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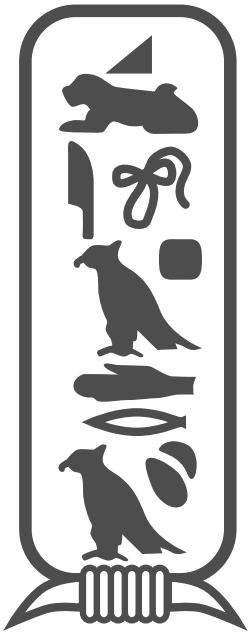
Ancient Writing Systems

Ancient is generally defined by Western culture as "before the fall of the Western Roman Empire, 476 CE." Few remember to consider the highly developed societies of the ancient Egyptians, Greeks, and Romans with their magnificent architecture, legal systems, epic plays, elaborate religious rituals and myths, comfortable homes with indoor plumbing, and carefully developed writing systems. Many believe that these societies' technological developments would not have been possible without written communication.



1.1 Cartouche of Egyptian queen Cleopatra II, who ruled approximately 69–30 BCE. A *cartouche* (called *shenu* in ancient Egyptian) is a series of hieroglyphics enclosed by an oval or rectangular band representing the name of a royal or divine persona.

The study of written communication is somewhat synonymous with the study of the history of civilization. In prehistoric times, before writing systems were developed, there was no recorded history; knowledge of past events was orally communicated from generation to generation. It is possible that if there had never been written records, the history of the world would be condensed to the point that one human could commit it to memory.

Key Concepts

ancient
boustrephedon
cartouche
cuneiform
demotic script
hieratic script
hieroglyphics
iconography
ideograph
logogram
mnemonics
papyrus
parchment
phonemes
phonetic
phonogram
pictograph
rebus
Rosetta Stone
Semitic languages
syllable
typography

Fact Find! Archeological evidence indicates the use of fire, tool making, and cooperative activities before the evolution of either a verbal or written language. What are examples of nonverbal communication used today? Log on to to your favorite search engine and find an Internet reference to help you answer the question. Correctly cite your source(s).

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Already subjective in nature, the experience and recollection of events are further affected by personal interpretation and editing; if there were no written record, it would be impossible to know any of the details of the earliest cultures and the the lives of ordinary people who lived in them.

Because lettering and *typography* (the style, arrangement, and appearance of type)) are tied closely to available manufacturing technology, writing substrates (clay, stone, or parchment) reflect the raw materials and mechanical abilities of a particular society. Much knowledge of ancient cultures comes to us via secondhand parchment copies of papyrus scrolls, made by monks during the Middle Ages. Most original papyrus texts no longer exist, as they deteriorated in the moist Mediterranean climate, while many of the copies on *parchment* (which is made from animal skins) survived. Contemporary translations, therefore, are based on copies that are assumed to be fairly accurate reproductions of the original texts.

Prehistoric Societies

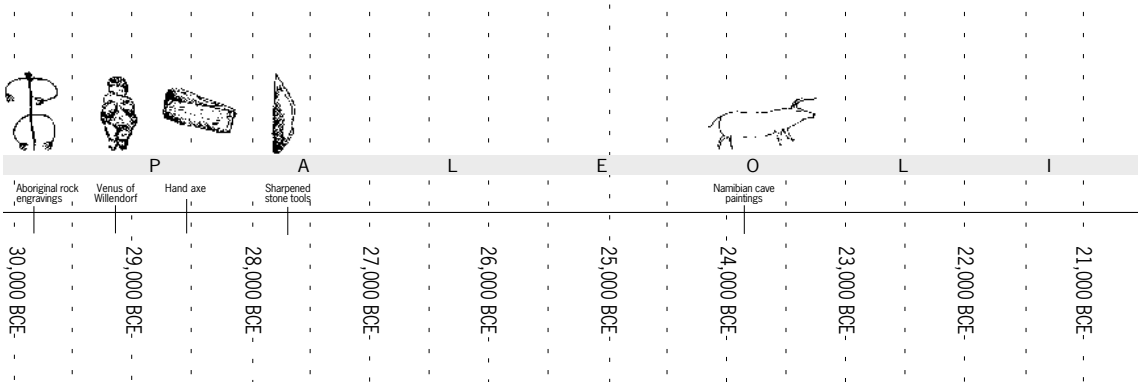
Trying to imagine human existence prior to oral and written communication is difficult. Scientists debate when the ability to enunciate a spoken language evolved. Archeological evidence of fire use, tool making, and cooperative activities predates the evolution of a biological capacity for speech, indicating the probable use of extensive nonverbal communication.

As verbal communication developed, it became easier for humans to interact with and assist one another in organized activities, as well as structure their lives communally to achieve more comfortable, more predictable, and safer lives.

Development of Oral Communication

Oral communication allowed humans to communicate feelings, thoughts, concepts, techniques, and procedures. It brings forth the question of whether thought as we conceive of it today was even possible before humans developed the capacity to express it in words, or whether the expression of thoughts, hopes, and fantasies become possible because humans developed the means of expression through refined speech.

The earliest evidence of agriculture occurs in the Nile River valley in Egypt, the Tigris and Euphrates River valleys in Mesopotamia, and the Yangtze River valley in China. Since the first civilizations developed in these

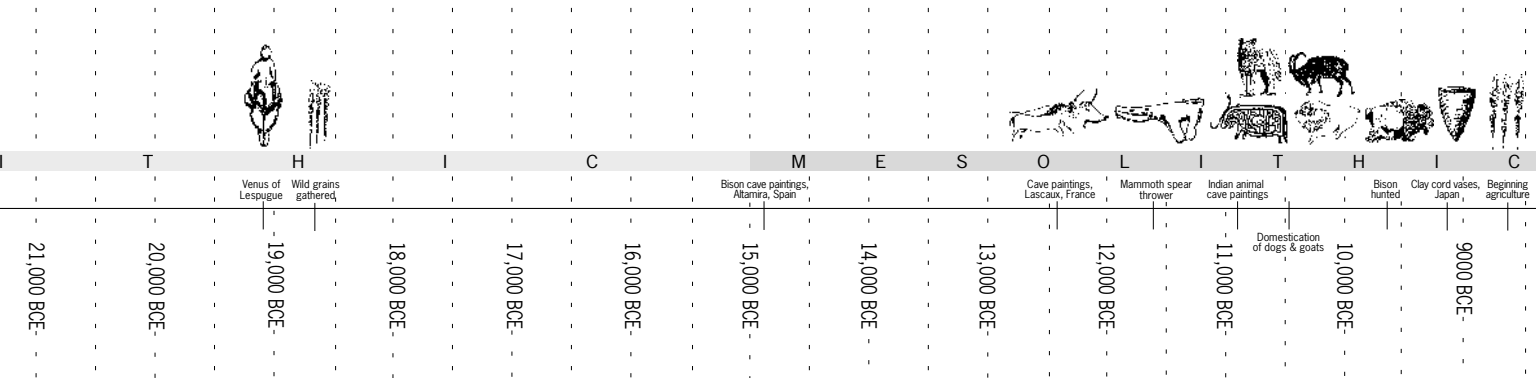


areas, it may be safe to assume that a hospitable climate and agricultural knowledge were two of the most significant contributing factors to the development of human civilization. Because humans no longer spent the majority of their time battling the elements and gathering food, they could devote more time refining their living conditions.

Anthropologists believe that the domestication of animals was a strong factor in the development of human societies. Nomadic tribes used domesticated animals to help

1.2 Early language centers and writing are believed to have evolved in areas surrounding the Mediterranean Sea, from Greece to Mesopotamia.

1.3 Timeline illustrating the development period of prehistoric tool making, cave painting, and agriculture from 30,000 BCE to 9000 BCE.



