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## **Lords of the Two Lands: Egypt and Africa**

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## Egypt's Old and Middle Kingdoms

The valley of the Nile river in northeastern Africa boasts one of the oldest continuous cultures on the planet Earth. Winding between the Sahara desert and the Red Sea for over seven hundred and fifty miles, this fertile stretch of land was one of the earliest cradles of civilization. Although the Sumerian culture of Mesopotamia was the first to develop the trademarks of modern civilization -- organization into cities and specialization of labor -- Egypt followed soon after, and in many ways progressed more quickly than her neighbor to the northeast.

Egypt's great advantage over the rest of the world was her geography. Protected on either side by desert, the fledgling civilization of Egypt prospered in peace for centuries before being disrupted by the outside world. The Nile river was calm and navigable for hundreds of miles, allowing for easy trade and communication between the residents of the various settlements that grew up on her banks. Once each year, like clockwork, the Nile river would rise and flood the valley, leaving behind a layer of fertile silt. This regular refreshing prevented the destruction caused by over-farming in other early civilizations, such as the Harrapans of India. With food plentiful, the Egyptians, like the Sumerians before them, were able to turn some of their population's energies to other pursuits. The abundance of food, the lack of natural disasters, and the protected geography of the Nile valley gave birth to a peaceful, conservative, optimistic people quite different in character from the Sumerians.

Unlike Sumer, Egyptian settlements had little need for trade with other cultures, since the Nile valley could provide everything they required. The lack of the outside trade and the easy communication provided by travel along the Nile helped determine that Egyptian government would develop along lines quite different from that of Sumeria or ancient Greece. The earliest Egyptian political unit was the clan, based on the extended family. As settlements grew larger, they began to combine into what were essentially the world's first nations: cooperative unions of settlements sharing a common culture and language. Each nation was ruled by a king, making Egypt the only known ancient civilization to jump straight from clan organization to centralized monarchy without first creating the city-state. Around 3100 BC, Egypt was divided into two main nations. The oldest was the civilization of the Nile Delta on the shore of the Mediterranean, called Lower Egypt because it was at the downstream end of the Nile river. Lower Egypt's center was at the ancient city of Memphis. The second early Egyptian nation was called Upper Egypt, since it was located upstream on the Nile (that is, further to the south), and had its capital at the city of Thebes.

Some time around 3000 BC, the leader of Upper Egypt led his troops downstream and conquered Lower Egypt, uniting the two nations. This leader, Menes (also called Narmer) began the Egyptian Old Kingdom, or Dynastic Age, which would last about five hundred years. King Menes combined the crowns of the two lands -- the red crown and the white crown -- to symbolize his conquest, and thereby created the traditional double crown of the Pharaohs. The cultural combination of the two societies was not so easy, and in many ways the people of Upper and Lower Egypt retained their separate identities. Memphis became the capital of the new unified Egypt.

The land area controlled by the King of Egypt roughly equaled that of Mesopotamia. The King's authority was supreme; he ruled as a god, with the support of the priestly temples. All land belonged directly to the King. Government positions were restricted to members of the royal family. A huge amount of money and work was invested in creating a tomb for the king so that he could live as grandly after death as he had in life. In fact, the term Pharaoh for the Egyptian ruler was never actually used in Egypt; it was a Biblical corruption of the Egyptian term Per-O, meaning Big House -- referring to the king's tomb, known as his House of Eternity. Around 2700 BC, King Zoser (or Djoser) ordered his royal architect, Imhotep, to build him a tomb greater than any king had ever had. Imhotep designed a stepped pyramid two hundred feet tall, which still stands today as the oldest known man-made structure in the world.

Although he didn't know it, Zoser had started a trend that would forever dominate the image of Egypt in the eyes of other cultures. In 2700 BC King Sneferu ordered the building of the first true pyramid, with smooth instead of stepped sides. His son, Khufu (Cheops) went him one better by having a truly astonishing pyramid built -- one that ancient historians claim took an estimated 100,000 workers over twenty years to

complete, though modern historians dispute this number. This structure, the Great Pyramid, became one of the seven Wonders of the Ancient World, and still awes modern visitors more than four thousand years after it was built.

The self-absorption of this first set of Egyptian kings, however, may have helped contribute to their downfall. The Old Kingdom declined around 2200 BC for unclear reasons, though there is evidence that famine and social unrest led to a popular uprising. One hundred and fifty years of chaos followed during which Egypt was divided among a number of lesser rulers, usually called barons. Eventually the baron of Thebes, Mentuhotep, made a deal with the other barons and assumed the throne of Egypt. This began the Middle Kingdom era of Egypt. In order to consolidate his rule, Mentuhotep had to share some power with the other lesser rulers, so this period of Egyptian history is also known as the Feudal Age. It lasted about three hundred years. During this time, Egypt first began to trade seriously with other ancient civilizations, including early Sumeria and the Minoans of Crete.

Inevitably, Egypt's increase in interaction with other civilizations led to her first experience with invasion. Around 1600 BC, the Nile Delta was overrun by a vigorous tribe from the north called the Hyksos. The Hyksos people possessed the very latest military advance: the horse-drawn chariot. The Egyptians had no defense against these powerful war-wagons, and no experience in defending their lands from outside aggression. The Hyksos moved in with very little opposition and set up the foreign dynasty of the Shepherd Kings, which would last about two hundred years.

Although the Hyksos dominated the residents of the Nile militarily, in all other ways they were considerably behind the refined Egyptians. The Hyksos were quickly Egyptianized, culturally assimilated by their subjects even as they ruled as conquerors. In exchange, the Egyptians learned modern methods of warfare, including the use of the chariot and the forging of higher quality bronze weapons. Eventually, it was natural that the native aristocracy would turn their new knowledge against their foreign rulers. Around 1550 BC, Ahmose, the baron of Thebes, put together an all-Egyptian army and ousted the Hyksos kings, chasing the invaders back into Canaan and ushering in the era of the Egyptian New Kingdom.

## Egypt's New Kingdom

Using tricks learned from the Hyksos conquerors, Ahmose and his successor, Amenhotep I, briefly turned Egypt into a world military power with a claim to the name of empire. During a period of about two hundred and fifty years, roughly 1550 BC to 1300 BC, Egyptian troops moved south along the Nile to conquer the rich kingdom of Cush, then east and north along the Mediterranean coast, taking control of first the Sinai peninsula, then the cities of Phoenicia, Philistine, and Syria. At the time of its greatest extent, this Egyptian empire reached nearly all the way to Asia Minor, and was considered the greatest power in the ancient world.

The most famous of the Egyptian pharaohs reigned during this era. One such was Queen Hatshepsut, one of the few women to rise to a leadership position in ancient times. Her twenty-year reign was known for the peace and prosperity it brought to the empire as Hatshepsut increased trade and diplomatic ties with other ancient civilizations and commissioned the building of many splendid monuments, some of which still stand today. Another Egyptian leader of note from this time was Amenhotep IV, who shocked Egyptians of all classes by renouncing the worship of Egypt's complicated pantheon of gods and ordering everyone to worship a single god, the Unconquerable Sun, instead. He changed his name to Akhenaton, Horizon of Aton, and he and his wife Nefertiti devoted their lives to sun-worship. Akhenaton's concept of a single all-powerful god was the world's first monotheistic religion, which may have influenced the ideas of Moses. From Akhenaton's point of view, however, the experiment was a failure; after his death, Egypt quickly reverted to the worship of the older gods.

Akhenaton's son-in-law, Tutankhamen, ruled after him for only a short time, but became one of the most famous of the Egyptian kings thanks to the recent discovery of the marvelous treasures buried in his tomb. The magnificence of the burial goods in the grave of this minor Egyptian king has led to much speculation about the death endowment of the more powerful Egyptian rulers, but unfortunately all of their tombs have long since been plundered of their riches by grave robbers.

Ramses II (Ramses the Great) was the last Egyptian king of this period to know relative stability. Although he had repeated troubles with the Hittites, an iron-wielding tribe of Asia Minor, he succeeded in holding Egypt's borders intact. By the time of his successor Ramses III, however, Egypt's foreign power was starting to crumble. An unidentified group called the Sea Peoples (possible the displaced Minoans of Crete) invaded many of the Egyptian-held coast regions of the Mediterranean, and the Nubians of Cush successfully rebelled against their Egyptian overlords. After that, Egypt started to have internal troubles, the most damaging of which was an intense rivalry between the priesthood and the army. These weakened the country enough that it was unable to stave off an invasion by the Cushites of the southern Nile in 715 BC, who were eager to become the lords over the people who had recently ruled them.

