Pen2Paper

The Story of
Egyptian Hieroglyphs

Prehistory Becomes History

The conventional view amongst historians is that the transition from prehistory to history occurs at the point at which language can be recorded in a format that enables traditions and stories to be passed from one generation to another. Evidence suggests that as soon as humans developed the ability to hold and utilise tools that required fine motor skills, those tools had a secondary function in addition to skinning and cutting meat; that is the decoration of the walls of caves.

Archaeologists recently discovered and dated the world's oldest cave paintings to 40,800 years ago, located in northern Spain.[i] Throughout the world, disparate communities, who would never have encountered one another, developed this ability to communicate through simple art forms and the point at which these pictures began to hold symbolic meaning is considered by scientists to indicate the evolution of modern man. This moment also heralded the potential for the development of written language.

It is widely accepted that the first writing system was developed by the Sumerians in approximately 3400-3200 BC. The system is known as cuneiform and was still in use until 75 AD. The Sumerian people lived in what is now southern Iraq in a very fertile land which was farmed very successfully. They were also very enthusiastic traders and book keepers and it is possible that their interest in record keeping led to the development of the cuneiform script beyond the use of symbolic pictures. The word *cuneiform* means 'wedge-shaped' and related to the shape of the letters that were carved into the clay tablets using a reed as a stylus in place of a pen.

Could Hieroglyphs be the First Writing System?

The general consensus amongst scholars is that hieroglyphs were developed shortly after the Sumerian script. Whilst it is plausible that hieroglyphs were influenced by cuneiform, there is no explicit evidence to suggest that this is the

case. Establishing a timeline for the development of writing systems relies upon the discovery of examples of text and the reliable dating of these examples. It is believed that the hieroglyphic writing system developed in Egypt in approximately 3100 BC, although there are some examples of writing in Egypt that have been dated to circa 3400 BC, suggesting that its development dovetails that of the cuneiform writing system. These first examples of writing in Egypt are found on inscribed seals at the tomb of a predynastic king known as Scorpion I which is located in Abydos.[ii]

What is clear is that both the Sumerians and Egyptians believed that writing was a divine creation. For the Sumerians, it was believed that the god Enil was the creator of writing as well as being the god of breath and the one who was responsible for the growth of crops. Egyptians believed that the god known as Thoth was responsible for the invention of writing. In addition, he was the historian and scribe for the gods and some believed he also created speech. This could be the reason for the ancient Egyptian belief that immortality could only be achieved if a person's name was spoken or permanently inscribed somewhere – hence the elaborately decorated tombs seen at the famous pyramids amongst other sites.

The term 'hieroglyphic' is an adjective that describes the nature of a writing system; the symbols themselves are referred to as 'hieroglyphs'. The word 'hieroglyph' was first used by Clement of Alexandria in the late second century AD. It originates from the Greek words, *heiros* which means 'sacred' and *glypho* meaning 'inscriptions'. Egyptians used the phrase *mdwt ntr* meaning 'god's words' to describe hieroglyphs.

Whilst the religious and cultural purpose and perhaps origins of hieroglyphs is well documented, it has been suggested that they were also important for trading and business:

"It was once thought that the origins of Egyptian Hieroglyphs are religious and historical, but recent developments could point to an economical impetus for this script as well as push back the time depth of this writing system."[iii]

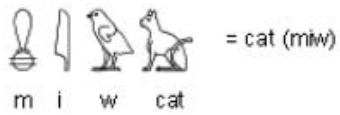
The Evolution of a Writing System

Whilst it is impossible to know the exact date prehistoric man first lifted a writing instrument to record his thoughts in writing, it is possible to determine the evolution of symbolic pictures into a writing system. William Anton Smith suggested that a true form of writing emerges through a process of developmental stages:

