

Who invented the alphabet? The untold story of a linguistic revolution

One of civilisation's most revolutionary inventions was long thought to be the brainchild of ancient Egyptian scribes. But its true creators may have been far less glamorous

[HUMANS](#) 5 February 2020

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AMENEMHAT III is one of Egypt's lesser-known pharaohs. He made pyramids, but not [on the scale of Khufu's at Giza](#). He commissioned many artworks, but none that survive match the opulence of [Tutankhamun's gold mask](#). He mounted military expeditions, but not with the success of Thutmose III, who built a vast empire. Still, Amenemhat has one claim to fame. Under his rule, a technology emerged that is more impressive, valuable and pervasive than any of these legacies: the alphabet.

The alphabet was a revolutionary way of recording information. But it is more than just a writing system. In a recent book, Philippa Steele and Philip Boyes at the University of Cambridge describe it as an ["icon of culture"](#). Today it is so central to education in most countries that children can often recite it long before they have learned to read or write. Beyond the familiar ABC, a variety of alphabets are used to write in many languages, from Russian to Arabic. But all trace back to one common ancestor.

The story of that first alphabet has long been a mystery, but over the past 25 years we have made enormous progress towards pinpointing when and where it was invented. Most astonishing, the consensus today is that the alphabet didn't emerge from a state-sponsored

initiative as was long believed. Instead, its originators were probably far removed from the ancient world's elites. Paradoxically, they may even have been illiterate. "No trained Egyptian scribe would write in the way these geniuses wrote," says Orly Goldwasser at the Hebrew University of Jerusalem, Israel. "He would be ashamed to do so."

By 3800 years ago, when Amenemhat III ruled, writing had already [been around for more than 1000 years](#). Two systems had become particularly influential: cuneiform, originating in Mesopotamia in south-west Asia, and Egyptian hieroglyphics. It was the latter that inspired the inventors of the alphabet, which still carries faint echoes of its hieroglyphic heritage. Our letter M, for instance, has the crests and trough of a water wave, the hieroglyphic sign from which it emerged. Although most of the letters of the alphabet weren't exactly new, the way they were repurposed certainly was.

Egyptian hieroglyphs generally represented syllables or full words. The alphabet uses a different approach. All letters represent phonemes, the indivisible elementary particles from which spoken languages are built. The word "pen", for example, is just one syllable but contains three distinct phonemes, each represented by one letter. There were some phonemic elements in earlier writing systems, but the alphabet was entirely phoneme based. That was revolutionary.

It may seem like a small distinction, but it makes a huge difference to the way the alphabet worked compared with hieroglyphics. The Egyptians needed hundreds of distinct hieroglyphs to represent individual words. Most languages comprise just a few dozen phonemes, however. As a consequence, all of the [40 or so known proto-alphabetic texts](#) use the same 20 or so symbols, or letters (see "[The first alphabet](#)").

As far as we know, this original alphabet wasn't used to write Egyptian words, but the words of one or more Semitic languages, a group of languages spoken, at that time, by various populations living in the Middle East and Turkey. This suggests the alphabet was a cross-cultural invention. "It makes sense to see this coming out of a close association of Egyptian and Semitic speakers," says John Darnell at Yale University. But in what context the two groups came together to invent the alphabet – and exactly when – wasn't clear for most of the 20th century. Archaeologists first unearthed examples of the early alphabet in 1905, but so little else was found in the following decades that people lost interest in the alphabet's origins. Then, in 1995, Darnell made a discovery that rekindled the flame.

"Good inventions tend to take root fast, so why did the alphabet seem to languish for 600 years?"

While working at the desert site of Wadi el-Hôl, a few tens of kilometres north-west of Luxor (the ancient Egyptian city of Thebes), Darnell's team analysed two alphabetic inscriptions carved into rock. Although still indecipherable, the style of the letters suggests many emerged from a very particular type of Egyptian hieroglyphics called hieratic. This was a significant discovery. Formal hieroglyphics altered little as time passed, but hieratic did change. And the inscriptions looked like a style of hieratic used 3800 years ago. "It's pretty incontrovertible that the inscriptions date to the end of the 12th dynasty, during the

reign of Amenemhat III,” says Darnell. That makes them among the oldest alphabetic inscriptions found.

The first alphabet

Alphabetic texts first appeared around 3800 years ago. The oldest share dozens of symbols but the record is incomplete. However, by around 3200 years ago, something resembling today's ABC was emerging.