The Cushite dynasty ruled Egypt until a new wave of invaders struck from the northeast in 675 BC. This wave of conquerors, the Assyrians under Esarhaddon, were in the process of putting together a huge Middle Eastern empire built on blood and terror. Fortunately for Egypt, Assyrian power began to wane shortly after Egypt was taken, and the Egyptian governor Psamtik was able to rebel successfully and reclaim control of Egypt for the Egyptians. A short-lived resurgence of Egyptian power followed, as the Egyptians became a sea power and engaged in relations with the new Greek civilization taking prominence in the northeast. It would last only one hundred and fifty years, however; the tides of empire were sweeping through the Mediterranean with even greater force. The hated Assyrians were soon replaced by the more moderate Persian Empire under Cyrus the Great, and in 525 BC Cyrus's son Cambyses II captured Egypt with little trouble.

Egypt's fall to the Persian Empire spelled the end of Egyptian independence for over a thousand years. An uprising around 400 BC briefly freed Egypt from Persia's rule, but within a hundred years the Persians were back. In 332 BC Alexander the Great arrived in Egypt, was greeted as a liberator, and assumed the double crown of the Pharaohs. On Alexander's death, control of Egypt passed to his Macedonian general Ptolemy, who founded a long dynasty that ended in 30 BC when Queen Cleopatra suicided at Actium, after having chosen the wrong side in the Roman civil war between Marc Antony and Octavian Augustus. Egypt

was made a Roman province and then became a part of the Byzantine Empire when the Western Roman Empire fell in 476 AD.

## Phoenicia, Cush, and Axum

Although Egypt was the greatest civilization ever to flourish on the African continent, a few other cultures left their mark on that land as well. Another people that flourished on the Mediterranean shore of North Africa and left a significant mark on history were the people of Canaan, called the Phoenicians. Although their homeland was located in the Middle East, in the area of modern Israel and Lebanon, they reached the summit of their power and influence after being driven out of their original homes into their colonial cities, the most important of which was Carthage, in modern Tunisia.

The early Phoenicians became known as a sea power around 2000 BC. Their society was the first in history to turn from an agricultural society into one based almost entirely on trade and manufacturing. Their most important exports were the products of the cedars of Lebanon -- prized for their lumber, oil, and resin -- and fine textiles, particularly the rare and beautiful purple cloth colored with a dye made from a kind of seashell. Only the Phoenicians knew how to make this purple dye; in fact, the name Phoenician comes from the word phoenix, Greek for purple. The color was so rare and expensive that it became the color associated with royalty for thousands of years. The Phoenicians were also fine craftsmen in ivory and metal, and superb shipwrights. As sailors they had no peers.

Around 950 BC, the Assyrians attacked and captured the main Phoenician cities of Tyre and Sidon. To escape the Assyrian warlords, many Phoenicians fled to their colony cities on other shores of the Mediterranean, such as the islands of Sicily, Corsica, and Sardinia, and the coast of Spain. The most successful of these cities, however, were founded in North Africa, and two of them -- Carthage and Utica -- became the new capitals of Phoenician influence. By 600 BC Carthage had become the major Phoenician city of the world, and an important center for trade both on the Mediterranean and across the Sahara by camel caravan.

The Phoenician settlements were city-states in some ways similar to those of Greece. Each city was ruled by a small group of wealthy merchant families, a type of government called an oligarchy. Although wealthy and influential, the Phoenician cities suffered from the same sort of problems the Greek ones did: without any real political unity, each city was essentially on its own, and vulnerable to a determined conqueror. Although they were able to defend themselves successfully against some half-hearted aggression by the Athenians of Greece in the fifth and fourth centuries BC, they had the misfortune to become one of the first targets of the fledgling Roman Empire.

In 264 BC, a territorial dispute over the island of Sicily brought Carthage and the Romans into conflict for the first time. The Romans had only recently finished conquering the Italian peninsula, and were nervous about a foreign power establishing itself so close to their weakly-held southern border. Going to war against the power of the Phoenicians (Puns to the Romans) was a risky move for Rome, which had no fleet to speak of, but the Romans were determined, and quick learners besides. They soon built a navy of their own (copying the design from a beached Carthaginian warship), and the two powers became locked in a struggle that lasted twenty-five years. This first of the Punic Wars, as historians have called the struggles between Carthage and the young Roman Empire, was narrowly won by Rome, more through sheer stubbornness than anything else. As part of the peace settlement, Carthage was forced to acknowledge Rome's claims on Sicily, hand over the islands of Corsica and Sardinia, and pay out a quantity of cash for reparations.

The long war and the territorial loss hurt Carthage, but did not permanently defeat her. Among her other assets, the Phoenician city still had control over the rich and populous territory of Spain. Within a few decades of the end of the first Punic War, the great Carthaginian general Hannibal had put together a large and diverse army in Spain for the purpose of attacking Rome. Instead of arriving by sea, he led them overland along the northern coast of the Mediterranean and then down through the Alps into Italy. Although many of his soldiers died on the difficult mountain journey, the tactic succeeded in taking the Romans completely by surprise. Though the legions were quickly mobilized, Hannibal defeated the Roman troops three times running and headed straight for Rome itself.

Had he actually attacked the city, the history of Western civilization might have been completely altered. But for reasons lost in time, Hannibal instead swung west around the city and headed into the south of Rome, there to await reinforcements to arrive from Carthage by ship. But the Romans kept firm control over the waters around Italy, and the reinforcements never arrived. After fourteen years of fruitless wandering around in the south, Hannibal was recalled home to Carthage to help defend the city itself, which was under attack by the brilliant Roman general Scipio Africanus. The two armies met on the field at Zama, and Hannibal's troops were defeated. Legend has it Scipio ordered the Roman trumpets blown loudly just before the fight, which spooked Hannibal's war elephants; in truth, Hannibal probably lost because a group of mercenaries were bribed to defect at a crucial moment. Whatever the reason, Hannibal was forced to flee to the east, and Carthage surrendered.

This time the Roman terms of surrender were harsh: Carthage was forced to give Rome nearly all her lands, including the Spanish prize; hand over all her warships and war elephants; disband her army; and promise not to engage in any wars without permission from Rome. Carthage had no option but to comply or be destroyed; in the years between the first and second Punic War, the Roman war machine had become a formidable weapon. Even surrender did not save the city for long, however. Within fifty years, Rome provoked a third and final war with Carthage. This time, Carthage had no chance. The city was razed, its citizens slaughtered or sold into slavery, its fields sown with salt, and its lands cursed by Roman priests. The destruction of Carthage marked the end of the Phoenician culture as a power in the ancient world.

Further down the Nile from Egypt, in the part of Africa that is now Sudan, another culture was flourishing in isolation from the Mediterranean. The kingdom known as Cush (also called Nubia and Ethiopia) was a rich and fertile land. In addition to the Nile waters, Cush received regular rainfall, and her hills contained large amounts of gold, emeralds, and iron ore. Most of the gold in the ancient world came originally from Cush, moving downriver to Egypt and then out into the Mediterranean.

The Cushites first became a kingdom around the same time Egypt did, but their original homeland (called Lower Nubia) was too close to the lands of Upper Egypt to last. When the Egyptians moved in shortly after King Menes rose to power, the Cushites were forced to relocate further upstream. About five hundred years later, the new settlement had once again grown into a kingdom. Relations with Egypt continued, both in peaceful trade and in regular border raids. Egypt took stone and slaves from Cush, while the Cushites borrowed Egyptian hieroglyphics (though they developed their own cursive script later) and religion (though they added their own gods to the Egyptian pantheon.) When relations with Egypt were good, the Cushite rulers would send their sons to the Egyptian courts to be educated.

While Lower Egypt was being invaded by the Hyksos, the Cushites seized the opportunity to raid Upper Egypt, making off with Egyptian monuments and treasures to enrich the tombs of their own kings. Once the Hyksos had been driven off, the Egyptians retaliated with a full-scale invasion of Cush, capturing and destroying the capital city of Napata. Eventually, around 800 BC, the Cushites reunited under King Piankhi, a worshiper of Amon, and moved in on Upper Egypt. About 715 BC, Piankhi's successor Shabaka continued moving north and captured Lower Egypt as well, establishing a Cushite Egyptian dynasty. When the Assyrians conquered Lower Egypt, the Cushites were driven back south. When Ashurbanipal recaptured Upper Egypt, the looming Assyrian threat inspired the Cushites to move their capital even further south, from Napata to Meroe. The city of Meroe was located near great supplies of iron ore, and it became the center of production for iron goods for all of Africa. The huge slag heaps of Meroe still stand today.