1. **Picture Writing System**
   To begin with, carved symbols or characters (known as glyphs) are used initially as a reminder of the parts of the story before evolving into pictographs that directly represent objects, ideas or situations within the story.
2. **Transitional System**
   The next stage would see the glyphs not only representing the objects of the story but the names of the objects as well.
3. **Phonetic System**
   Finally, the glyphs focus on representing the sounds or spoken symbols regardless of their meaning. This would firstly result in a glyph that represents a whole word, before the word being broken down into syllables and lastly single sounds.[iv]

Reading and Writing with Hieroglyphs

In the Classical or Middle Egyptian period (ca.2000-1650 BC) there were approximately 700 glyphs in use and this grew to more than 5000 glyphs by the Greco-Roman era (332 BC- 400 AD).[v] The rapid expansion of the writing system follows the evolutionary stages described above. A common misconception is that the glyphs only had a symbolic or semantic meaning. For example, the word 'cat' would be represented by a cat. In reality, in addition to an image of a cat, there would also be glyphs that represented the phonetic sounds that formed the word 'cat', as can be seen below;[vi]



The glyphs can be written in different directions – they can either be written from left to right (which was most common) but could also be written from right to left or top to bottom, vertically in columns. In order to tell the direction of any given text, it is necessary to study the heads of the animals or people which will be facing the start of the line of text. There was no significance to which direction was chosen by the writer or inscriber, it seems it was merely a question of artistic intention or desired aesthetic result.

Logograms, Phonograms & Determinatives

Most hieroglyphs had multiple meanings and uses. Each glyph is recognisable as a figurative or literal symbol. This is known as a *logogram* and these were used for the most popular common nouns. Additionally, most glyphs also represented phonetic sounds known as *phonograms*. If the glyph was being used as a logogram rather than a phonogram this would be indicated by the use of a vertical stroke between the glyphs.

Whilst many logograms were obviously a visual representation of an object, the connection could also be indirect or metaphorical. For example, the glyph for 'flamingo' was also the glyph for 'red' due to the bird's colour. Likewise, a hieroglyph of a temple flag was used to represent 'god' because of the association between the temple and worship.

Where glyphs were used as phonograms, only the consonants of a word were recorded. This practice is still seen in modern written languages such as Arabic and Hebrew. Glyphs existed that represented one, two or three consonants and were known as unilateral, bilateral and trilateral signs. The hieroglyphic 'alphabet' consisted of 24 unilateral signs but it is important to remember that the ancient Egyptians did not use these glyphs as an alphabet in the modern sense.

glyph	translit.	phonetic	glyph	translit.	phonetic
	*ꜣ*	[ʔ]		*ḥ*	[h]
	*i*	[i]		*ḫ*	[x]
	*y*	[y]		*ḫ*	[ç]
	ꜥ	[ʕ]		*s*	[s]
	*w*	[w]		*š*	[š]
	*b*	[b]		*ḳ*	[q]
	p	[p]		*k*	[k]
	f	[f]		*g*	[g]
	*m*	[m]		*t*	[t]
	n	[n]		*ṯ*	[tʸ], [c]
	r	[r]		*d*	[d]
	*h*	[h]		*ḏ*	[dʸ], [j]

As glyphs had multiple meanings and uses, additional glyphs would be used to act as determinatives. These additional glyphs were necessary for two reasons; firstly, the lack of recorded vowels meant that the same combination of consonant glyphs could represent several different words. Secondly, as is seen in spoken English, the same word can have several meanings and the context of the sentence makes it possible to determine its specific meaning that would not be possible to glean if the word was spoken on its own.