1.4 Simple pictographs are somewhat representative in appearance. At top is a pictograph for an ox, and below is the pictograph for mountains.

1.5 Cylinder seals were rolled into wet clay to show ownership, to indicate the contents of containers, and/or to commemorate events or for ceremonial purpose. The wet clay could be wrapped over the top of a vessel to prevent tampering. These seals were used in Mesopotamia as early as 1500 BCE.

them more easily transport food and shelter resources. In both nomadic and agrarian societies, domesticated animals could be slaughtered as necessary for sustenance.

With the basic necessities of life attended to, humans turned their attention to refining tools, maintaining the political organization of the tribe, perfecting healing arts, defending against predators and pondering the stars, skies, nature, and spiritual ideals. When information was communicated by word of mouth, certain people were entrusted with the "memory" of the tribe. They were chosen by the tribe's elders to memorize the myths, legends, and genealogies of the community. Sacred knowledge and techniques of healing were passed down orally as well. *Mnemonics*, the use of reminder devices used to help recall large amounts of information, were developed by these ritual specialists and historians. Often relieved of the menial tasks of fulfilling the basic day-to-day needs of the tribe, such individuals were invested with social power and political status in the community.

The tribal historians and other specialists often had the exclusive power to choose their successors, deciding to whom they would pass the knowledge of the tribe for the next generation. This prestigious position required great accuracy in the recall and telling of important information, so many years were devoted to training and memorization. Most of these specialists were respected elders by the time they assumed the position.

Respect for elders in the community was unquestioned. Some indigenous peoples associate the various stages of aging (commonly based on hair color) with status within the tribe. In fact, in some Native American

Puzzling Evidence

Archeologists have long held that written language was first developed in Mesopotamia, where cuneiform tablets date from 3200 BCE. New evidence emerging from China, however, raises a new question of who may have been first to pen their thoughts.

Tortoise shells etched with symbols have been excavated from the Jiahu site in Henan province in central China. The shells found appear to be part of a funerary ritual in Neolithic graves that have been dated to 7000–5800 BCE. If the incised symbols can be taken as a written language, they will predate what was previously the earliest known written language in China by more than three thousand years, and the written language of Mesopotamia by more than two thousand years.

The tortoise shells, some stone tools, and several bone musical instruments have been incised with up to sixteen different symbols and geometric shapes either identical or very similar to the jiaguwen pictographs used in the second millennium BCE and found at the Yinxu archeological site, generally accepted as evidence of the first written language of China.

Some archeologists point to the great similarity of the symbols and their artifactual context between the Jiahu and Yinxu sites and argue that the Jiahu symbols were part of early attempts at an organized information system.

Others hold that the symbols are isolated geometric decorations, and although they may have had religious significance, they do not represent an early written language.

What are your thoughts? At what point would religious or decorative *iconography* (the pictorial illustration or set of illustrations representing a subject) begin to be recognized as a pictographic written language?

languages the word for "gray-haired" means "knowledgeable" and the term for "white-haired" means "close to the knowledge of the gods." This linkage between thought and word is one example of how language and our perceptions of reality are connected.

Since all communication was verbal, it was contemporaneous. Before the invention of writing, no one could speak directly to anyone not living at the same time. For ideas, concepts, and practices to have lasting influence, they had to be restated by each succeeding generation and could not help but be influenced and altered by personal interpretation, inaccuracies, embellishments, and memory lapses. As a result, there is a limitation to the accuracy of nonwritten transmission of information over time.

Still, today many spoken languages exist that have no written form. It may seem logical to use an existing alphabet (Roman, Cyrillic, Arabic, etc.) to transcribe them. But because of broad historical associations among certain societies, political and economic and cultural features of those societies, the languages used in those societies, the languages used in those societies and the alphabets used to write those languages, the choice of an existing alphabet to transcribe a previously nonwritten language may be fraught with political consquences. Ultimately, the written form of a language must develop out of the culture of the people who practice it for it to make total sense.

Early Writing Societies

Developed writing systems have been discovered in Sumeria, Egypt, China, and India. Cuneiform is dated to approximately 3200 BCE; hieroglyphics are dated to approximately 3000 BCE; precursors to the Chinese system of writing date to around 1800 BCE; and Sanskrit is dated to approximately 1500 BCE. The introduction of writing allowed these cultures to more rapidly develop complex sociopolitical organizations, as it enabled them to record codes of law, history, literature, philosophy, medicine, mathematics, scientific discoveries, and religious practices.

The single expression of an idea in a visual form cannot be considered an alphabet. For instance, the cave paintings in Lascaux, France, dating back to somewhere between 30,000 and 12,000 years ago, communicate the form of animals but do not qualify as pictographic communication. Because they do not add up to a codified system of standardized symbols, and they are not used repeatedly in a consistent, standardized manner to represent the same concept over a period of time, they are considered images and not a system of writing.

Repetition of agreed-upon shapes is the essence of a writing system. In order to communicate, the simplified drawings must be recognizable and easily interpreted by larger numbers of a population.

Pictograph-Based Writing Systems

Early picture writing employed simplified drawings to represent objects. This is assumed to be the first step in developing most written languages. Called *pictographs* (the simplified drawings of objects), these drawings may have been introduced into use for a variety of reasons. Some historians assume that writing began with small tags of clay inscribed with pictographs that were attached to jugs by string intended to

Fact Find! What other languages can you find that use other alphabets? What about Greek? Cyrillic? Log on to to your favorite search engine and find an Internet reference to help you create your comparison. Print out the results for discussion. List some of your ideas in the space provided below. Be sure to cite your sources correctly!

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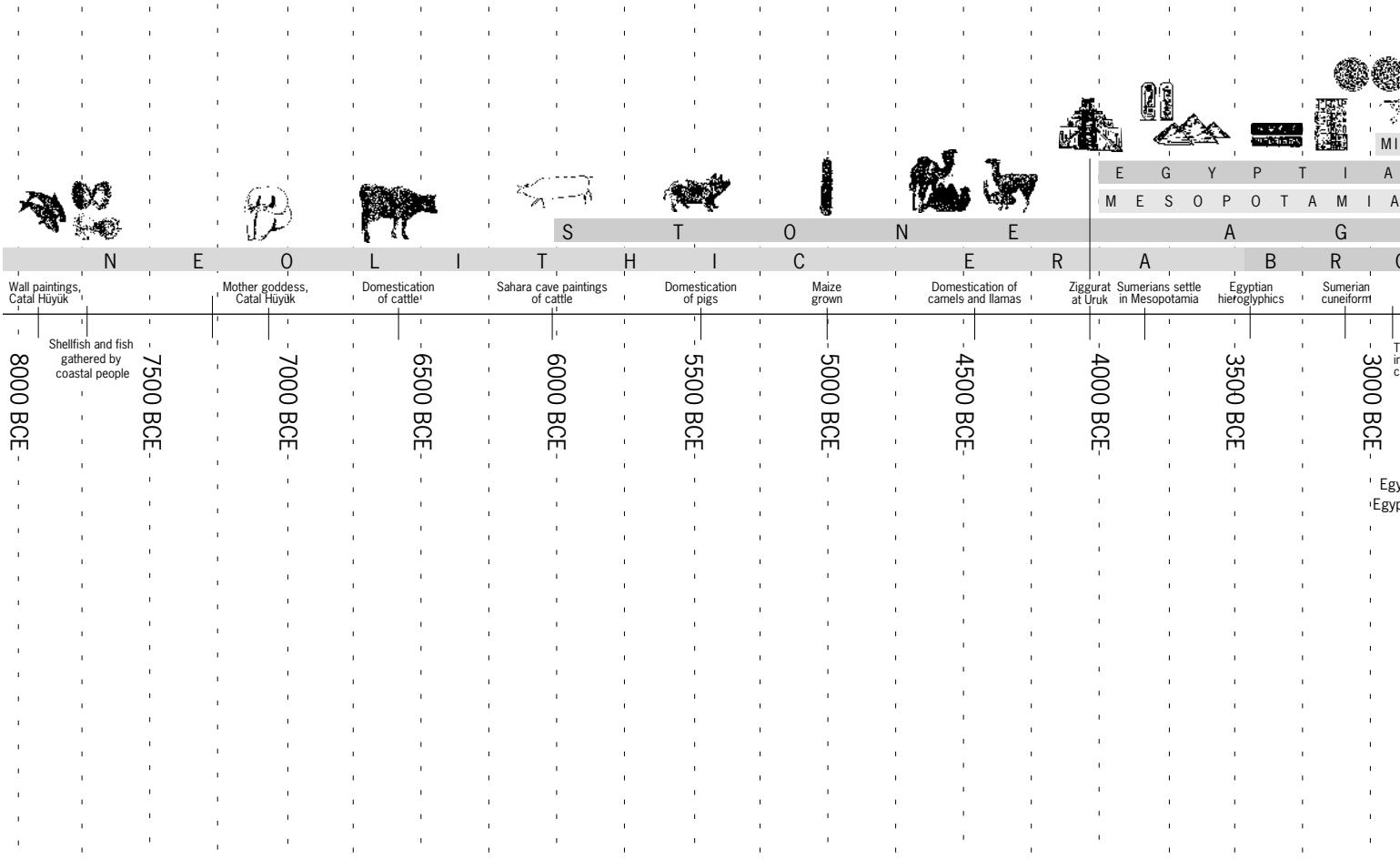
1.6 The combination of the top two pictographs, an ox and mountain range, results in the final ideagraph on the bottom, meaning "wild ox."