As Egypt declined under centuries of foreign occupation, Cush became more and more isolated from the civilizations of the Mediterranean. The Romans drained Egypt's wealth, robbing Cush of her main trading partner as a side effect. The area between Cush and Egypt was also becoming more arid as the Sahara expanded, creating a buffer zone between the two cultures. Cush became more African and less Egyptian after this separation. Because the Cushite language diverged sharply from Egyptian around this time, modern scholars can't understand the historical records of Cush from this period. Because of this, information on the later Cushite kingdom is scarce. It's known that the civilization declined in the first few centuries AD, but the reasons for it are not clear.

Between 320 and 352 AD, Cush had declined so far in strength that it was easily conquered by a new



African power, the kingdom of Axum. Axum was founded by Arab traders from the Sabaeen tribes across the Red Sea who settled on the strip of Africa's coast between the Sudan plateau and the sea. The Axumites were legendary traders who shipped an astonishing variety of goods by both land and sea: gold, ivory, ebony, ostrich feathers and eggs, slaves, cattle, grain, leopards, giraffes, rare oils and perfumes, gum, carnelian, and dyes. They were also accomplished builders in stone who left behind magnificent ruins of crenellated castles, stone thrones, and huge obelisks. Unfortunately, the language of the Axumites, like that of Cush before them, has not been deciphered, so there are no records of their culture told in their own words. Around 400 AD, Axum became the only sub-Saharan African kingdom to convert to Christianity. This left them isolated when the Muslim invasions began around 900 AD, and they quickly declined and disappeared.

Much of sub-Saharan Africa has yet to be explored by archeologists or studied by historians. Because the huge swath of the Sahara Desert kept this part of the world isolated from the other ancient civilizations who might have left records of their interactions, great empires might have arisen and died with no one to mark their passing. For example, archeologists have recently discovered the remains of an advanced Iron Age civilization on the Benue Plateau of Nigeria; these people, called the Nok, appear to have jumped straight from stone tools to iron, missing bronze entirely -- the only known ancient culture to have done so. Other lost empires may be lying hidden within the African jungles.

## The Technology & Culture of Ancient Egypt and Africa

Life for the early Egyptians was much easier than for their contemporaries in ancient Mesopotamia. Food was plentiful; wheat, barley, and various fruits and vegetables grew in abundance in the Nile valley, and thanks to the Nile floods the soil never lost its fertility. The Egyptians also grew flax, which they learned to weave into sheer linen while the Sumerians were still wearing sheepskins and coarse wool. Another important agricultural product was the papyrus reed, which could be pulled apart and flattened into papery sheets far superior to Sumerian clay tablets for writing and creating artwork. The ease of their life gave the Egyptians plenty of time for activities not related to survival, such as artwork, religion, and fashion (they were particularly fond of cosmetics.) Wealthy Egyptians of the New Kingdom period lived lives of grace and comfort a thousand years before the flowering of Greece.

The status of women in Egypt was remarkably high for the time. They could choose from several professions and could go into business for themselves. Since royalty in Egypt was matrilineal (a son inherited power from his mother, not his father), girl children were as welcome as boy children in Egyptian families. The Egyptian custom of brother and sister marrying stemmed from this tradition; the son of a powerful man who wanted to inherit his father's standing had to marry his sister, and many did.

Perhaps because of the richness of their lives, the Egyptians spent a great deal of time thinking about and preparing for the afterlife. The wealth and luxury of an Egyptian's tomb was a sure measure of his social status; the kings of Egypt were buried with an enormous fortune in treasure, all designed to provide them with a comfortable life after death. Egypt developed a complicated pantheon of gods and beliefs very early, but the domain of the gods was restricted to the afterworld, for the most part. In day to day life, ancient Egyptians were conservative, slow to change, practical, pragmatic, and not particularly superstitious. Their society was very hierarchical, with serfs on the bottom, then bureaucrats, priests, nobles, princes, and finally the pharaoh on top.

Although the Sumerians developed writing first, the Egyptians picked up on the idea very soon after, apparently on their own; Sumerian cuneiform and Egyptian hieroglyphics have no elements in common. Like all else they did, Egyptian writing was elegant, as much an art form as a means of communication. Instead of pressing marks into clay with sticks, the Egyptians learned how to make ink and wrote on sheets of papyrus with reed brushes. Unlike other early cultures who first used writing for bookkeeping, the first written records in Egypt were histories, probably kept by temple priests, which is why modern scholars know more of ancient Egypt than any other culture of that period. At first the Egyptian language was pictorial, but, like cuneiform, it soon became at least partly phonetic. A cursive script called hieratic was developed fairly late in the history of ancient Egypt which looks rather similar to the modern Arabic script. Once they had written language, Egypt quickly developed a bureaucracy run by the scribes.

Egyptian mastery of technology was rather uneven. They were very good at observing nature, at astronomy, and at applied mathematics -- yet at the same time, they were one of the last of the Mediterranean cultures to acquire the wheel. This was probably due to that fact that the Nile met nearly all their transportation needs, and wheeled vehicles simply weren't necessary. (Neither the Tigris nor the Euphrates river were good for boating, so the Sumerians couldn't use their two rivers for travel.) Most Egyptian traffic went by poled raft or boats made of bundles of papyrus reeds.

The practical use of astronomy was an Egyptian specialty. Before the start of recorded history, the Egyptians were already using accurate sundials to tell the time. Unlike the Sumerians, who kept track of the year using the phases of the moon, the Egyptians were more interested in tracking the seasons and all-important yearly flooding of the Nile. They thus developed a yearly calendar based on the sun instead of moon, made up of twelve thirty day months, plus five extra days at year's end. This calendar evolved into the standard one used by Western civilization today.

The Egyptians were not especially gifted at mathematics, although they did have a primitive math system in which they could work with fractions and square roots (though not easily) and calculate the area of a circle. Their engineering ability, however, was unsurpassed until Roman times. The most visible proof

of this is the Great Pyramid of Giza, the only one of the Seven Wonders of the Ancient World still standing. This pyramid -- the tomb of King Khufu -- and the two smaller pyramids belonging to the later kings Khafre and Menkaure were built between 2700 BC and 2300 BC, during the Old Kingdom period. The Great Pyramid is made of 2,300,000 blocks of stone, weighing between two and a half and five tons each. Some of the interior chambers are lined with slabs of granite weighing more than fifty tons, dug from quarries six hundred miles away and floated to Giza down the Nile on barges. The pointed capstone weighs about fifteen tons and rises nearly four hundred and fifty feet in the air.

Modern engineers are at a loss to explain how a civilization that did not have the wheel, draft animals, pulleys, winches or derricks could manage to lift such a weight that far in the air. Although several theories have been proposed (involving long ramps, greased wooden slides, and other simple machines), most of them have at least one flaw that makes it unlikely any of the current theories is the entire truth. Until more information is unearthed either through archaeology or the study of history, the building of the Great Pyramid will remain a fascinating puzzle from the past.

The greatest technological weakness of the Egyptians was in the area of warfare. Never an aggressive people, the ancient Egyptians were militarily powerful only for about two hundred years of their three thousand year history. Early Egyptian wars (with the Cushites, for example) were fought by semi-naked spearmen. A few Egyptian soldiers might have had simple bronze maces or axes with sheet-metal blades. Only after the arrival of the Hyksos did the Egyptians pick up the technology of modern warfare. The chariot was the most important advance, of course, but the Shepherd Kings also taught the Egyptians about body armor and a much wider variety of weapons, including clubs, poleaxes, swords, and the composite bow made of horn and sinew which was much more powerful than the Egyptian wooden bows. The Egyptian contribution to Western civilization was much more of a cultural conquest than a political one; the Egyptians, like the Greeks, exerted a powerful influence on every culture that touched them.

