the "double *U*," but by the time the French adopted it, late in the game, it looked like two *V*s, and that's why the French call it *double vé*, "double *V*."

The Origins of *F*

- It's time to circle back to the letter *F*. Recall that the Greeks took the Phoenician *Y* shape twice. The one they put at the end of their alphabet went on to become *V*, *U*, and *W*. The other one became an *F* shape that the Romans later used for their "f" sound. Over time, that shape morphed into what we recognize today as the uppercase *F* and lowercase *f*.

13

The Yesteryears of *Y*

The letter *Y* was borrowed at different times by different languages for different reasons. This lecture traces its journey as it was adopted twice by Greek, twice by Latin, and twice by English—once before and once after French's influence. Many factors came into play in *Y*'s evolution, including the Norman Invasion, the Great Vowel Shift, and the growth of printing.

The "Ew" Sound

- To understand the history of *Y*, we have to first understand that the sound it originally referred to was one that we don't have in English, at least not anymore. Recall that the Phoenicians had a *Y*-shaped letter that stood for their "w" sound. The Greeks borrowed it twice and assigned one of them to their "oo" sound, placing it near the end of their alphabet. When it gets to Latin, the second *Y* changes into a *V* shape. But in Greek, things were completely different, and so this "oo" sound changed to the "ew" sound. French also has the "ew" sound, pronounced in words like *lune*, "moon." In linguistics, that sound is called a high front rounded vowel.

- The Greeks called this sound "hew," because at that point in Greek, when the "ew" sound came at the beginning of a word, it always had an *H* before it. Consider, for example, the words *hyper* and *hypo-*. In Greek, those *H*s were in front of the "ew" because they were remnants of what had been *S*s. In a Latinate word, *hyper* is *super* and *hypo-* is *sub*.

- The "ew" sound, when it changes, often becomes "ee," and so, in modern Greek, *Y* is pronounced "ee." That letter is called upsilon, meaning "simple eu." It was called that because another sound in Greek, "oy," also became "ew," so there were two "ew's" for a while. The *Y* "ew" was the "real ew," the "simple, or naked, ew," and then there was the other one. Both became "ee." And that's why, for example, our English word *oenology*, the study of wine, is pronounced "ee-nah-luh-jee." It comes from the Greek word *oînos*, meaning "wine."

The Roman *Y* and the Greek *I*

- Just as the Greeks borrowed the *Y* shape from the Phoenicians twice, the Romans borrowed the Greek *Y* shape twice. But whereas the Greeks borrowed the shape twice at the same time, the Romans borrowed the shape at different times. First, they used it for their "oo" sound, which we know devolved from a *Y* shape into a *V* shape and later a *U* shape. When they borrowed it again later, they retained the *Y* shape. They used it specifically for the Greek words they had adopted, like *stylus*, which was, at first, pronounced "stew-loos." At that point, the Romans decided they

needed a new letter, so they took the *Y* and kept it that way. There was no *Z* yet, so *Y* was at the end of the alphabet, which explains why it holds the place it does today.

- In Latin, "ew" became "ee," just like it had in Greek. So, what was "stew-loos" for *stylus* became "stee-loos." This meant that, in Latin, there was an interesting situation where there were two ways to write the "ee" sound: *I* and *Y*. As Latin gradually became French, these two ways served a purpose. As people were writing more, handwriting became more important, and in the handwriting of the period, *I*s were difficult. The practice of using *Y*s for *I*s made it easier for readers to distinguish the letters from one another.

- Consider the Latin word *inuium*, which meant "impassable." It's easier to read if there are *Y*s for the *I*s, as in *ynuyum*. The *Y* has been processed as a special *I*, so to speak, and it's the *I* from Greek. That's why the word for "*Y*" is *i griega* in Spanish and *i grec* in French. It means "Greek *I*." It's a major aspect of why medieval spelling can look rather peculiar.

- This treatment of *Y* as *I* was passed on to English. Sometimes writers would put a dot over the *Y* to indicate that it's supposed to be kind of like an *I*. It became a stylistic gesture to have *Y* for *I*. So, for example, *his* was often spelled *hys*, not to indicate a specific pronunciation, but because people just got used to doing that. Printing eliminated any confusion between *I* and *Y*, and the practice of substituting largely stopped.