represent the contents of the vessels during shipping. Others have speculated that writing was used to record gifts to the temples, as people were required to give offerings each year. Another theory posits that writing evolved as a means to indicate ownership; a small distinctive mark or series of marks on an object designated to whom it belonged or by whom it was crafted. Still others theorize that pictographs developed out of drawing as a shorthand means to record memorable events. Exactly how and why writing systems were developed is unclear. What is clear, however, is that distinct but possibly related alphabets developed in different ancient cultures in different geographic locations within a relatively short period of time.

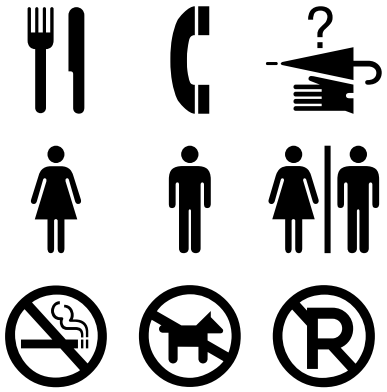
Pictographs are appropriate for the representation of people, places, and things but are not efficient for communicating complex and abstract ideas, emotions, concepts, and actions. Modern examples of pictographs indicate gender-separate restroom facilities, overnight lodging, eating areas, acceptable smoking and nonsmoking environments, and eating establishments. Pictographs are vital in communicating simple meaning in the absence of a common language or script. As the



uses for written communication expanded, it was necessary for the written language to express a greater variety of concepts.

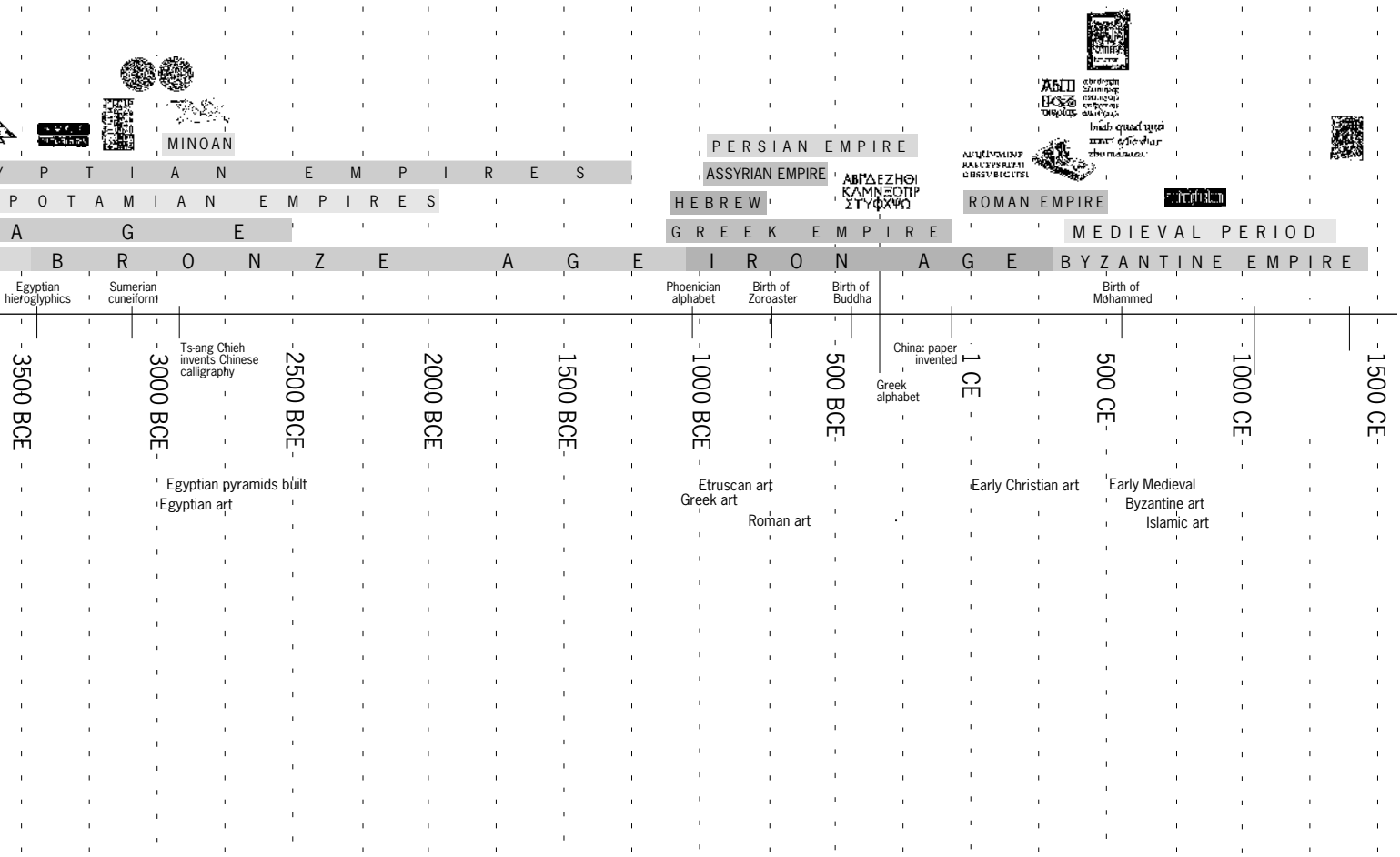
From Pictographs to Ideographs

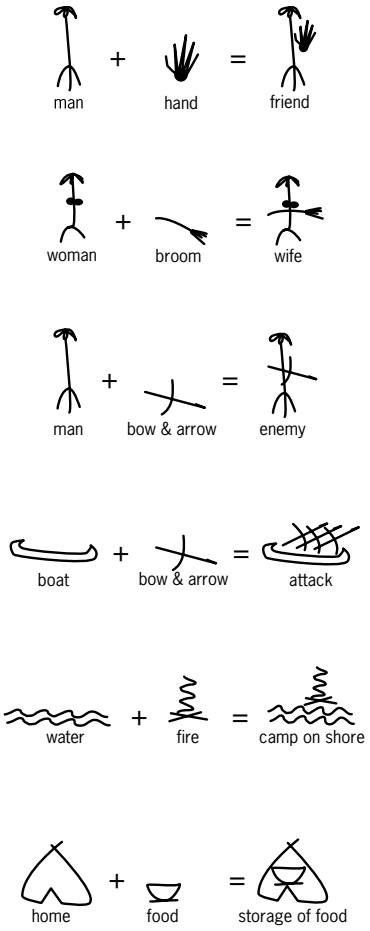
Pictograph-based languages evolved into written systems that allowed the representation of abstract thought rather than simply representing objects. As pictographs were assigned meaning that went beyond a simple visual representation of a tangible thing, they were transformed into a slightly more complicated form of writing known as an ideograph. An *ideograph* (or



1.7 Modern pictographs and ideographs communicate simple messages across multiple languages and cultures.

1.8 The timeline below shows the expansion of literacy, the dissemination of knowledge, and the growth of typographic forms over the centuries.