Not every innovation in Africa came out of Egypt, however. The Phoenicians of North Africa made critical contributions in two important areas. First, they were the first to learn how to navigate by star and oar (around 1100 BC), which allowed them to explore parts of the ancient world no other Mediterranean culture could reach. By 500 BC Phoenician ships had sailed past the straits of Gibraltar and discovered a land they called the tin islands, which was probably Cornwall, on the southwestern shore of Great Britain. There are also records showing they may have managed to sail all the way around Africa on a three-year voyage (stopping every autumn to plant grain, wait until spring to harvest it, then moving on.)

An even more critical invention of the Phoenicians, however, was the first (and probably the only) entirely syllabic writing system. The Phoenicians, whose whole economy was based on trade with at least a dozen distinct groups of people, found it difficult to learn all the different written languages then in use. To simplify matters, they created the first script where each letter represented a sound, not a concept. Using this script, they could take down information in any language by writing down the sound of the word instead of the picture that represented it. The Phoenician lettering system had only the twenty-two consonants; there were no vowels. The Greeks, who knew a good thing when they saw it, adopted the Phoenician system and added vowels, creating Greek, which finally evolved into the modern Latin letters used by most Western cultures.

All syllabic alphabets in use today are descended directly from the Phoenician script. Even the word alphabet is Phoenician in origin, a combination of aleph, meaning ox, and beth, meaning house. When the Greeks borrowed the Phoenician letters, they also took the letter names, changing them slightly so that aleph became alpha and beth became beta; the words alpha and beta have no meaning in Greek, except to identify the first and second letters of the alphabet. The simplification of writing made it possible for a much larger portion of the population to become literate, and was a major contribution to the explosion of knowledge that took place in ancient Greece.

## **Masters of the Mediterranean: Greece and Rome**

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## Minoans and Mycenaeans

The civilization that would provide the backbone of almost all modern Western culture began to grow in an unpromising place. The lands on the northeastern shore of the Mediterranean sea are not nearly as friendly as the lands of Sumer and Egypt. Instead of flat, fertile river soil well-suited to farming, the early settlers in Greece had only rocky mountains and islands with poor soil and few natural resources. And yet, from this unlikely location came one of the greatest cultures of the ancient world.

Due to the difficult geography of the area, civilization was slower to develop in Greece than in Egypt or the Middle East. The earliest settlers probably came from Mesopotamia, wandering through the hills of Asia Minor in search of new homes. As they settled in and began to build cities, the nature of the land helped determine the nature of the people. Isolated on islands and mountains overlooking the Aegean, the Greeks became a seafaring people with tight loyalty for the citizens of their own cities and a strong distrust of outsiders, even those from other Greek cities. The fierce independence of the Greek cities became one of the most powerful influences on the history of their civilization.

There is relatively little known of the bronze age history of the Greek people, compared to the wealth of information available on Sumeria and Egypt. The first clearly recognizable culture in the area belonged to the fascinating and rather mysterious Minoans, who appeared around 3000 BC. Their capital was the city of Knossos on the island of Crete, which may have held around 100,000 people at its peak around 1800 BC. If this number is correct, Knossos was the largest city in Europe in that era. It held the Great Palace of the Minoans, the ruins of which have provided most of what is known about this ancient civilization.

The Minoans appear to have been blessed with a peaceful and prosperous lifestyle. Their mastery of the seas seems to have allowed them to protect their island cities with ease from other civilizations that might have threatened them. The ruins of their cities show no walls, and little sign of military activity. The art of Knossos shows animals, dancers, and flowers, not soldiers. The organization of the Minoan culture probably centered around mutually beneficial trade between cities instead of political and military dominance. Freed of the expense and effort of defending themselves against invasion, the Minoans instead used their energies to create a remarkably advanced culture. They produced lovely pottery and carvings in ivory and stone. Their cities were carefully laid out in circular patterns and featured running water and indoor bathrooms. One of the earliest forms of writing known, called Linear A, originated on Crete and probably was an important ancestor of modern Greek (the language is still only partially understood.)

Despite their peaceful and advanced civilization, however, the culture of the Minoans died out suddenly around 1400 BC. One possible explanation is that their islands were invaded by an aggressive tribe from the mainland called the Mycenaeans. A second, more interesting possibility is that the Minoans were destroyed by a natural disaster, a huge volcanic explosion on the Aegean island of Thera, now called Santorini. It is known that Thera erupted around this time in a blast that destroyed half the island and spread a cloud of smoke and ash for hundreds of miles in every direction. The tidal waves, ash rain, and other side effects of the explosion could easily have made the nearby island homes of the Minoans uninhabitable, killing thousands of people and forcing the rest to abandon their cities and flee.

Records of other cultures from that time make several mentions of people who might have been the displaced Minoans, such as the Sea Peoples who invaded the Nile delta, and the Biblical Philistines. The island of Crete itself may have been the historical basis for the Atlantis myth: an island that was home to a beautiful and advanced city, circular in appearance, that was swallowed up by the sea. The explosion of Thera might also have been responsible for the Biblical plagues of Egypt, particularly the fiery rains and the poisonous red waters, polluted by volcanic ash.

For whatever reason, the culture of the Minoans disappeared from the Aegean Sea, never to return. The next people to establish a presence in the area were the Mycenaeans, who moved into Greece from the north. The Mycenaeans, unlike the unaggressive Minoans, were a warlike people who most likely conquered and intermixed with small tribes of Minoans who had settled on the mainland of Greece. This mixture gave a cultural boost to the relatively primitive Mycenaeans, who carved out a small empire for

themselves around 1550 BC. Not much is known about the Mycenaean civilization except that they used bronze weapons and armor, drove chariots, and lived mostly by conquest and piracy. They had a written language called Linear B, which was an early form of classical Greek. The Mycenaeans were almost certainly the Greeks who sacked the city of Troy in Asia Minor, although they were more likely to have been motivated by a desire to keep their trade routes through the Bosphorus open rather than by any mythically beautiful Helen. Several of the classical Greek warrior-heroes such as Odysseus and Achilles may also have arisen from Mycenaean prototypes.

The Mycenaean age ended around 1150 BC when a new people, the Dorians, descended on Greece from the north much as the Mycenaeans themselves had done. Though less culturally advanced than the Mycenaeans in almost all areas, the Dorians had learned the secret of forging iron. Like several other important bronze-age civilizations, the Mycenaeans were swept under by a flood of warriors wielding black metal. Although records of the Dorian period are scarce, it appears that civilization in Greece was set back by about a thousand years or so, starting a local dark age that lasted about five centuries. An important exception to the Dorian wave of conquest was the coastal city of Athens, small and poor at the time but destined for great things.

## Classical Greece

Around 700 BC or so, the civilization now thought of as Classical Greek started to emerge. The people who were a combination of Dorians, Mycenaeans, and Minoans came to see themselves as a unified culture, and called themselves the Hellenes after a mythical ancestor named Hellen (a man, and no relation to Helen of Troy.) The name Graeci was assigned to these people by the Romans in later centuries, but cultures that were influenced by the Greek model are known as Hellenistic. By the sixth century BC, the Hellenes had spread out over most of the coast of the eastern Mediterranean, including Spain, North Africa, Sardinia, Corsica, and the shores of the Black Sea. Each Greek city that was founded had its own constitution and existed separately from all other Greek cities, although occasionally cities would team up and form leagues for one purpose or another (usually for trade reasons, or to attack other cities.)

The city of Athens was founded during Mycenaean times and dedicated to Athena, the goddess of wisdom. The thick clay soil around the city was very bad for farming, although excellent for pottery. Thanks to its location on the coast, however, Athens became an important center for trade by both land and sea routes and soon rose to local prominence in the area. Yet, strangely enough, it was not until the city was sacked and burned by a foreign invader that it became one of the foremost cities of the ancient world.

During the period of Greek expansion, Greek city-states had been founded in an area on the far side of the Bosphorus called Ionia, part of modern Turkey. Because of their location, they were a tempting target for Cyrus the Great, ruler of the newly-formed Persian Empire. Cyrus conquered the Greek cities of Ionia with no trouble, but local resistance to his rule was never completely eliminated. After fifty years of Persian dominance, the cities of Ionia revolted during the reign of Emperor Darius I and appealed to the other cities of Greece for aid. Athens responded, sending a force of a thousand soldiers to fight the Persians.