Y as "Ee" and a Consonant

- Recall that during the Great Vowel Shift, the "ee" sound changed to "aye." That's why the *Y* in *stylus* is pronounced that way rather than "stee-loos." Just as Greek and Latin had borrowed *Y* twice, English also borrowed it twice. Before being

Have you ever wondered why, when used as a suffix, *Y* is pronounced as "ee," as in the word *happily*? That is a remnant of the time when *Y* was regularly thought of as the "ee" sound, and it just kind of stayed with us.

influenced by French, Old English had used *Y* to indicate its "ew" sound. For example, the word for "feast" was *symbel*, and it was pronounced "sewm-bel." That sound is likely the source of our name for the letter; it's not known for sure. Originally, in English, that would have been "ew-ee," along the lines of "bee," "tee," "vee" for *B*, *T*, and *V*. The "ew-wee" sound for *Y* would have become "wee." The Great Vowel Shift changed it to "wigh," as in *why*. You just never know how these things are going to happen.

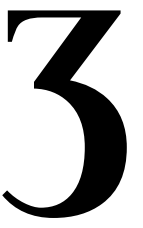
- "Ee" is the vowel version of "y," the consonant, which we also get from French. They began spelling words with an initial *Y*. For example, our word "eyes" was *ieuz* in Old French and is now *yeux* in modern French.

The name Menzies was originally "Mingis," with a yogh. It was just written "Menzies," and people started saying it that way. Scots can play with this, as we can see in this limerick, where the words are pronounced "authentically" but spelled in a jocular way with *Z*:

There wis a young lassie named Menzies,
That askit her aunt whit this thenzies.
Said her aunt wi a gasp,
"Ma dear, it's a wasp,
An you're haudin the end whaur the stenzies!"

Now, replace the *Z*s with *G*s:
There was a young lassie named Mingis,
That asked her aunt what this thing is.
Said her aunt with a gasp,
"My dear, it's a wasp,
And you're holding the end where the sting is!"

- English had already had a letter for the "y" sound, called yogh. It looked kind of like a 3 that hangs below the staff. It was used alternately for the "g," "gh," or "y" sounds. As English started to be written mostly by French speakers, yogh went away, and *Y* started to be used specifically for the "y" sound.



- Interestingly, in some cases the yogh didn't go away but instead was reinterpreted as some other letter. For example, the Scottish name MacKenzie was originally spelled with a yogh, not a *Z*. When yogh became obsolete, a tradition emerged of indicating it with a *Z* rather than leaving it out. The name should have evolved into something like "MacKenna" or "MacKenneth," where that weak *Y* sound dropped out. The *Z* is just an orthographical convention that people then started pronouncing.

14

Brisk Sojourns through *B*, *L*, *N*, and *S*

Some letters may have more interesting stories than others, but all have traveled far and wide to find their places in our alphabet. Their histories are important too. This lecture briefly covers four letters with journeys that might not seem exciting, but that doesn't mean their paths were always predictable or uneventful.

The Letter *B*

- *B* started as a letter in the Egyptian alphabet that stood for the *H* sound. It looked like an enclosure, a square, with a little hole in it. The Phoenicians saw this enclosure as a house and called it *bayt*, because in Semitic languages "house" is *bet*. To make the shape easier to write, they changed it to something that looked like a *P* shape.
- The Greeks took this letter from the Phoenicians and turned it around so that it faced to the right. At that point it looked even more like a *P*, which they already had, so they gave the new shape a second loop to distinguish the *B* from the *P*.
- When the uncial style came in, followed by the Carolingian minuscule, it was faster and easier to write *B* by leaving out the top loop. This becomes what we think of as the lowercase *b*.

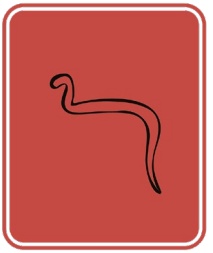
The Letter *L*

- The Egyptian letter *L* probably would have been pronounced "el," and it would have referred to God, as in the names Israel and Emanuel. The Phoenicians took this letter, but to them it looked less like God and more like a cattle prod, something to goad an ox, and their word for that was *lamed*.
- The Greeks adapted the letter, but the word *lamed* had no meaning to them, so they called it lambda and took it in a different direction. This got passed on to the Etruscans and to the Romans, who

Efforts to make the letter *L* easier to write by simplifying it to a single line resulted in something that looked too much like a capital *I* or a number 1—the lowercase *l*. It was only clear when written with serifs. It was one of the last of the lowercase letters to emerge.

named letters based on their sounds. Instead of calling it lambda, they called it *el*. It's kind of a coincidence that it returns to what the Egyptians originally called it: *el*.