The Development of Hieroglyphs

Hieroglyphs

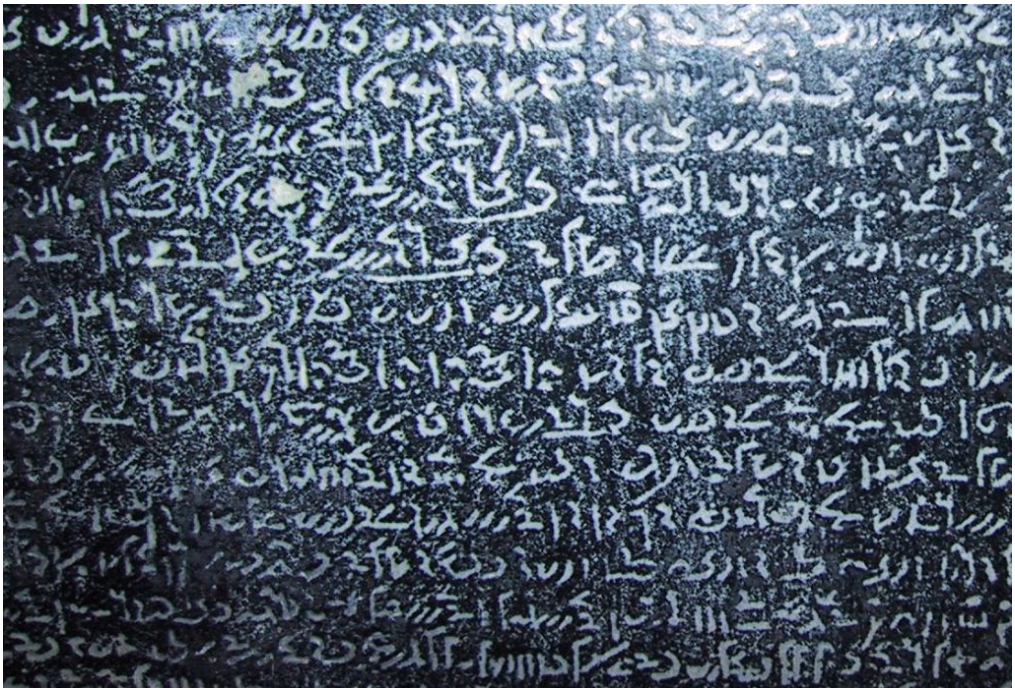
The notion of Egyptian Hieroglyphs conjures up images of tomb inscriptions and vast pyramid sites. In reality, there were three different writing systems used in ancient Egypt with hieroglyphs reserved for use in formal inscriptions on monuments and in places of worship, such as temples. These would have been constructed on a large scale but could range greatly in appearance, with some highly decorated with coloured detailing and others formed from simple outlines.

Hieratic Script

Hieratic script was also known as the script of the priests and was used in painting and manuscripts. Its content was very similar to hieroglyphs but it had a more cursive appearance which would have been more suited to use on papyrus, painted with reeds. A cursive script would not have been possible to produce on a large scale in chiselled stone. Hieratic script would have been quicker to produce and use in an everyday context and over time some frequently used groups of glyphs would have been connected by ligatures, in much the same way as modern cursive handwriting runs letters together.

Demotic Script

Demotic script was also known as popular script or the script for document or letter writing and it replaced hieratic script from around 600 BC onwards until the 5th century AD. By this time, the text had lost the pictorial element and no longer resembled hieroglyphs. It has been suggested that it is more closely related in appearance to the Aramaic texts located in the Fertile Crescent during this time period.[vii] Demotic script was highly cursive and had the highest status in Egypt from the 4th century BC onwards. Within two hundred years, Greek had become the administrative language of Egypt and therefore more important than Demotic and at this time the most significant documents would have featured both languages. Demotic preceded the Coptic alphabet which was developed in 300 AD.



The Swedish scholar, Johan David Åkerblad described demotic script as 'cursive Coptic' and his work studying the Rosetta Stone led to the publication of an alphabet for the demotic text that contained 29 letters (half of which were accurate). In order to do this, he studied the Greek text of the stone and identified where proper nouns and names were placed in the demotic text. A further breakthrough came when it was discovered that proper names, when written in hieroglyphs, are contained within a cartouche, or a rectangular shape with rounded corners.