Although the revolt failed, Darius's attention had been drawn to the upstart Greek city, and he decided to punish Athens for its temerity in challenging his authority. He sent out the royal navy to attack Athens from the sea. The Persian ships landed at the plain of Marathon in 490 BC, where the Athenian army quickly engaged the invaders in battle. Although outnumbered three to one, the Athenian soldiers were better fed, better trained, and better armed than the Persians. The result of the battle was a crushing defeat of the Persian forces, who had 6400 casualties compared to the Greeks' 200 dead.

This astonishing outcome infuriated Darius, who vowed to crush the Athenians. Unfortunately, the Persian emperor died before he could carry out his planned invasion, leaving the job to his son and successor Xerxes. Rather than approach Athens by water, Xerxes raised up the largest army the world had yet seen and set off across land to attack Greece. Most of the Greek cities he encountered along the way surrendered without a fight. In 480 BC, a small force of Athenians and their allies, the Spartans, met Xerxes' forces at the mountain pass called Thermopylae. Though they were outnumbered by over a hundred to one, the last stand of the three hundred succeeded in holding off the Persian horde for several days before they were betrayed, attacked from the rear, and destroyed. Although they failed to keep Xerxes from reaching Athens, the battle at Thermopylae became a byword for doomed valor in the face of overwhelming odds, and no doubt must have given the Persian emperor pause. But Xerxes pushed on south toward his goal, forcing the Athenians to evacuate their city. Upon reaching Athens, Xerxes' forces sacked the city and burned it to the ground.

The Athenians, however, did not know when they were beaten. Although their city was gone, the forces of Athens fought on. The Athenian navy, backed into a corner by the Persian fleet at Salamis while trying to flee, counterattacked and wiped out most of the Persian ships. A dismayed Xerxes decided that he had taken enough losses and retreated from Greek lands back to Persia, leaving only a small force garrisoning the ruins of Athens. In 479 BC the Athenian army reorganized itself long enough to crush the Persian garrison and reclaim their city -- or at least the remains of it.

The Athenians quickly went to work rebuilding their city. They received support and help in this endeavor from other Greek cities who had been impressed by the Athenians' defeat of the Persian army. Making good use of their new prestige, the leaders of Athens put together a trade and protection alliance

called the Delian League. The growth in industry and commerce resulted in a surge of wealth for Athens, and many of the city's most famous monuments were constructed around this time period.

In a period of little more than twenty years, Athens rebounded from a pile of rubble to one of the greatest cities in the world. Cultural development was surging ahead in all the settled areas of the globe during the five centuries before and after Christ, as previously isolated cultures came into contact with each other, engaged in trade and conflict, and greatly increased the flow of knowledge from one civilization to another. Nowhere did learning advance more quickly than during the Golden Age of Athens, a short but glorious age for Greece. The Athenians developed brilliant new concepts in nearly every field of knowledge that existed at the time, including politics, literature, mathematics, commerce, medicine, and philosophy. All works tried to embody the ideal of the classical style -- balanced proportions, purity of expression, restraint in ornamentation, and emotion tempered by reason. The basis for a vast body of Western thought was laid down in a span of under thirty years.

The growth of Athens as a cultural center was accompanied by her growth as a military power. In this, however, Athens was less successful. Although the armed forces of the Delian League were supposed to be recruited from all the cities in the League, in fact most of the cities only provided money, while Athens provided the soldiers. By 450 BC, Athens was the acknowledged overlord of a small Athenian Empire. But her rule would be short-lived, and her efforts to dominate her fellow Greek cities would help bring about the end of her Golden Age.

The only other city-state in Greece that rivaled the power of Athens was her erstwhile friend and ally Lakedaemon, better known as Sparta. The culture of Sparta was unique in the ancient world, and very different from that of Athens. They based their society on a set of rules handed down to them by the possibly imaginary ruler Lykurgos the Lawgiver, which stressed simplicity and military service over all other values. Children of both sexes were trained in harsh military exercises from an early age. As adults, Spartan soldiers held to a rigid warrior-code that compelled death before surrender. This code was usually followed; a Spartan surrender was a rare and noteworthy event in the histories of ancient Greece.

It was in Sparta that the military concepts which helped Athens defeat the Persians were developed. The Spartan soldier, called a hoplite, was a citizen-warrior who served in the military at the same time that he tended his own land and helped run the affairs of the city. Hoplites wore heavy armor -- bronze boots, greaves, breast and back plates, helmets and shields -- and could fight equally well with swords or spears. Spartan hoplites were trained in the tactics of the phalanx, a tight-packed square eight men across and eight men deep that was excellent for defense. Although many other Greek cities adopted Spartan fighting styles, the Spartans remained the masters of the form. By 550 BC, Sparta was the strongest military state in Greece, although limited because, being a landlocked city, she had no fleet.

When Athens established the Delian League, the Spartans stayed out of the alliance due to a strong dislike for trade. As Athens grew more powerful, Sparta began to eye her former ally with worry, and hurried to make alliances with several nearby cities against Athenian aggression. Sparta's worries were well-founded, since the leader of Athens, a man named Pericles, was determined to expand Athens' holdings. Sparta was the one city in Greece that could stand in the way of his plan; therefore, Sparta had to be subjugated somehow.

Around 435 BC, the army of Pericles engaged in deliberate attacks on Sparta's allies, trying to provoke Sparta into declaring war. Unfortunately for Athens, they succeeded. In 431 BC, Sparta marched on Athens and brought the city under siege. The same thing that limited Sparta's power also protected her: as a landlocked city, Athens' fabled fleet could not be brought to bear. Although Athens had the strength to overcome Sparta with the backing of the rest of the Delian League, her might was too much based on her fleet and not enough on her land forces. The two powers of Greece became caught in a deadlock neither side was willing or able to break.

A long series of inconclusive conflicts followed, historically referred to as the Peloponnesian Wars, after Sparta's home on the Peloponnesian peninsula. The fighting continued with only minor breaks for some twenty-five years until Athens, Sparta, and all their allies were completely exhausted. The final



victory eventually went to Sparta, which captured a plague-devastated Athens in 404 BC. The Spartans installed a puppet government and indulged in a brief reign of terror before being ousted by the Athenians. Rather than expend the effort of taking the city again, the Spartans simply gave up and went home.

The main effect of this long grueling struggle was to deplete all of Athens' resources and decimate her fledgling empire. The city had lost too much population, wealth, and prestige to keep her dominion intact. Although Athens never lost her reputation as one of the world's greatest centers of knowledge and culture, she would never again be a military or political power.

## Alexander the Great

Forty years after the end of the Peloponnesian Wars, the coastal cities of Greece faced yet another invasion from the north. The kingdom of Macedon was a rugged land of high mountains (rich in mineral wealth) and deep fertile valleys that was first settled around 800 BC. The soldiers of Macedon had a well-earned reputation as tough, sturdy highland fighters, and needed only an ambitious leader to set them on the road to conquest. They found such a leader in King Philip II, who assembled an army and marched it south, conquering all the cities of Greece in a span of less than twenty years. When Athens fell in 337 BC, all of Greece was once again unified, this time under a foreign king. Philip, an aggressive warrior-ruler, had no intentions of stopping with Greece. He had his sights set on the lands of the sprawling Persian Empire, which had fallen into disorder in recent years due to the collapse of central power and were ripe for invasion. Unfortunately for Philip's plans of conquest, he was assassinated before he could make his move. Fortunately, however, he left those plans in the hands of an able successor, his eldest son Alexander III -- soon to be known as The Great.

Alexander was born in 356 BC. His father provided him with an excellent education, bringing the renown Greek philosopher Aristotle to Macedon to tutor the boy for three years. By age sixteen, Alexander had already been given command of a number of his father's troops, and was showing early signs of a formidable military talent. When Philip was assassinated in 336 BC, twenty-year-old Alexander assumed the throne. He immediately set out to complete his father's plans for the invasion of the Persian Empire.

Alexander's army held about 35,000 soldiers, 5,000 cavalry and the rest infantry. The foot troops included archers, javelin throwers, and spearmen carrying thirteen-foot pikes. A host of non-combatants traveled with the fighters, including surveyors, engineers, architects, and historians to record Alexander's feats. They traveled along the coast of the Aegean Sea, past the Dardanelles, and down into Asia Minor where he liberated the Persian-ruled Greek cities of Ionia, threw out the tyrannical Persian satraps, and installed Greek-style democracies. Many cities in Asia Minor surrendered to him without even a token fight, glad to be rid of the Persians.