The Letter *N*

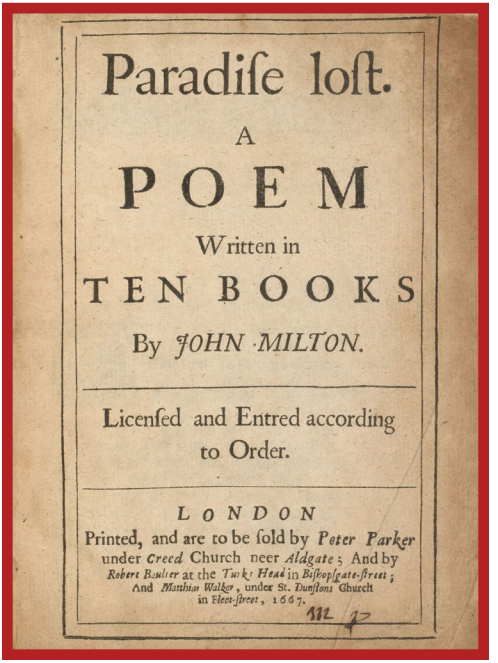


- *N* started as a snake in the Egyptian alphabet, and they likely called it *nahash*. When the Phoenicians took it, they made it a fish and called it nun. This change may have been made to relate the *N*, a fish, to the preceding letter, *M*, mem, which was the Semitic root for "water." There was a synergy between the two things.
- The Greeks took this letter *N* but called it nu instead of nun. That affected the name of the preceding letter, *M*, which they then called mu. So, *mu* was modeled on *nu*. If they hadn't done that, the letter *M* would have become "mema" in Greek.
- The original nu faced leftward, which may seem more natural to some people, especially kids learning to write the letter. Our version of the capital *N* came later when it was written to the right.

The Letter *S*

- The Phoenicians wrote their "s" sound with what they called samekh, but that's not where our *S* comes from. The Greeks adopted the wrong letter for their "s" sound. Instead of taking the samekh for "s," they took the Phoenician letter for "sh." That "sh" letter became shin in Hebrew, but the Greeks mistakenly used it for their *S*. And that mistake, like others we've seen, was just baked in.
- The Greeks named their letter *S* after the Phoenician letter *S*, samekh, even though what the Greeks were using wasn't actually the samekh but the shin. They called it sigma. They also tipped it upward, and gradually it goes from four strokes to three, taking on the *S* shape.

- There were two lowercase versions of this. One of them is what we're used to, which looks like a baby *S*. The other one came filtered through the uncial and then Carolingian minuscule system. The curve was reduced until it was practically a straight line, and it ended up as a downward stroke with little to no curve or just a little bump out to the left. That looked rather alarmingly like a lowercase *f*. Sometimes you'll see that version in old documents. In English, that stops as we straddle roughly 1800, and it stops at different points in different writing systems.



Paradiſe loſt.

A

POEM

Written in

TEN BOOKS

By JOHN MILTON.

Licenſed and Entred according to Order.

LONDON

Printed, and are to be ſold by Peter Parker under Creed Church neer Aldgate; And by Robert Boulter at the Turk's Head in Biſhopſgate-ſtreet; And Matthias Walker, under St. Dunſtons Church in Fleet-ſtreet, 1667.

For a long time, there was a convention where the *f*-like lowercase *s* was used in the middle of words, and the more familiar lowercase *s* was used only at the end of words. For example, in the original documents, Milton's "Paradise Lost" looked like "Paradiſe Loſt," and in Shakespeare's folio, *Love's Labor's Lost* looked like "Love's Labor's Loſt."

15

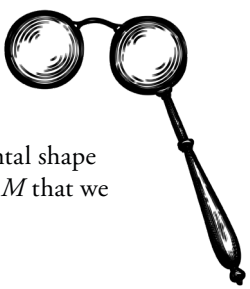
Meditations on *M*, *D*, *X*, and *T*

There are only four letters remaining in our journey through the alphabet. Like the other letters we've studied, some took paths that meandered more than others, and all can teach us interesting lessons about how language works. To understand two of our final four, we need to understand their relationship to others that came before. The lecture concludes with a brief recap of why the alphabet is ordered the way it is.