This discovery meant that it was possible to easily identify the proper names in all three texts and glean insight into the phonetic meaning of the glyphs from this. The foreign names on the Rosetta Stone led to Thomas Young discovering 80 similarities between hieroglyphs and demotic which had previously been viewed as completely separate languages. With the knowledge of the cartouches, it was now possible to study other examples of hieroglyphs with the intention of seeking out the cartouches and deciphering their contents.

The Demise of Hieroglyphs

Many factors led to the demise of hieroglyphs during the 4th and 5th century AD. As use of the Coptic alphabet became more widespread, demotic text disappeared with the most recent example dated to 11th December 452 AD, at the Temple of Isis at Philae.[viii] The Isis Temple also houses the last example of monumental hieroglyphs known as the Graffito of Esmet-Akhom which is dated 24th August 396 AD.

By the 4th century AD, the hieroglyphic texts had become so specialised and expansive with over 5,000 glyphs that few Egyptians were able to read them. Additionally, the Byzantine emperor, Theodosius I, ordered the closure of all pagan temples throughout the empire in the late 4th century AD as Christianity had now been established as the main religion of the Roman Empire. As these temples were lost, so too was the ability to decipher the hieroglyphs and they remained a mystery until the discovery of the Rosetta Stone in 1799.

When the Coptic language is written today using the Greek alphabet it makes use of a small number of hieroglyphs that originated as demotic glyphs. It can also be argued that due to the phonetic nature of Egyptian hieroglyphs, they were the inspiration for all modern conventional alphabets that began with the Phoenician alphabet which originated in modern Lebanon in 1200 BC.

Hieroglyphs Rediscovered

Early deciphering attempts

Knowledge of the existence of hieroglyphs never disappeared, but the understanding of them extinguished with the abolition of the pagan temples in the 4th century AD. In the centuries that followed, many tried to provide an interpretation for the meaning of the symbols, including Horapollo in the 5th century who gave a translation for almost 200 glyphs, some of which were later found to be accurate. Early scholars over-emphasised the obvious differences between hieroglyphs and the Greek and Roman alphabets which did not contain any pictorial content. This focus on the appearance of the glyphs led to the misunderstanding that they did not contain any syllabic or phonetic information:

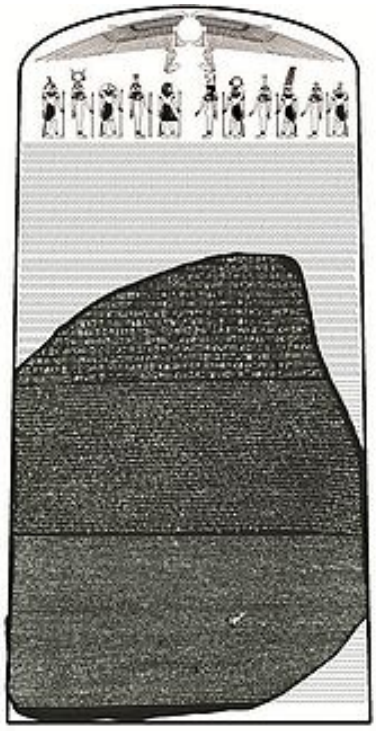
“Believed to be authoritative yet in many ways misleading, this [the work of Horapollo] and other works were a lasting impediment to the understanding of Egyptian writing.”[ix]

Further attempts at translation were made in the 9th and 10th century by two Arab historians, Dhul-Nun al-Misri and Ibn Wahshiyya followed by Athanius Kircher in the 17th century. These attempts were also hampered by the conviction that each glyph was merely a symbol representing an idea as opposed to containing any phonetic information. A translation might attempt to explain why a particular glyph represented a given object and struggle to find even a tenuous connection, when in reality the glyph represented a sound within the word for the object.

The Rosetta Stone

In 1798 Napoleon invaded Egypt and interest in ancient Egyptian culture experienced a renaissance as artefacts were brought back to Europe. In the following year, a French captain Pierre Bouchard discovered the Rosetta Stone at Fort Julien, close to the town of Rashid or Rosetta in the Nile Delta. It is believed to have been on display at a temple originally, but moved and used as building materials during the early Christian or medieval period when pagan temples had been closed.