In autumn of 333 BC, the Persian emperor Darius III sent out a force to attempt to stop Alexander's advance. Somewhat foolishly, Darius had brought his family and entourage along with him on campaign. Darius's soldiers were slaughtered by Alexander's disciplined troops, and his family was taken captive. The Emperor himself barely managed to escape. Alexander kept Darius's family in comfortable captivity for several years, treated them well, and never resorted to threats against them to bring pressure against the Persian Emperor.

Rather than head immediately east for the heart of the Persian Empire, Alexander continued to march south along the shore of the Mediterranean, into the lands of the Phoenician city-states. Like their Ionian counterparts, most of the Phoenician cities willingly opened their gates to Alexander. One serious exception to this was the island fortress-city of Tyre, an important Phoenician trade center. Tyre was widely considered to be an impossible target of conquest, and, confident of their invulnerability, the citizens of the island city defied Alexander's demands for surrender. Alexander promptly laid siege to Tyre, and his engineers went to work devising ingenious plans of attack. It took him seven months -- by far the longest single engagement of his entire career -- but in the end, the walls of Tyre fell to Alexander. To make a lesson out of the city that had dared think itself beyond his reach, Alexander put most of the male citizens to the sword and sold the women and children of Tyre into slavery. It was a potent demonstration to other cities and lands: submission to Alexander brought generous and merciful treatment, while resistance brought only death.

After the fall of Tyre, Darius sent an emissary to Alexander, offering to surrender all the lands west of the Euphrates river plus a great quantity of gold to the Macedonian conqueror if Alexander would advance no further into Persian territory. Alexander wasn't interested. Parmenio, one of Alexander's generals, counseled him to take the Persian offer, saying I would accept, were I Alexander. I, too, replied Alexander, Were I Parmenio!

In November of 332, Alexander reached Egypt and was once again welcomed as a liberator instead of a conqueror. The Persian satrap wisely surrendered without a fight. Alexander went out of his way to represent himself as willing to rule Egypt in the Egyptian style; he made obeisance to the Egyptian gods, sought (and received) the blessing of the Egyptian priesthood, and was crowned with the ceremonial double crown of the Pharaohs. He gave control of local Egyptian affairs over to native governors, although the army remained Alexander's alone. While wintering in the Nile valley, he founded the city of Alexandria, which would go on to become a celebrated multi-ethnic center for culture and learning.

When spring arrived, Alexander was on the march again, heading east across Mesopotamia into the heart of Persia. The ancient and wealthy cities of Babylon and Susa surrendered up their riches to Alexander without opposition. Darius again sent out an army to meet with Alexander's forces on the shore of the Tigris river at the plain of Gaugamela. Once again the Persian Army was disastrously defeated, and once again the Emperor had to flee in humiliation to avoid capture. The following year, Alexander took Darius's capital city of Persepolis, though the Emperor himself was not in residence at the time. Shortly after Alexander entered the city, much of Persepolis burned to the ground. While many Persians thought Alexander had started the fire deliberately to symbolize the official end of the Persian Empire, the more likely explanation is that it was accidentally set by some Greek soldiers during a drunken victory celebration.

Although the Emperor Darius was still free, the destruction of Persepolis spelled the end of the Persian Empire, and all of Persia knew it. Shortly after the capital burned, Darius was assassinated by one of his own satraps. This ignominious death for the Persian Emperor upset Alexander, who would have much preferred to have personally accepted the surrender of a living Darius. He freed Darius's family and ordered the fallen Emperor buried in his royal tomb at Persepolis with full honors.

The death of Darius ended all organized armed resistance to Alexander's rule. The Macedonian conqueror continued east at a leisurely pace, accepting the surrender of Persian cities and founding Greek outposts as he went. Eventually, in 326 BC, he and his army reached the shores of the Indus river. Faced with the daunting prospect of marching through India's thick jungles, Alexander's army grew rebellious. Though they stopped short of true mutiny, the troops refused to cross the Indus, despite Alexander's urging. Eventually Alexander gave in and turned westward again, but he never got over his disappointment. His temper worsened, and the formerly tolerant and generous leader began to turn tyrannical, executing a number of his governors on flimsy pretexts.

During his march through Persia, Alexander had been impressed by the luxury and sophistication of Persian life. Instead of forcing Greek ways onto the Persians, he wished to combine the best of both cultures in one unified Greco-Persian Empire. Unfortunately, his determination to put Persians on an equal footing with Greeks caused resentment in his troops, particularly among his elite Macedonian soldiers, and they resisted their leader's efforts. His great energies thwarted once again, Alexander became moody and irrational. The death of his lover Hephaestion in late 324 BC pushed Alexander even closer to the edge of madness. He became obsessed with the notion of his own godhood, and put forth decrees saying that all of his lands should revere him as such. Sparta replied to this demand with typical Spartan practicality: If Alexander wishes to be a god, let him be a god.

In 323 BC, the man who was arguably the greatest military leader the world has ever known died at the age of thirty-three after a prolonged bout of drinking. After his death, Alexander was awarded the status of godhood in both Egypt and Greece (this time without any snide comments from the Spartans.) He left no heir capable of taking up the reins of his empire, and it was promptly carved up by his generals. Seleucus I Nicator claimed the middle eastern portion of Alexander's conquests and founded a short-lived Greek dynasty of Persian emperors; Ptolemy took over Egypt and founded a dynasty of rulers that would end with Cleopatra; and Alexander's homelands of Macedonia and Greece splintered into half a dozen small squabbling kingdoms. The huge and glorious empire that had flamed to life with blazing speed burned out just as quickly.

Alexander's tragedy was that he was born to conquer, not to rule. The man who subjugated all of the great ancient civilizations except India and China without losing a single battle could never be satisfied

with the day-to-day tedium of governing the lands he had taken. Yet Alexander still left a formidable legacy. Without his example, and, more importantly, without the spread of Greek thought and ideas that traveled with his army, the Roman empire would never have been possible. Alexander's empire, the creation of a single exceptional man, would have long-lasting effects on the development of Western civilization.

## The Roman Empire

While Alexander was conquering in the East, the culture that would become his successor in empire was just beginning to bloom in the opposite direction, across the Adriatic Sea to the west. At that time, the Italian peninsula was a cultural backwater, sparsely populated by a handful of different tribes who spent most of their time warring with one another over territory. The far southern tip of Italy was home to a few small Greek city-states. About halfway up the peninsula, on the east coast, lived the Samnites; on the west were the Latins. Further north were the crumbling remains of the Etruscan civilization, and in the Po valley lived a number of Gallic (Celtic) tribes.

The ancient Etruscan civilization of Italy was rather Greek in flavor. Her city-states were independent of each other, and valued art and culture highly. Their lands were subject to constant raiding by the Gauls, however, who regularly looted and burned Etruscan cities. Adding to the Etruscan troubles was the growing strength of the Latin tribe just to their south. As the Etruscan cities declined in power, the Latin settlements -- particularly the trade city of Rome -- began to increase, until eventually the Latins overran the Etruscans. The addition of Etruscan culture and engineering know-how to the native energy of the Latins proved a potent combination, and soon the citizens of Rome and her allied cities had destroyed the Samnites, swallowed up the Greek settlements in the south, and pushed the Gauls back north toward the Alps. By 290 BC, the Romans had firm control over the entire Italian peninsula.

But, despite their achievements, the Romans were still a minor-league power on the world stage. They had conquered several nearby tribes, but had yet to prove themselves in a serious conflict with another established civilization. They got their chance in 264 BC when a territorial skirmish on the island of Sicily ignited into a full-fledged war with the greatest Mediterranean power of the time, the Phoenician city of Carthage. The Phoenicians (or Puns, as the Romans called them) were a seafaring trader people, originally from the land of Canaan (modern day Israel and Lebanon). When the Assyrians conquered their homeland, the center of Phoenician culture shifted to their colonies elsewhere in the Mediterranean, particularly those in northern Africa. The greatest of these was the city called Kar-Hadasht, Romanized to Carthage.

Located in modern-day Tunisia, Carthage was a prosperous and vigorous city, blessed with fertile lands and ample trade. Her trading fleet and navy held undisputed dominion over Mediterranean waters, and Carthaginian settlements were scattered over hundreds of miles of shoreline, from North Africa, to the islands of Corsica and Sardinia, and as far west as Spain. The Greek-held island of Sicily, less than a hundred miles from the Carthaginian coast, was a natural target for Carthaginian interests. At the same time, Sicily lay only a few miles off the point of the Italian peninsula, held by the Romans. It was inevitable that the two powers would come to blows over ownership of this strategic island.