1.9 Ideographs combine pictographs to communicate more complex concepts and messages.

ideogram) is the combination of two or more pictographs intended to represent a concept—for example, the pictographs of a woman and a child may combine to represent the idea of "pregnant" even though it does not show a literal interpretation of a pregnant woman.

Ideographs, in other words, are pictographs that come to mean something other than their original intent. For example, the pictograph of "hand" changed to an ideograph when it is combined with other symbols to convey the concepts of "to give," "to greet," "to offer," or "to take"—actions or concepts associated with the hand in some way. Ideographs mark the true beginning of a written language.

There is an element of abstraction to ideographs, so they may not be instantly understood when seen. They often require interpretation and translation. Each culture developed a specific set of ideographs that reflected it spiritual beliefs and its political, economic, and social structure.

The Semitic Languages

The *Semitic languages* comprise the languages in the Middle East, an area today that includes the countries of Syria, Lebanon, Israel, Palestine, Jordan, Cyprus, Turkey, Iraq, Egypt, Iran, Kuwait, Saudi Arabia, Bahrain, Qatar, United Arab Emirates, Oman, and Yemen.

Semitic languages fall into four groups. North Peripheral includes Akkadian, which was spoken in Assyria and Babylonia and which is the oldest Semitic language. It stopped being used as a literary language in the first century CE. North Central includes Hebrew (the language of Israel today); Aramaic; and Ugaritic and Phoenician, both of which no longer exist. South Central includes the Arabic language in nearly all of its dialects, as well as Maltese, which is an offshoot of Arabic. South Peripheral includes South Arabic dialects and Amharic, as well as other Ethiopian languages.

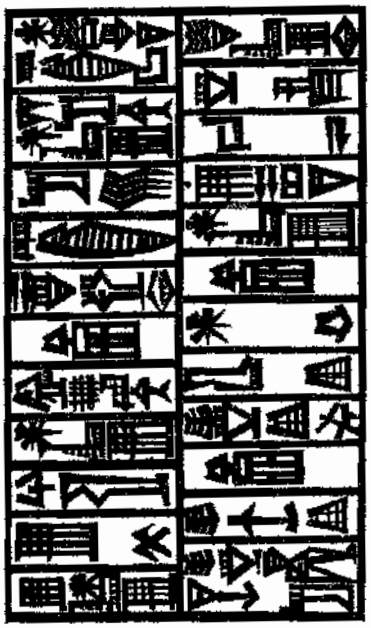
Sumerian Cuneiform

The Sumerian culture arose in Mesopotamia in the region between the Tigris and Euphrates Rivers, known as the "fertile crescent" (present-day Iraq). The soil in this area is rich and productive, but much of the surrounding land is limited in its ability to sustain agriculture. The land has low-lying hills surrounding it to the north that act as a natural barrier preventing attack from that direction. The regular supply of freshwater from the two rivers enabled the culture to grow its own food and become a sedentary, agricultural society.

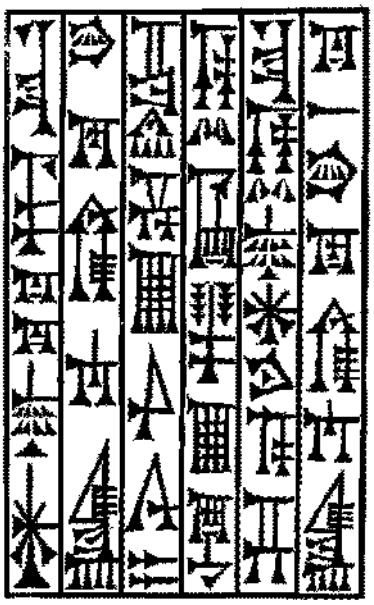
Eventually the Sumerians developed written forms of communication. At first every character represented one word, but many words lacked unique symbols. For these, symbols of related objects were used (a foot could mean both "to go" and "to stand," in addition to meaning "foot").

Abundant clay from local riverbeds served many purposes, among them making writing tablets. The clay tablets could be inscribed with a stylus while still moist, then laid in the sun to dry. As both the stylus and the tablet-making processes developed, the style and form of the written messages changed in appearance. By 3100 BCE a codified system of pictographic symbols called *cuneiform*, existed.

By approximately 2500 BCE scribes had shifted from using a pointed stylus to draw



1.10 Old Akkadian pictographs of ancient Babylonia, from the time of King Sargon, predate the wedge-shaped cuneiform writing.



1.11 The wedge-shaped characters of cuneiform are stacked in vertical rows.

in the clay tablet to using a triangular stylus pressed into the clay, the hallmark of cuneiform writing. Characters had evolved into combinations of wedge-shaped strokes, further abstracting the symbols composing the written language. In its early stages cuneiform was written from top to bottom. During the third millennium BCE this changed into writing from left to right, and also the signs changed: they were turned on their sides.

Cuneiform writing developed into a mixture of logograms and syllables. A *logogram* is a sign that represents an entire word and *syllables* represent certain sounds. Cuneiform writing mixed these two symbol types.

Eventually the Sumerians were conquered by the Assyrians from northern Mesopotamia. The Assyrians were quick to adopt cuneiform as a practical writing system. Cuneiform writing has been used in several languages, and was in use for about 3000 years. When Aramaic spread as the predominant language in the seventh and sixth centuries BCE, its alphabet (derived from Phoenician script) gradually replacing cuneiform writing. The last example of cuneiform writing dates to 75 CE. Western scholars deciphered the cuneiform systems in the 1840s.

Early cuneiform employed ideograms, though later these symbols came to be used as phonograms. *Phonograms* are signs that represent sounds—either whole words, syllables, or *phonemes* (a language's distinctive sounds).

A *logogram* or logograph is a single written symbol that represents an entire word or phrase. For example, the symbol 8 is a logogram that is pronounced "eight" in English. Compared to alphabetical systems, logograms have the disadvantage that a large

Fact Find! What are examples of logograms, other than numerals, used today? Can you find a modern definition or interpretation? Log on to to your favorite search engine and find an Internet reference to help you answer the question. Be sure to cite your source(s) correctly!