The Rosetta Stone is believed to be part of a bigger stone known as a stele, or an upright stone slab or pillar which bears an inscription and serves as a marker. The original dimensions of the stele can be approximated by comparing it to other steles from the same era in addition to calculating how much text is missing from each of the three sections.



The text of the Rosetta Stone is a decree asserting the rule of King Ptolemy V over Egypt, following his coronation in Memphis, aged just 12 years old. It also confirms his place amongst the gods to be worshipped by the Egyptian people and instructs that a copy of the decree should be placed in each temple. The Stone has been dated to 196 BC and is written in three different languages, the first section at the top of the stone is written in ancient Egyptian Hieroglyphs, with the middle section in Demotic script and the final portion at the bottom of the Stone in ancient Greek. The use of three languages on the Rosetta Stone confirms that the languages had different roles at the time of its construction.

The riddle of the Rosetta Stone was not solved immediately but took a number of historians more than twenty years of collaboration. Some of the significant milestones included:

1799 Recognition that the three separate texts contained the same content in three languages.
1802 Discovery that the demotic text contained examples of foreign names that had been spelt with phonetic characters.
1814 Discovery of phonetic spellings of foreign names also appearing in hieroglyphic text in addition to other substantial similarities with the demotic text.
1822 Recognition that phonetic spellings were also used in the spelling of native Egyptian words.

By the 1820s, the hieroglyphic script had been completely deciphered by Jean-François Champillion assisted by many historians that preceded him. Champillion was a natural linguist as well as a historian, able to speak Latin, Greek and six other ancient languages by the age of sixteen. One of these languages was Coptic which proved invaluable in the translation of the Rosetta Stone text. Champillion was able to identify that the glyphs were:

“alphabetic… syllabic, and determinative, meaning that he depicted the meaning of the words himself.”[x]

The key to Champillion’s decipherment was the realisation that the Coptic language (which followed hieroglyphs once the development of the Phoenician alphabet had taken place) could be used to aid the translation. Coptic was a descendent of hieroglyphs and was still used by the Coptic Church in Egypt as a liturgical language.

When the British defeated the French in Egypt in 1801, the Rosetta Stone was transferred to the British Museum in London in 1802 where it has been on display ever since. It is the most popular exhibit in the museum and has only been moved from the public gallery on two occasions. One of these occasions was in 1917 when it spent two years in an underground station of the Postal Tube Railway at Mount Pleasant, close to Holborn, 50 feet below ground to protect it from heavy bombing.

The Rosetta Stone is not unique in the sense that further examples of the same decree have since been discovered, two of which predate the Rosetta Stone. The significance of the Rosetta Stone has been its role in unlocking the ancient Egyptian world through its remarkable language.

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[i] More information about the *El Castillo* cave paintings can be found at http://news.nationalgeographic.com/news/2012/06/120614-neanderthal-cave-paintings-spain-science-pike/

[ii] Information taken from http://www.ancientscripts.com/egyptian.html

[iii] Quotation taken from http://www.ancientscripts.com/egyptian.html

[iv] W A Smith, *The Reading Process,* 1922, Macmillan

[v] Statistics taken from http://www.omniglot.com/writing/egyptian.htm

[vi] Images taken from http://www.omniglot.com/writing/egyptian.htm

[vii] Information taken from http://www.ancientscripts.com/egyptian.html

[viii] Information taken from http://www.academia.edu/4057252/The_Death_of_Demotic_Redux_Pilgrimage_Nubia_and_the_Preservation_of_Egyptian_Culture

[ix] Quotation taken from http://en.wikipedia.org/wiki/Rosetta_Stone referenced to Parkinson, Diffie & Simpson, (1999) *Cracking codes: The Rosetta Stone and Decipherment,* University of California Press.

[x] Quotation taken from http://www.discoveringegypt.com/Egyptian-Hieroglyphic-Writing.html

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