The Letter *M*

- The development of *M* is probably the most straightforward of any letter of the alphabet. It turns up in that early alphabet by those Egyptian laborers. At first, it's a lengthy squiggle, drawn vertically, that can't be mistaken as anything but waves. If these are speakers of Semitic languages, we can be pretty sure they would have called it mem, the root for "water," or something close to it.

- The Phoenicians took this symbol and turned it horizontally. They added a long stick, so to speak, at one end, making it look kind of like a lorgnette. The Romans, who had a way of making things, especially letters, look beautiful, modified the horizontal shape into two balanced squiggles. The result was the letter *M* that we have today.



The Letter *D*

- The story of *D* may only make sense in relation to *M*'s story, especially when we think about connection between the fish and the water, discussed in lecture 14.
- The Phoenicians called their letter that stood for the "d" sound dalet, after their word for "door." However, the triangular dalet didn't look much like a door. One possible explanation for its shape is that it might have been a fish before it became a door. The Phoenician word for "fish" is *dag*, which could have also stood for *D*. Why would it have been changed to mean "door"?
- Recall that when the Phoenicians adopted the *N* from the Egyptians, they changed the snake, *nahash*, to a fish and called it *nun*, another Phoenician word for "fish." That fish may have served as an indicator or memory aid for the preceding letter, *M*, mem, the root for "water." The problem was that then there were two fish letters, and they may have chosen to keep the mem-nun relationship and change the other one. They may have chosen "door," because a door can have many shapes. So, the reason that the *D* letter is a door is probably because somebody just made it up after a second fish was created later in the sequence. We can never know how these things will work out.

The Letter *X*

- The Greeks borrow the letter *X* from the Phoenicians and use it for their "kh" sound at first. But that's not where our *X* comes from.
- Recall that the Greeks took the wrong Phoenician letter for their "s" sound. The Phoenician "s" was samekh, but the Greeks took shin and called it sigma, their variation of the word *samekh*.
- When the Greeks wanted a letter for their "ks" sound, they made another mistake by taking the actual samekh. This meant that the Phoenician "s" became the Greek "ks." If this process had been more straightforward—if

we'd taken what the Greeks borrowed originally from the Phoenicians—our *X* should be something derived from this samekh. But it didn't work out that way because of chance reasons.

- Writing systems are rarely completely uniform across regions, especially in the early days when there wasn't standardization. One way to write "ks" in Greek was to use the samekh-derived symbol; that's what it should have been. However, other dialects of Greek would indicate "ks" in different ways. One way was to combine *X*, which stood for "kh," with the sigma *S*, which stood for "s." When those were combined, it looked like "khs," but it was considered shorthand for "ks." So, there were two ways to make "ks." That chaotic situation got even worse because you could abbreviate this doublet into just the *X* sign, and that was seen as indicating "ks."

- Greek dialects in Italy were among the ones using this "khs" to indicate "ks," and that was where the Etruscans got it. They were borrowing from people using Greek on the peninsula. The Etruscans passed this usage of *X* for "ks," and that is why we use it in that way.

The Letter *T*

- *T*'s story only makes sense when connected to *X*. In Egypt and then Phoenician, the *T* was a cross called *taw*. It meant "mark" or "cross." The Greeks moved the horizontal line up to the top to avoid confusing it with the letter *X*, especially when it was handwritten. This is how we got the capital *T*.

- Once the uncial form develops, things loosen up a little bit, and crossing the *T* over the top becomes chancier—it's easier just to cross through. The lowercase letter, as this uncial and then Carolingian minuscule version of the letter becomes, ends up looking the way the capital letter began. It's just a random consequence of history, and it took a while.

The lowercase *t* is the second-newest of those lowercase forms, appearing in 1200. Lowercase *i* appears about 200 years later, when printing made serifs easier to use and the dot made it clearer.

The Order of the Alphabet

- Throughout the course, we've gotten a sense of why the alphabet is in the order that it is, especially at the beginning and at the end. For example, we know why it would begin with something like "ah." We understand why it goes *B*, *C*, *D*—because *C* is a version of what began as *G*, and "b" and "g" and "d" are a class of sound called stops. They're more properly ordered "b," "d," and "g" in terms of how they're pronounced in the mouth.