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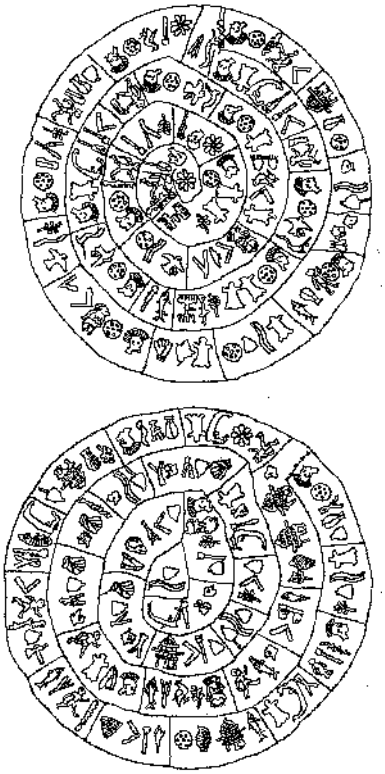
Meaning	Pictograph	Sideways	Cuneiform	Assyrian
orchard				
to walk				
star				
goose				
sun/day				
plowing				
fish				
ox				
boomerang				

1.12 Pictographs were transformed into hieroglyphs, script hand, hieratic script, and demotic script, shown right.



1.13 Drawings of the Phaistos Disk exemplify the use of early pictographs. The Phaistos Disk has not yet been deciphered and translated into a modern language.

number of them are needed to be able to write down a large number of words. An advantage is that one does not need to know the language of the writer to understand them—everyone understands what 1 means, whether they call it one, eins, uno, or ichi.

Cuneiform required deciphering for understanding to come about; they could not be intuitively identified and so immediately impart understanding to the reader.

Minoan Writing

A significant piece of evidence alluding to early writing outside of Mesopotamia is found on the island of Crete and is attributed to the Minoans (a culture named after their ruler, King Minos). The remains of this writing are limited as the Minoan culture is believed to have been decimated by a tidal wave caused by a volcanic eruption on a neighboring island. Among artifacts found in archeological excavations of the ancient city of Phaistos that include the Minoan alphabet is a clay disk with symbols spiraling to or from the center.

Found in 1908 at the ruins of the Minoan palace, the Phaistos Disk is dated to approximately 1700 BCE. The text is made up of sixty-one words, with forty-five different symbols occurring a total of 241 times. The symbols portray recognizable objects such as human figures and body parts, animals, weapons, and plants.

1.14 Ancient clay tablet inscribed with cuneiform.

Some scholars think the text is a prayer and the language is Greek. Another theory also suggests that the language of the disk is Greek, but claims that it contains proof of a geometric theorem. Others feel that the disk contains a magical text, possibly a curse, and that the language of the disk in Indo-European. Finally, some believe that this alphabet may provide a link between ancient hieroglyphics and ancient Phoenician. The debate continues.

Written Languages Remain Undeciphered

Like the script on the Phaistos Disk, a number of writing systems have been discovered but remain partially or completely undeciphered today. Among them is Vinca or Old European, found on many artifacts excavated from archeological sites in southeast Europe, especially near Belgrade. These samples date between 6000 and 4500 BCE.

The Indus script, named for the valley in India where it was found, dates to approximately 3500 BCE. Sometimes referred to as Harappa script, little is known about the language or the people who utilized it. Some think it may be a form of a Dravidian Language.

A script that first appeared around 2900 BCE in the kingdom of Elam in southwest Persia (modern Iran) is named Proto-Elamite and has yet to be deciphered. So does a script used between 2250 and 2220 BCE called Old Elamite.

Linear A is a script used between 1800 and 1450 BCE on the island of Crete. Although it has not been proven, historians believe that Linear A may be related to Linear B writing, which has been deciphered.

The Etruscan alphabet has been deciphered, but the Etruscan language remains poorly understood. It is assumed to have developed from the Greek alphabet when the Greeks colonized southern Italy, starting in the middle of the sixth century BCE.

Meroitic is an extinct language that was spoken in the Nile Valley and northern Sudan until the fourth century, CE. Although the Meroitic script has been deciphered, little is known about the language it represented.

Rongo Rong is a script representing the Polynesian language Rapa Nui, spoken on Easter Island. Knowledge of the script was lost during the 1860s and has yet to be rediscovered.

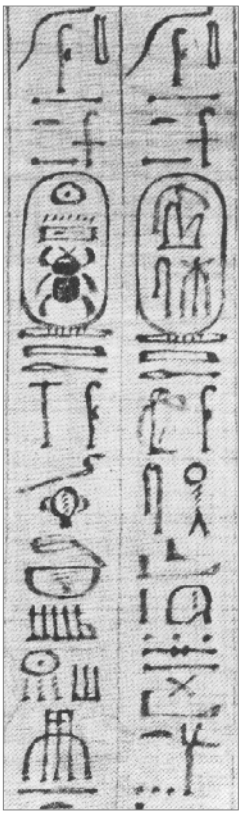
What Is a Rebus?

A *rebus* is a series of pictographs of short words combined to have the reader verbally sound out longer words or phrases; it is a mode of expressing words and phrases by pictures of objects whose name resembles those words, or the syllables from which they are composed. An example might include the combination of

moon + light = moonlight, *or*
eye + ball = eyeball.

The invention of the rebus allowed the creation of complex words.

A combination of the pictographs of the sea and the sun results in a rebus meaning "season." The phoenetic sound of each word combine to sound out a new word (season) with new meaning (the natural division of temperate zones, sometimes marked astrologically).



1.15 The fluid appearance of these hieroglyphs was produced with a reed brush on papyrus.

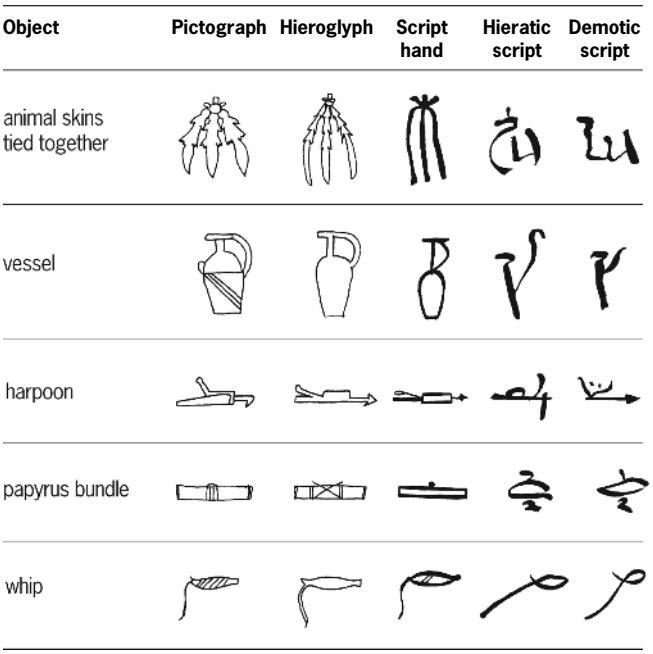
The Voynich Manuscript, named for Wilfred M. Voynich, the antique-book dealer who acquired it in 1912, is a lavishly illustrated, 234-page codex written in an unknown script. Numerous attempts have been made to decipher the text to no avail. One theory that survives is that the manuscript was written by the Franciscan friar Roger Bacon sometime during the thirteenth century.

Egyptian Hieroglyphics

Egyptian pictographic *hieroglyphics* (a writing system that used pictographs to represent words and sounds) are believed to have originated around 3000 BCE. Magnificent examples of hieroglyphs found in Pharaoh's tombs date to approximately 2900 BCE. The highly detailed carved stone tablets required much patience to produce and this level of effort is not seen in everyday written records from ancient Egypt. The hieroglyphs popularly used for historical, legal, and business records consisted of simplified symbol systems to speed the writing process.

Hieroglyphics commonly run in vertical columns, read from top to bottom but not always starting with the far right column. All the people and animals face the same direction in any given passage. To read hieroglyphics, read into or toward the front of the human or animal symbols. The vertical columns are separated by thin rules and delineated by one or two colored horizontal rules across the top and bottom of the adjoining columns.