𐤀/𐤁	— A	𐤂	— H	𐤃	— P
𐤄/𐤅	— B	𐤆	— I	𐤇	— Q
𐤈/𐤉	— C	𐤊/𐤋	— K	𐤌	— R
𐤍	— D	𐤎	— L	𐤏	— S
𐤐	— E	𐤑/𐤒	— M	𐤓	— T
𐤔	— F	𐤕/𐤖	— N		
𐤗	— G	𐤘/𐤙	— O		

Most scholars agree that this is currently our best guess for when the alphabet was invented. The Wadi el-Hôl carvings also hint at how it was invented. The site was frequented by the Egyptian army, and military recruits were a cosmopolitan bunch. “You’d have had all sorts of people: Nubians, Egyptians, people from what we’d refer to as Libya, people from south-west Asia – it was a real melting pot of people and languages,” says Darnell. Military expeditions also required scribes to read and write dispatches, so he imagines a scenario in which those professional scribes sat down with their military colleagues from south-west Asia and helped them invent the alphabet. “I’d say it has to come out of some interaction,” he says. “And whoever came up with those signs was probably literate in Egyptian hieratic.”

Darnell and his colleagues [published their findings in 2006](#). Although widely accepted as landmark work, it wasn’t the end of the story. For a start, it highlighted a real puzzle. As far as we can tell, the alphabet wasn’t embraced for state business until 3200 years ago. [Brilliant inventions tend to take root fast](#), so why did the alphabet seem to languish for 600 years?

One surprising suggestion is that the literati didn’t consider it to be superior to their traditional scripts. “We’re conditioned to thinking about writing in terms of efficiency,” says Boyes. From this perspective, cuneiform and hieroglyphics must be poor systems because they employed hundreds of signs, each potentially having multiple meanings. But scribes valued this complexity, in part because [it left room for creativity](#) – enabling them to make visual puns, for instance. “You can switch things around to show how clever you are,” he says. At the same time, ancient writing systems were crystal clear in their meaning. The earliest versions of the alphabet were less so. For instance, most didn’t fully represent the vowels of the spoken language.

Hidden history

However, another possibility is emerging: the alphabet didn’t fail to take off, its early history has simply been hidden, until now. In 2015, Ben Haring at Leiden University in the

Netherlands [described a 3450-year-old chunk of pottery](#) unearthed a few decades ago in a tomb near Thebes. He soon realised the text was unusual. The Egyptian hieratic and hieroglyphic writing looked like [one, or possibly two, mnemonics](#) – or memory aids – spelling out the first few letters of the alphabet in alphabetical order. A modern version might read “Albert Bought Custard Doughnuts”. Aaron Koller at Yeshiva University, New York, argues that [this is a key discovery](#). Thebes was Egypt’s capital at that time, he says. And this fragment of pottery suggests that scribes in the metropolis wanted to learn the writing system apparently invented by their provincial military colleagues 350 years earlier. That might seem like quite a lag, but although Wadi el-Hôl was close to Thebes, in cultural terms it was a world away, visited rarely by Egypt’s elites.

Even if the alphabet was catching on, the Egyptian state didn’t abandon hieroglyphics. Koller thinks he knows why. The clue, he believes, lies in [a collection of 3500-year-old clay tablets](#) documenting formal state business in southern Mesopotamia, more than 1000 kilometres east of Egypt. The text is in cuneiform, but when Stephanie Dalley at the University of Oxford examined the tablets, she discovered something intriguing. On the edge of four of them were short alphabetic inscriptions. Mesopotamian scribes stored cuneiform tablets on shelves in rows, like books in a modern library, says Koller. That makes text on the edges important because it is all that is visible to anyone navigating the archive. Like their counterparts in Egypt, he thinks, Mesopotamian scribes were compelled by tradition to use the ancient writing systems to document official business. But for unofficial, private work – like writing these “spine notes” – they chose to use the alphabet because they found it quicker to write and read.

Dalley is sceptical about Koller’s idea, however. “I do not think the evidence bears the weight of his deductions,” she says. Christopher Rollston at George Washington University in Washington DC also advocates caution because the tablets lack provenance, so it is unclear whether they were archived with the alphabetic inscriptions exposed. In fact, he doubts that scribes used the alphabet widely in its first 600 years. Professional writers typically standardise their writing systems, he says, but there is [nothing standard about the way alphabetic texts were written](#) before 3200 years ago. Some read right to left, others left to right, and yet others top to bottom. Even the orientation of letters within words wasn’t fixed. “If scribes were using this fairly widely for their own purposes, we would expect a modicum more standardisation,” he says.