The Romans were not (yet) devoted to the idea of conquest. Their main interest in Sicily was defensive -- allowing Carthage to take possession of the island would give the Phoenicians easy access to southern Italy, which the Romans had only recently won and where their authority was still shaky. The decision to go to war to keep Carthage out of Sicily was not made easily; at the start, Rome did not have a single seaworthy fighting ship. The island was too important to lose, however, so the battle was joined.

The war with Carthage forced Rome to become an international power. In response to the Phoenician threat, the Romans built a navy (based on plans drawn up from a beached Carthaginian warship) and drastically increased the size and efficiency of their land forces. Though they started at a disadvantage, the Romans were quick learners who had inherited formidable engineering skills from the Etruscans. This allowed them to quickly close the gap in ability separating them from Carthage, and soon the war had become an extended conflict of attrition between two essentially equal powers. At the end of twenty-five years of struggle, the Carthaginians finally surrendered, more out of exhaustion than for any other reason. The spoils of victory for the Romans included the lands of Sicily, Sardinia, and Corsica, plus a large cash settlement.

The Romans gained something else from this conflict, historically called the first Punic War: a sense of their own power, coupled with a new interest in the lands beyond the Italian peninsula. Sicily,

Sardinia, and Corsica became the first of the Roman provinces, and the seeds of empire had been sown.

Before those seeds could bear fruit, however, there was still Carthage to deal with. The Phoenicians had been hurt by their loss, but not seriously, and now they had a grudge against the Romans. In 221 BC, the Carthaginian general Hannibal raised a huge army in Spain (still under Phoenician control) and set out overland to launch a surprise attack on Rome from the north. The second Punic War began with a series of crushing defeats of the Roman legions by Hannibal as he marched south down the Italian peninsula, heading for Rome.

Fortunately for the Latin capital, he never got there. For reasons which are still a historical mystery, Hannibal turned east, went around the city, and headed into southern Italy. There he stayed for fourteen years, waiting for the arrival of reinforcements from Carthage that would allow him to smash Rome. The reinforcements never came. Carthage was losing to the Romans on all other fronts of the war, and had no men to spare. Hannibal's brother Hasdrubal tried to duplicate the famous march across the Alps from Spain, but was stopped and destroyed by the Roman general Scipio Africanus. In 203 BC Hannibal was recalled to Africa to defend Carthage itself from an attack by Scipio's forces. The two armies met on the field of Zama, and Scipio proved the victor. Although Hannibal escaped to the East, Zama marked the end of Carthaginian hopes. In 201 BC the exhausted city again surrendered to Rome on Rome's terms.

This time the Romans punished Carthage severely. The Phoenicians had to give up all of their lands including rich Spain; hand over their warships and elephants; and promise not to engage in any wars without Rome's express permission. By making all these concessions, the Carthaginians bought their city's survival, but only for the moment. The Romans had agreed to peace only to give their own forces a rest; fifty years after the end of the Second Punic War, Rome provoked war with Carthage on a trumped-up excuse, razed the city to the ground, sold its population into slavery, salted its fields, and proclaimed the land cursed by the gods.

Over a hundred years of war with Carthage had changed the nature of Roman society forever. Although Rome's original intent was defensive, by the time Carthage was destroyed the Romans had acquired authority over vast stretches of land almost by accident. Trade with her new territories had brought unprecedented wealth and prestige to the capital city of the Latins. The long conflict had also left Rome with a large and experienced army and the strongest navy in the Mediterranean. Even before the final annihilation of Carthage, Roman armies had started to move into the disordered kingdoms of Greece. In 148 BC, the Latins annexed the kingdom of Macedon, the once-proud homeland of Alexander, and reduced it to a Roman province. The same year that Carthage was razed, the rest of Greece came under Roman rule. In 129 BC, the Latins laid claim to the kingdom of Pergamum on the northwest corner of Asia Minor, seizing control of the important trade routes through the Dardanelles. Over the next seventy years or so the Roman legions continued to push east, capturing most of the rest of Asia Minor and nosing south into Syria.

The rapid expansion of Roman holdings caused a great deal of strain on the structure of the Roman government. Shortly after assimilating the Etruscan civilization, the Latins had changed from a dictatorship to type of government called a Republic, where a small body of prominent citizens, the Senate, made all the decisions for the city. This worked well while Rome was small, but as the Roman lands began to expand the Senate gradually grew more ineffective and corrupt. The riches of the provinces went to line the pockets of the Senators, who used the wealth to buy large tracts of land and huge numbers of slaves to tend to the fields. The Roman small farm owners, long the backbone of Roman society, began to be forced off their lands and into the city in search of work, which was scarce. As time passed, the gap between the upper classes of Roman society and the lower orders became wider and wider, and popular unrest grew. The Romans were ready for a different type of government, and it wasn't long before they got one. His name was Gaius Julius Caesar.

Julius Caesar hailed from a minor and unimportant Roman patrician family, but what he lacked in family prestige he more than made up for in raw talent. Equally gifted politically and militarily and blessed with inexhaustible energy, he rose quickly through the ranks of the Roman Senate to become the governor of several rich provinces. To prove himself a competent military commander, he then raised an army and led it north to the lands of Gaul, where he spent a decade or so wiping out the native Gallic tribes. In the

end, he had turned all of Gaul into Roman territory.

Back in the capital, Caesar's rapid rise, political maneuvering, and undisguised ambition had made him many enemies in the Senate, who conspired to have him arrested and executed on treason charges based on the claim that Caesar was trying to set himself up as king of Rome. In 49 BC the Senate revoked Caesar's military command and ordered him to return to Rome as a private citizen, secretly planning to have him arrested when he arrived. But Caesar had as many friends in the Senate as enemies, and he was swiftly warned that returning to the capital alone would mean a death sentence. The young general decided to return to Rome as ordered -- but with his army, fanatically loyal to his person above all else, in tow.

Caesar entered Rome at the head of his army to great popular acclaim, as many of his legislative actions as a Senator had earned the gratitude of the lower classes. The Senate did not openly oppose him, but threw their real support behind General Gnaeus Pompeius, better known as Pompey the Great, who was in Syria with his own legions preparing to attack Caesar. For the next two years Caesar's armies and Pompey's armies clashed in battle after battle, with Caesar proving to be the better general. Finally, Pompey was cornered and killed in Egypt, leaving Caesar to return to Rome in triumph as the city's undisputed master.

Although he had proven himself capable of ruthlessness while in Gaul, Caesar decided to treat his Roman enemies with mercy -- which turned out to be a mistake. Julius Caesar ruled Rome for a year, making many important and beneficial changes to the city, but never gained the loyalty of the entire Senate. In 45 BC a conspiracy of some sixty senators stabbed the dictator for life more than twenty times while he was delivering a speech in the Senate Hall. The conspirators expected that the populace of Rome would applaud them for freeing the city of an autocrat and restoring the rule of the Republic, but they badly underestimated the extent of Caesar's popular support. When Caesar's right-hand man, Marc Antony, made a public speech praising Caesar and condemning his murderers, the conspirators were forced to flee to the East to escape mob violence.

Although it was Julius Caesar who put an end to the faltering power of the Roman Senate, it was his successor who truly forged the Roman Empire. Most of Rome expected that Marc Antony would take over the reins of power, including Marc Antony himself, but to the surprise of many Caesar had named his eighteen-year-old grand-nephew Gaius Octavius (usually referred to in histories as Octavian) as his heir. No one expected Octavian to try to claim his inheritance. But Octavian surprised everyone, including Marc Antony, by showing up in Rome and taking control over Caesar's troops, whose loyalty to Caesar demanded that they respect his choice of successor, even if he was a teenager with no battle experience.

So began a struggle for power that would last over ten years. Marc Antony had more money, power, connections, respect, and experience than Octavian -- but Octavian had the blessing of the revered Julius Caesar, and more than his own share of wily cunning. Furthermore, Octavian gained the support of the Senate, who probably felt they could make a puppet ruler out of the boy. (They were seriously mistaken.) By various political maneuvers Octavian managed to keep outright civil war between himself and Antony at bay until Octavian could gain the experience and respect he would need to defeat Caesar's lieutenant.