In hieroglyphics the same *phonetic* (spelling that corresponds to pronunciation)



1.16 Pictographs were transformed into hieroplyphs, script hand, hieratic script, and demotic script.

sound could be represented by a variety of symbols depending upon the scribe's geographic location or education. Over three hundred symbols had to be known in order to "read" the story or message. The Egyptians never simplified the system to the twenty-four consonant sounds needed to represent the utterances of their spoken language.

Hieroglyphics evolved into a system of communication that was constructed in a rebus-like fashion. This transition to the use of the rebus device marks the beginning of a phonetic relationship between the spoken word for an object and the objects they represent; there is a detachment from the physical object of the pictograph. A rebus must be deciphered, unlike pictographs, which need only to be identified.

Further embellishments to the manner in which a pictograph was written could add significant meaning to a word or name. For instance, Egyptian pharaohs were believed to be direct descendents of the gods. Their

1.17 In this example the Egyptian hieroglyphics are organized into vertical columns divided by column rules. Each column was read in the direction faced by the symbols.

names were written in hieroglyphs enclosed with the ankh to signify immortality.

Hieratic Script

Pictorial hieroglyphics became more simplified with the invention of papyrus and reed brushes. By 1500 BCE a calligraphic style known as *hieratic script* (meaning "priestly writing") began to appear. Hieratic script was used for religious literature exclusively for a time, until its gradual adaptation for commerce and business uses. It is characterized and influenced by the development of the reed pen as a writing tool, so the characters are more abstract and simplified than previous forms of lettering.

Demotic Script

Around 500 BCE the hieratic script eventually evolved into *demotic script*, (demotic means "of the people"). This writing style is visually simplified even more compared to hieratic script.

Throughout history, the dissemination of knowledge and the ability to read and write have often been reserved for the chosen few: the elite, the scholars, the ruler, and the priests who controlled the religious rituals and early forms of taxation. Those who could read were pursued for advice in all types of disputes and emergencies; their knowledge and judgment were highly respected. In many cultures the scribes—those who could write—were believed to hold power over human life; if an Egyptian scribe wrote your name in the Book of the Dead, it meant that your time in this world had expired.

Although ordinary people could use demotic script, the average working person did not have access to the education required to interpret or write the information using the system. Doubtless the scribes did little to remedy this situation, as it helped to perpetuate the class system and ensure their necessity in society.

The transition away from hieroglyphics was gradual, eventually giving way to demotic script, and ultimately there was no one left who was able to read the ancient Egyptian writing.

Ancient Writing Systems Evolve

A majority of scholars agree that by 1500 BCE ancient Phoenicia had established a phonetically based alphabet consisting of twenty-two characters. This ancient Phoenician alphabet is believed to be the basis of the Greek and Roman alphabets, and hence of the alphabet used in much of the Western world today.

Phoenicia was considered the gateway to the Middle Eastern lands and all the goods and foods its people produced. The Phoenicians were a seafaring and merchant people located at the crossroads

Papyrus

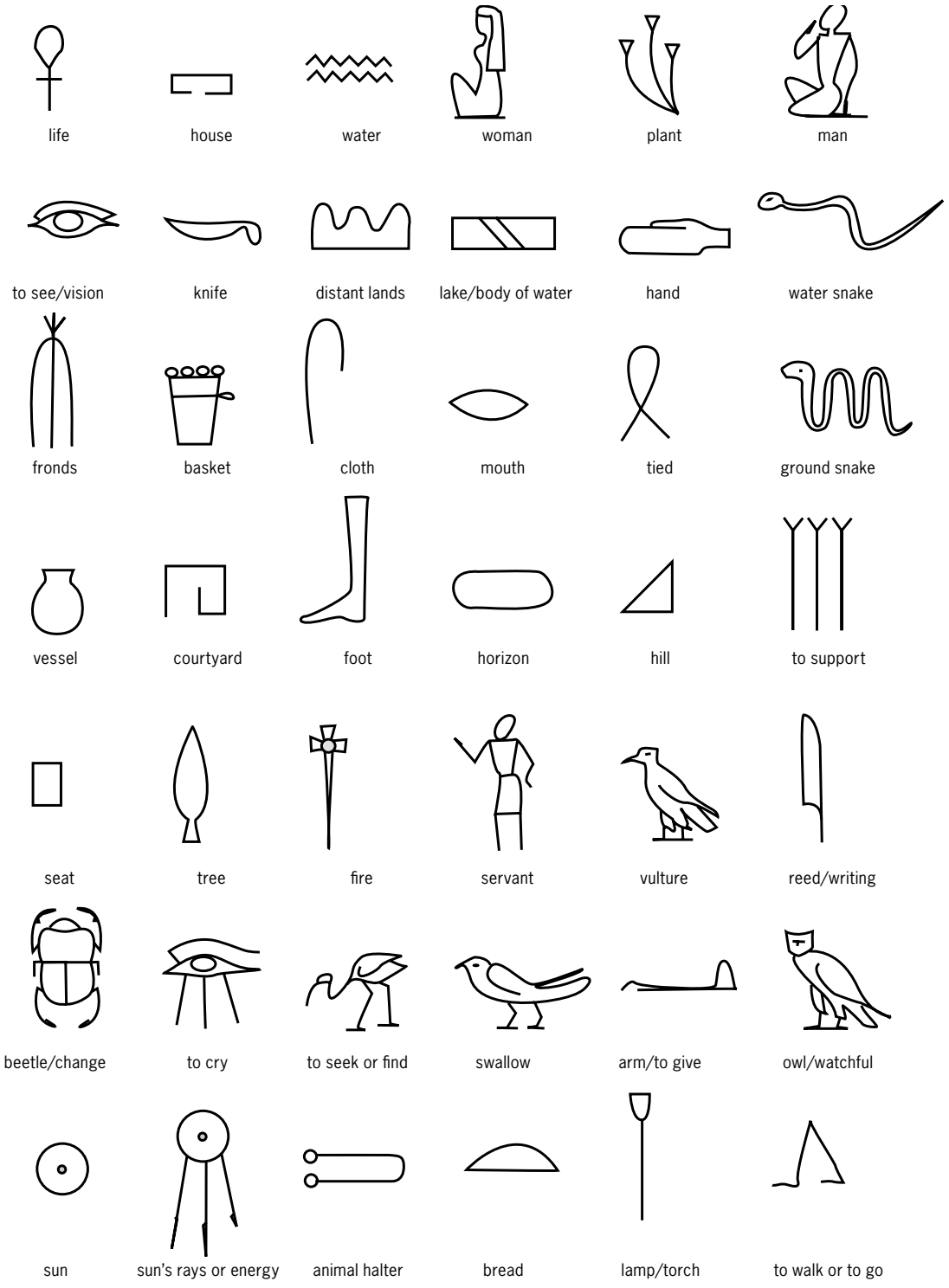
Papyrus is a paper-like material made from the papyrus bulrush that grew wild along the banks of the Nile River. Papyrus is made by soaking the bamboo-like plant in water, then stripping the inner fibers. These fibers are beaten flat and then aligned in a parallel fashion. A second layer of flat fiber strips is placed crosswise to the first. Layered with cloth, the fibers are placed under great pressure to dry. Individual pieces of papyrus, measuring approximately 9 x 15 inches are joined to create scrolls up to 30 feet in length.

When papyrus became a common writing substrate in about 2400 BCE, a reed brush was found to be the perfect writing tool. The pictographs took on a fluid, sinuous, graceful appearance when drawn using a brush. Corners became rounded as the speed of the scribe increased; often several hieroglyphics were constructed from one continuous, flowing stroke.