Texts engraved at Serabit el-Khadim in Egypt could be the root of the Phoenician alphabet, shown on a 2700-year-old tablet (below)

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Goldwasser goes even further. She thinks one reason scribes failed to adopt the alphabet is that they [played no part in creating it](#). In fact, she believes it originated not at Wadi el-Hôl, but at Serabit el-Khadim in the Sinai peninsula of north-east Egypt, where alphabetic inscriptions found a century ago have now been [dated at about 3800 years old](#).



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Serabit el-Khadim was once a centre of turquoise mining, employing Semitic-speaking Canaanites from the Middle East to extract the gemstone. Goldwasser's idea is that these illiterate miners saw Egyptians writing dedications to the gods and wanted in on the action. Given their lowly status, they were never going to persuade Egyptian scribes to teach them hieroglyphics. So they improvised. They assigned new meanings to signs in the hieroglyphic texts so they could record their Semitic language phonetically – and created the alphabet. The Serabit el-Khadim alphabetic inscriptions are crudely executed, with letters of different sizes, Goldwasser notes, suggesting they were written by people with no formal training. Egyptian scribes would never be so clumsy in their work, she says.

Koller concedes that the writing is crude, but still thinks it makes more sense to see the alphabet as an invention from within Egypt's literate elite. However, he also notes that early alphabetic texts are presented in an unbroken stream, whereas hieroglyphic writing incorporated signs to indicate where words end. "So, if the inventors of the alphabet knew Egyptian, they consciously omitted something that's clearly useful," he says.

Rollston thinks it possible that Canaanitic miners played a key role in the alphabet's invention. But he questions whether they were completely illiterate. Goldwasser herself has found evidence that some Canaanites used Egyptian hieroglyphics in the traditional way, although their writing is littered with basic errors. However, she argues that these literate Canaanites were tribal leaders who wouldn't have mingled with the illiterate miners.

Whoever invented the alphabet, they never lived to realise the importance of their creation (see [“How we write today”](#)). Indeed, it is still a mystery exactly why the alphabet ultimately replaced other writing systems. It is tempting to link it with a region-wide collapse of civilisations 3200 years ago, the cause of which is still unknown. But the alphabet was beginning to rise to dominance along parts of the eastern Mediterranean coast before that. “To be honest, I think that it’s more of an accident than anything,” says Steele.

Whatever the reason, the alphabet did become more common as the Bronze Age ended around 3200 years ago. In a very literal sense, written history had changed forever.

How we write today

The alphabet was born about 3800 years ago. After a slow start, it has produced dozens of offspring. Arguably the most important divisions happened between 3000 and 2000 years ago. Near the beginning of this period, the Phoenician alphabet – a direct descendant of the first one – gave rise to the Greek and Aramaic alphabets. The Greek alphabet then led to a huge variety of forms, from the Cyrillic family used in south-east Europe and northern Asia to the Latin/Roman family that includes English, German and French. The Aramaic alphabet, meanwhile, blossomed into a group that includes the Hebrew and Arabic alphabets. It probably also gave rise to the Brahmi script, another distinct type of alphabet that is itself the parent of dozens more used across south and South-East Asia.

Aside from the alphabet, there are two other modern writing systems. In the first – of which Chinese text is the only real example still in use – signs represent full words. In the other, signs represent syllables. Japanese uses many Chinese “word” characters, but has two other writing systems based on syllable signs. The few other syllable-based systems include the Cherokee one used in the south-east US.

The variety and global dominance of the alphabet isn’t necessarily a sign of its superiority to other writing systems, says Amalia Gnanadesikan, recently retired from the University of Maryland. In some parts of the world, alphabets have been foisted on people by empire builders, she says. For instance, they are used across north Asia, Africa and the Americas because of Russian and western European expansionism.

The fact that alphabets use a smaller set of characters than other writing systems isn’t entirely beneficial either, says Gnanadesikan. It means words must be written using combinations of several symbols. Take the phrase “dog bites man”. Someone learning Chinese has to understand just three signs – rather than 11 letters – to read and write the sentence. “So you get a very rapid ability to translate what you’re learning into use,” she says. Moreover, children in Japan learn the hiragana syllable-based writing system so easily that they can often start reading aged 3.

Read more: <https://www.newscientist.com/article/mg24532680-600-who-invented-the-alphabet-the-untold-story-of-a-linguistic-revolution/#ixzz6D5d3Slv1>