- The Phoenician alphabet ended with *T*, and later the Greeks added *V* and *U*, and *W* derived from them. The letter *X* was a later development by the Greeks, and then the Romans added *Y* and *Z* to the end to use for Greek words.

- So, the order of *A*, *B*, *C*, *D* makes sense, as does the order of *U*, *V*, *W*, *X*, *Y*, *Z*. A lot of what happened in the middle has to be ascribed to randomness, although putting *M* and *N* together was probably not an accident because they're both nasal sounds—an "m" is just an "n" that's pronounced with your lips together. The alphabet has come a long way, and we have now seen how that happened with at least a brief look at each of its 26 letters.

A strange poetic document exists from 1475, written in Middle English. It's known as *Flen Flyys*, meaning "Fleas and Flies." It is rather obscene in places, and those parts are written in a code: Instead of using the correct letter, the author uses the one that comes after it. For example, the word *wives* is spelled XXKXZT. Deciphering the code shows us not only how people understood the alphabet at that time, but also how spellings have changed.

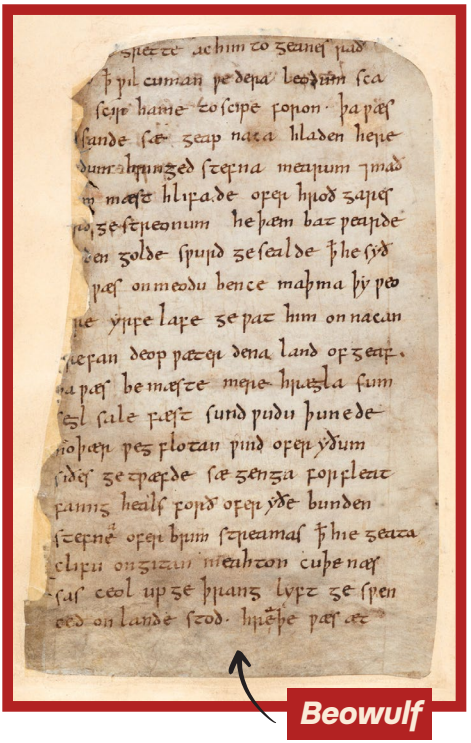
16

How Did Punctuation Develop?

As writing became more common and reading became more private, punctuation developed as an aid for comprehension. The story is not linear—there were as many reversals as there were moves forward. This lecture highlights some of the turning points in the evolution of punctuation, from the first attempts to create a system to the standardization that came with the invention of printing.

Early Punctuation

- The story of modern punctuation begins with its absence. Early writing either has very little of what we would call punctuation or lacks it completely. For a long time, there weren't even spaces between words. It didn't immediately occur to people to create anything like that for the page. This lack of punctuation is part of what makes it so hard to understand many early texts, because there could be different interpretations depending on how one might punctuate. If we do encounter early materials that are punctuated, it's because it was added later. *Beowulf*, for example, didn't have semicolons and commas. It did have spaces between words, but that was the extent of it.


Beowulf

- Writing was first used for commercial or memorial purposes—to make lists of inventory, record transactions, or chronicle a series of large-scale events. As writing began to serve more purposes, such as private reading, punctuation was needed more to ease comprehension. Private reading seems so natural to us, but at first, if something was read, it was read out loud to other people. For example, people's religious experiences often involved being read to from liturgical texts.

- The earliest punctuation known is on a stele that dates from 840 BCE. Written in Moabite, a variant of Phoenician, it's a partial reproduction of the book of Kings in the Bible. On the stele, there are two types of punctuation marks: a dot between words and a slash to indicate a new thought. They were probably aesthetic choices of the person responsible for creating that particular object. It wasn't until later that someone proposed a system for punctuation.

Moabite Stele

Even as reading alone became more common, people would still read aloud, even to themselves. Silent reading eventually became the custom, but until then, mumbling readers made for noisy libraries.

The First Systems of Punctuation

- Aristophanes of Byzantium, a librarian in Alexandria, found the unspaced Greek writing system cumbersome. He designed a system of three dots to indicate pauses of different lengths for readers reciting texts. At this point, it was still about orality. The high dot indicated a full stop, like a period.