Exercise Objectives

Upon completion of this exercise, readers will be able to:

- Understand the challenges associated with assigning meaning to images and constructing a system of visual communication
- Identify and discuss some characteristics of pictographic writing
- Outline design decisions in the combining of images intended to communicate to someone other than themselves
- Explore the possibility of multiple interpretations of pictographs within different communication contexts



Hieroglyph Writing Exercise

Traditionally, hieroglyphs are stacked vertically, with all characters facing the same direction (either left or right). Combine a number of symbols to create a short story or message. Write your English interpretation along with the hieroglyphic story for later reference in the space allotted.

Copy only your hieroglyphic message onto a blank sheet of paper and exchange messages with another student. Determine if each of you can decipher the story as written. Make a note of the difficulties you encounter during your process of interpreting the unfamiliar message.

What topic(s) would you like to have written about had you known a greater quantity of symbols?

Was the resulting story interesting and creative or relatively limited and straightforward? Why?

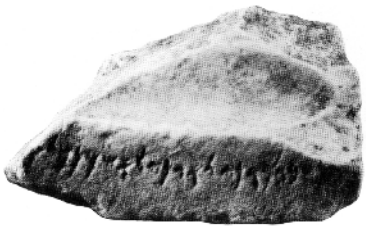
Compare your experience with this exercise and what you imagine to be that of a young person learning to write for the first time. What about learning to pronounce and write a foreign language? What are the similarities between these situations?

of international trade. The Phoenician language was in use along the coast of Syria, Lebanon, and Israel, as well as in Phoenician colonies all around the Mediterranean Sea, as far west as northern Morocco. The Phoenician language was very close to Hebrew and Moabite. The oldest archeological traces of Phoenician date back to eleventh century BCE.

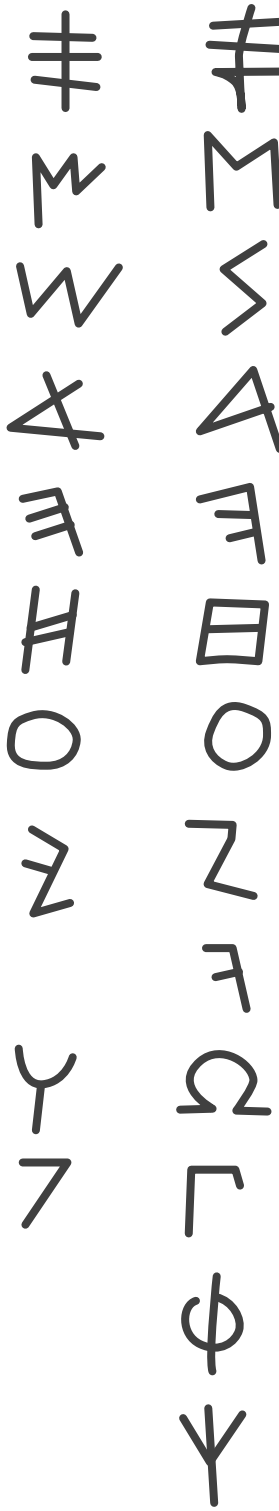
Because of their diverse trade and travel, the culture of the Phoenicians was influenced by many other peoples who lived around the Mediterranean Sea, including the Greeks, Minoans, Etruscans, and Sumerians. The Lebanese, Maltese, Libyans, and even some Somalis, along with certain other island folk in the Mediterranean, still consider themselves descendants of Phoenicians.

The Phoenician alphabet was developed around 1200 BCE from an earlier Semitic prototype. The alphabet was a unique approach to writing. Oral speech was broken down into a series of sounds and a written symbol was assigned to each sound, freeing written communications from the literal visual translations originally used in other written languages. This simplified the number of symbols required to write and read the message. With fewer symbols to memorize, learning to read and write became a less arduous task. Literacy spread among the general population. The Phoenician alphabet also was used to transcribe other oral languages into written versions, making early translation and cross-cultural communication possible. The Phoenician alphabet and language spread quickly in the region as a result.

From this alphabet the Greek alphabet, which forms the basis of all European alphabets, was derived. The alphabets of



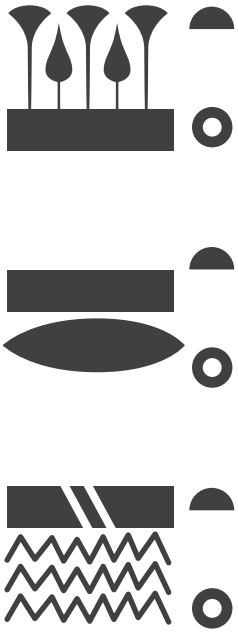
1.18 Ancient Phoenician characters inscribed on a piece of the interior of a bowl.



1.19 Comparing the form of Phoenician characters, on the left, with early Greek characters, on the right, reveals the resemblance between the two.

Writing Compared to Plowing

For a while, Greek writing read from right to left on the first line, then reversed and read from left to right on the following line, and so forth, across the page in a snake-like fashion, flipping asymmetrical letters. This structure was named "*boustrephedon*" and comes from the Greek words meaning "as the ox plows the field." Although ʎou ɯɐʎ ʇɥᴉuʞ ʇɥɐʇ ǝʌǝuʇnɐllʎ ᴉʇ ᴉs just as easy to read backwards, ʍᴉʇɥ sǝɯǝ pɹɐɔʇᴉɔǝ, ᴉʇ ᴉs sʇᴉll difficult to read text when you have to constantly flip the letters to discern them.



1.20 Hieroglyphs used in ancient Egypt to depict the seasons, from top to bottom: akhet—winter, a time of sowing; pert—spring, a time of growing; shemu—summer, a time of inundation.

the Middle East and India are also thought to derive indirectly from the Phoenician alphabet. Ironically, the Phoenicians themselves are largely silent on their own history—Phoenician writing has largely perished, since their characteristic writing material was papyrus and has disintegrated. What we know of them comes from their neighbors, the Greeks and the Hebrews.

By approximately 800 BCE the use of the Phoenician alphabet had spread to ancient Greece. To write the alphabet the Greeks used an ivory or metal stylus to inscribe wax tablets. The Greeks simply borrowed the original twenty-two characters and adapted them for their own needs. Five consonants were changed to vowels to account for the sounds in the Greek language that had no Phoenician equivalent. The first vowels were alpha, epsilon, iota, omicron, and upsilon. The Greeks introduced three new consonants which were appended to the end of the alphabet in the order in which they were developed. There were several variants of the Greek alphabet, most important were western (Chalcidian) and eastern (Ionic) Greek; the former gave rise to the Etruscan alphabet and the latter to the Roman alphabet.

The Rise of Ancient Greece

The year 500 BCE is considered the peak of arts and learning during the Golden Age of Greece, approximately three hundred years after the adoption of the Phoenician alphabet. With the expansion of the Greek Empire under the rule of Alexander the Great (from 356 to 323 BCE) Greek culture spread. The growth of the Hellenistic culture caused the spread of the Greek alphabet (precursor to our own) as far as Egypt, Mesopotamia, and India. When Alexander died, his generals parceled out the lands of his empire, creating smaller kingdoms. Despite the resulting lack of unification, the effects of the common language and writing system prevailed.

1.21 The Rosetta Stone is believed to have been carved around 200 BCE. The same inscription is written in three different alphabets.

Recovering Ancient Egyptian Hieroglyphics

As demotic became more widespread, understanding of hieroglyphics faded away, and ultimately there was no one left who was able to read the ancient Egyptian writing. A large portion of the hieroglyphic texts were difficult to decipher because of their religious nature, since the names of the gods were no longer recognized. Until the discovery of the *Rosetta Stone*, hieroglyphics had not been completely or correctly deciphered. The Rosetta Stone held the key to translating and understanding

Chapter One Review

ancient hieroglyphics. The stone was unearthed by Napoleon's men in 1799 when they invaded Egypt. This elaborately inscribed stone displays one message in three different forms: ancient Greek, Egyptian hieroglyphics, and demotic script. Using the ancient Greek inscription as a map, archeologist Jean-François Champollion decoded the order and sounds of the hieroglyphs in 1822. Champollion also posed theories, later proved correct, about the structure of the demotic script on the Rosetta Stone. The discovery and transcription of the writing led to the deciphering of other hieroglyphic inscriptions.

Circle one answer for each definition to indicate the correct key concept term for each. When necessary, determine whether the phrase provided is true or false.

1. The year 5100 BCE is considered the peak of arts and learning during the Golden Age of Greece, aproximately three hundred years after the adoption of the Phoenician alphabet.
    a. True
    b. False

2. Pictures and/or pictographs assembled in an order so as to represent the syllables in a word or words, from which meaning can be deciphered.
    a. Hieroglyphic
    b. Demotic script
    c. Cuneiform
    d. Rebus

3. Anthropologists believe that the domestication of animals was a strong factor in the development of human societies.
    a. True
    b. False

4. To sound or utter any of the abstract units of the phonetic system of a language that correspond to a set of similar speech sounds.
    a. Phoneme
    b. Semitic languages
    c. Ideograph
    d. Syllable

5. Tortoise shells etched with symbols have been excavated from the Jiahu site in Henan province in central China. The shells found appear to be part of a funerary ritual in Neolithic graves that have been dated to approximately 12,000–7800 BCE.
    a. True
    b. False

6. Pictorial material relating to or illustrating a subject or the traditional or conventional images or symbols associated with a subject and especially a religious or legendary subject; the imagery or symbolism of a work of art, an artist, or a body of art.

a. Iconography
b. Pictograph
c. Mnemonics
d. Hieroglyphic

The Assyrians were quick to adopt cuneiform as a practical writing system. Cuneiform writing has been used in several languages, and was in use for about 3000 years.

a. True
b. False

7. The pith of a plant cut in strips and pressed into a paper-like substrate or material to write on.

a. Parchment
b. Rosetta Stone
c. Papyrus
d. Cartouche

8. Repetition of agreed-upon shapes is the essence of a writing system.

a. True
b. False

9. A character or symbol used to represent a word, syllable, or phoneme.

a. Phonogram
b. Ideograph
c. Rebus
d. Parchment

10. Today many spoken languages exist that have no written form.

a. True
b. False

12. An Egyptian script that lasted for about 1000 years following hieratic script, and belongs to the last period of ancient Egyptian history. This script was used for business and literary purposes. It has a cursive form, signs are more flowing and joined, and the signs themselves are more similar to one another, making it slightly more difficult to read.

a. Hieratic script
b. Semitic languages
c. Demotic script
d. Cuneiform

13. Most original parchment texts no longer exist, as they deteriorated in the moist Mediterranean climate, while many of the copies on papyrus survived.

a. True
b. False

14. A symbol that is used to wholly communicate a simple message without words, such as in traffic signs and restroom door signage. This may be used as a signature, otherwise known as a distinctive mark indicating identity, such as a corporate logo.

a. Hieroglyphic
b. Pictograph
c. Mnemonic
d. Rebus

15. Some historians assume that writing began with small tags of parchment inscribed with pictographs that were attached to jugs by string intended to represent the contents of the vessels during shipping.

a. True
b. False

16. The oval band symbolizing continuity encloses hieroglyphs of a god's or pharaoh's name into one visual entity.
    a. Phonogram.
    b. Cartouche
    c. Rebus
    d. Ideograph

17. With the expansion of the Greek Empire under the rule of Frederick the Great (from 356 to 323 BCE), Greek culture spread.
    a. True
    b. False

18. A sign or character that represents and idea or concept, often comprised of two or more pictographs.
    a. Pictograph
    b. Cartouche
    c. Ideograph
    d. Syllable

19. The Semitic languages comprise the languages in the Far East, an area today that includes the countries of Syria, Lebanon, Israel, China, Palestine, Jordan, Cyprus, Turkey, Iraq, Egypt, Iran, Kuwait, Saudi Arabia, Bahrain, Qatar, United Arab Emirates, Oman, and Yemen.
    a. True
    b. False

20. A name used to designate a group of Asiatic and African languages, namely: Hebrew and Phoenician, Aramaic, Assyrian, Arabic, Ethiopic (Geez and Ampharic).
    a. Hieratic script
    b. Semitic languages
    c. Demotic script
    d. Hieroglyphic

21. Around 500 BCE the hieratic script eventually evolved into demotic script (demotic means "of the people"). This writing style is visually complicated compared to hieratic script.
    a. True
    b. False

22. Representing speech sounds by means of symbols that have one value only; of or relating to spoken language or speech sounds.
    a. Phonogram
    b. Pictograph
    c. Phonetic
    d. Ideograph

23. Found in 1908 at the ruins of the Minoan palace, the Phaistos Disk is dated to approximately 3700 BCE. The text is made up of fifty-one words, with eighty-five different symbols occurring a total of twenty-four times.
    a. True
    b. False

24. A black basalt stone found in 1799 that bears an inscription in hieroglyphics, demotic characters, and Greek and is celebrated for having given the first clue to the decipherment of Egyptian hieroglyphics.
    a. Hieratic script
    b. Semitic languages
    c. Demotic script
    d. Rosetta Stone

25. Hieroglyphics commonly run in horizontal rows, read from right to left. All the people and animals face the left in any given passage.
    a. True
    b. False

26. Of or relating to a time early in history, or to those living in such a period or time; especially of or relating to the historical period beginning with the earliest known civilizations and extending to the fall of the western Roman Empire in 476 CE.

a. Phonetic
b. Boustrephedon
c. Rosetta Stone
d. Ancient

27. A written language of characters formed by the arrangement of small wedge-shaped elements and used in ancient Sumerian, Akkadian, Assyrian, Babylonian, and Persian writing.

a. Cuneiform
b. Hieratic script
c. Demotic script
d. Hieroglyphic

28. Because of their diverse trade and travel, the culture of the Phoenicians was influenced by many other peoples who lived around the Mediterranean Sea, including the Greeks, Minoans, Etruscans, and Sumerians.

a. True
b. False

29. Writing with alternating lines in opposite directions; one line is written from left to write, then the next line is reversed (mirrored) and written from right to left. The Greeks called this Phoenician method of writing in alternating directions a word which means "like the ox plows a field."

a. Hieratic script
b. Boustrephedon
c. Demotic script
d. Typography

30. Before the discovery of the Rosetta Stone, hieroglyphics had been completely and correctly deciphered.

a. True
b. False

31. A writing system developed in ancient Egypt that used pictographs to represent words and sounds.

a. Hieroglyphic
b. Pictograph
c. Mnemonic
d. Parchment

32. The style, arrangement, and appearance of typeset matter; typography is sometimes seen as encompassing many separate fields from the type designer who creates letterforms to the graphic designer who selects typefaces and arranges them on the page.

a. Hieratic script
b. Logogram
c. Demotic script
d. Typography

33. A device, such as a formula, verse, or rhyme, used as an aid in remembering; a technique of improving the memory.

a. Mnemonic
b. Cartouche
c. Rebus
d. Ideograph

34. The smallest conceivable expression or unit of speech; a unit of spoken language that is next bigger than a speech sound and consists of one or more vowel sounds alone or of a syllabic consonant alone or of either with one or more consonant sounds preceding or following.

a. Ideograph
b. Pictograph
c. Syllable
d. Logogram

35. Greek culture spread. The growth of the Hellenistic culture caused the spread of the Greek alphabet (precursor to our own) as far as Egypt, Mesopotamia, and India.

a. True
b. False