The middle dot indicated a partial pause, a breather, akin to the semicolon. The low dot was like a comma, indicating the kind of brief pause one would take when reading a list of things.

Cicero rejected the early Greek punctuation system, finding its prompts to be antithetical to the art of individual recitation. To him, developing oratory skills meant people had to figure out pauses on their own, and punctuation restricted an orator's choice.

- The Romans didn't adopt this system from the Greeks along with their alphabet. Only after the fall of the Roman Empire was the Greek system adopted into Latin. This was first done by Archbishop Isidore of Seville in the 600s CE. He embraced it because Christianity was a text-focused religion, relying less on oral recitation than, for example, Judaism. As reading became more common, more necessary, and more private, punctuation took on greater importance.

- Isidore's system was like the Greek one, but it focused more on writing than speaking. He used it to indicate relationships between pieces of text. Around the same time, monks in England and Ireland were establishing the practice of putting spaces between words. They did this mostly with Latin texts, which were harder for them to read than texts in their native language.

The Period, Comma, and Semicolon

- One reason medieval texts are so difficult to understand is that punctuation varied greatly depending on the time, the place, and the author. This phase was a bit chaotic. For example, pause marks used in Gregorian plainchant scores were adapted by French scribes for ordinary written text. That tradition led to the colon and the semicolon that we use today.

- The colon started as an upside-down semicolon, called the *punctus elevatus*, whose tail on the upper part wore off. The semicolon began as the *punctus versus* in Gregorian texts. It was used sometimes, but not always, to end a sentence. That is why, in some medieval texts, sentences end with semicolons; it functioned as a period.

- After 1200, an Italian professor named Boncompagno da Signa created a punctuation system that used a dash for a major pause and a slash for a lesser pause. The slash caught on and evolved into what we now know as the comma. While all this was happening, the dot system created by Aristophanes was still being used, though in vague ways.

- The invention of printing in the 1400s stops the madness, and by 1500, our modern system is established—more or less. Two printers, Aldus Manutius and his grandson, greatly influenced the process of standardization. The lower dot came to mean the full stop, our period. The Boncompagno slash was lowered and rendered as a comma, and

the semicolon marked the intermediate state. The first manuscript with modern punctuation was *De Aetna*, a scholar's account of his trip to Mount Etna.

The Exclamation Point and Question Mark

- There are two more punctuation marks worth discussing—there were, of course, more than we can cover here. Like everything else, they evolved gradually. However, the poet Iacopo Alpoleio da Urbisaglia claimed to have invented the exclamation point in the 1300s. This mark, the *punctus admirativus*, indicated when something should be read with a tone of admiration. His version was two dots and a slash going up to the right.

- A more popular story is that the exclamation point began as Latin's *io*, which meant roughly "hooray." Over time, it shortened so that the *O* went under the *I* and became a dot, which looks like an exclamation point. However, there's no evidence to support this story.

- According to one story, the question mark began as an abbreviation of the Latin word for "question," *quaestio*. In the abbreviated "Q-O," the *O* became a dot, and the *Q* moved upward and turned the other way, forming the shape of a question mark. Once again, there's no evidence for it.

- It's more likely that the question mark began with the *punctus interrogativus*, an "interrogative point." It was formed with a dot and a tilde. The tilde gradually tilted upward and became a curve. It's easy to see how that would become a question mark.

Conclusion

- We have covered quite a bit in this course, which began with societies that thrived without any kind of writing systems—where everything was oral. The early writing systems that developed were essentially scribal

customs, elite scribal tools that would have been difficult for the ordinary person to master. It's fascinating how everything slowly evolved, including punctuation.

- There were the Egyptian workers who came up with the idea of an alphabet, which got picked up by maritime traders, the Phoenicians. From there it was adopted by the Greeks and then by the Romans. It was even heavily influenced by a group of people who are now utterly unknown and extinct, the Etruscans. Gradually, there emerges a democratic alphabetic system used all over the peninsula called Europe, and eventually all over the world, except for a few places.

- We should be careful not to assume that today we are more advanced. Language is always changing, and there is chaos today like there was in medieval manuscripts at times. For example, there's a debate over the necessity of the Oxford comma. And what about the apostrophe? Is it necessary for conveying meaning? Throughout this course, we've seen things that people did in writing systems that weren't strictly necessary; sometimes it was just a matter of custom. In many ways, we are just like them.

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