Eventually, however, Marc Antony realized that Octavian wasn't going to go away, and relations between Rome's two most powerful men became decidedly strained. Marc Antony went off to Egypt where his legions were stationed, leaving Octavian in Rome, which was a mistake. When Antony divorced his Roman wife (who happened to be Octavian's sister) in order to take the Egyptian queen Cleopatra as his bride, Octavian accused Antony of scheming with his foreign wife to take Roman lands away from Rome and give them to Egypt. Using this as a pretext, Octavian sent his own legions after Antony and Cleopatra. Although only a mediocre general himself, Octavian had the support of excellent Roman military leaders such as Marcus Agrippa. At Actium in 31 BC Octavian's fleet engaged Cleopatra's, and the Egyptian vessels surrendered as Cleopatra and Marc Antony fled. A year later, Octavian's army seized Alexandria and declared Egypt a Roman province, leaving Cleopatra and Marc Antony no option except suicide.

It was Octavian, not Caesar, who gave the Roman Empire its classical form. The form of government Octavian created, officially known as the Principate (from Princeps, Latin for first) borrowed from the

structures of earlier empires, particularly the Persian Empire of the Achaemenids. To the title of Princeps, Octavian added Augustus, meaning exalted, another name by which history would remember him. Although he never took the official title of Emperor, an Emperor was what Octavian (now Augustus) was; he held sole authority, his word was law, and offenses to the dignity of the Princeps were punishable by death. Under Octavian's rule, the formerly supremely powerful Senate became little more than a ceremonial body.

In one way, Octavian's assumption of supreme power represented the death of the Roman tradition of freedom; ironically, however, the common people of Rome were better off under Octavian than under the rule of the corrupt Senate, which is why Octavian's rule lasted. And last it did: he ruled for fifty-six years. By the time of his death in 14 AD, hardly anyone in the Roman Empire could remember a time before the Principate, and the institutions of the Roman Republic were thought of with dislike whenever they were thought of at all. Octavian's most important reforms were in the area of provincial government. He restructured the provinces, adding several new ones in the process, and made the provincial governors directly responsible to himself. Before Octavian, provincial governors were Senators who, as members of the ruling body, were responsible to no one except themselves and so were usually thoroughly corrupt and vicious to the local residents of their provinces. Once Octavian took control, serious misbehavior by a governor could result in an Imperial execution order. As a result, many of the governors mended their ways, and the provinces became much more peaceful and prosperous.

The dynasty of Emperors founded by Julius Caesar and Octavian Augustus was known as the Julio-Claudian line. Unfortunately, few members of this line proved even half as capable as their famous ancestors. Augustus was followed by his stepson Tiberius, who was efficient but who disliked being Emperor and was disliked by Rome in turn. Tiberius's choice of successor was his grand-nephew Gaius Germanicus, better known by his nickname Caligula. Caligula was the first of the Roman Emperors to be seriously unbalanced, and he inaugurated a reign of terror in Rome that was not ended until a mob (led by the Praetorian Guard, the Emperor's own elite palace troops) stormed the Emperor's residence and killed him and his family. The Praetorian Guard chose Caligula's successor from the few members of his family remaining, picking his uncle Claudius, a quiet and bookish man. Though not a great emperor, he was at least sane. His successor, however, was his stepson Lucius Domitius Ahenobarbus, better known to history as Nero. Nero ascended the throne at the age of seventeen, thanks to political maneuvering by his mother Agrippina, who probably poisoned Claudius. He started out as a popular Emperor, but later became self-indulgent and tyrannical. After surviving several assassination attempts, he was eventually chased from Rome by a mob (again, led by the Praetorian Guard) and committed suicide.

The death of Nero left the Roman army without a descendent of Julius Caesar to proclaim as Emperor, and a brief but vicious civil war followed. It ended when the Roman general Titus Flavius Vespasianus (Vespasian) took power in 70 AD. Fortunately for the Empire, Vespasian turned out to be an excellent Emperor -- efficient, honest, hardworking, and militarily gifted. By the time his ten-year reign ended he had earned himself the title Second Founder of the Principate. By proving that the Principate could exist and be effective even without a descendent of Julius Caesar in charge, he revitalized the Roman Empire and extended its life by centuries. His two sons followed him to the throne as the Flavian line of Emperors.

The Flavians were followed by the distinguished Antonine line of Roman Emperors who presided over the Golden Age of the Roman Empire. The Antonines (named after Titus Marcus Antoninus Pius, fourth of that line) were unusual in that instead of trying to establish hereditary dynasties, the first four of these six Emperors -- Nerva, Trajan, Hadrian, and Antoninus -- instead chose a successor based on his fitness to rule instead of his bloodlines. The result was nearly a full century of internal peace and prosperity the like of which the world had never seen. The Pax Romana, the Roman Peace, completely circled the Mediterranean Sea. The total land controlled by the Roman Empire equaled that of the modern United States and held about one-third of the world's entire population at the time.

The long decline of the Roman Empire began with the death of Marcus Aurelius in 180 AD. Unlike his predecessors, Aurelius -- otherwise an excellent Emperor -- chose his son, Commodus, to succeed him. Commodus, like Nero, ascended the throne while still a teenager. Also like Nero, he was unfit to rule. He became a tyrant, and like many other Roman tyrants he met his end at the hands of the Praetorian Guard,



closing the glorious reign of the Antonine Emperors on a note of ignominy and disgrace. From that point until the official end of the Roman Empire in 476 AD, the rulers of the Empire were almost all ineffective, tyrannical, or both at once. Political power in the Empire had passed into the hands of the legions, who chose the Emperor by which general offered them the largest bribe, and disposed of their choice when he could no longer deliver. There were a few bright spots during the last three hundred years of the Roman Empire, such as: the Emperor Aurelian who ruled 270 AD - 275 AD; the Emperor Diocletian, who temporarily restored stability to the Empire in 284 AD by completely reworking the government; and the Emperor Constantine, who ascended the throne in 324 AD and left a major double mark on history by founding Constantinople as his new capital and by converting to Christianity and making it the official religion of the Empire.

The founding of Constantinople spelled the end of the city of Rome as the center of Mediterranean culture. Trade, commerce, and political power all migrated east to the new capital. The division between the eastern and western parts of the Empire deepened as the west came increasingly under attack by barbarian tribes from the north, particularly the Germanic peoples. Finally, in 476 AD, the German chieftain Odoacer invaded Italy, sacked Rome, and seated himself in the former Roman capital as king. Though the eastern half of the Roman Empire would survive for another thousand years as the Byzantine Empire, the western half disintegrated into a disorderly collection of barbarian kingdoms.

## The Technology and Culture of Greece and Rome

No other culture of the ancient world has affected modern Western civilization more than that of ancient Greece. In the areas of politics, art, architecture, drama, poetry, rhetoric, philosophy, theoretical math, and others, the influence of the ancient Hellenes can still be clearly felt, thousands of years later. Remarkably, this explosion of new ideas and knowledge came from a city with a population of no more than 300,000 at its largest, at least one third of whom were slaves, and which controlled an area of land of only about 3500 square miles.

The Greek culture did not develop in a vacuum, however. The earliest Greeks were avid traders throughout the eastern Mediterranean, carrying cargoes of olives, grapes, pottery, metal tools, textiles, opium, and slaves. Commerce brought them into contact with some of the most advanced cultures of ancient times. From the Egyptians, the Greeks learned a highly-ordered mysticism. From the Phoenicians, they acquired knowledge of shipbuilding, and, most importantly, the phonetic (instead of pictographic) alphabet. Contact with the Persians during the Greco-Persian wars further enriched Greek cultural life. The Greeks were also familiar with much of the technology and culture of ancient Babylon.

By the late decades of the seventh century BC, the Greek cities -- especially Athens -- had become the trade centers of the Mediterranean. Trade in slaves was particularly profitable. The culture of the Greeks was heavily dependent on its slaves, who might make up between one and two-thirds the entire population of each city. Originally, the Greeks enslaved each other, until around 600 BC the Athenians passed a law making it illegal for any Athenian to enslave another. In 510 BC the citizens of Greece's most prominent city took things a step further by overthrowing the dictatorship in which they lived and installing a form of government they called democracy. The Greek definition of democracy wasn't the same as the modern definition: only free male citizens with a certain amount of money could vote, which left seventy to eighty percent of the society without a voice. Women, slaves, resident aliens, and the poor had no say. (The free women of Greece, in fact, often lived worse than male slaves.) Still, this was a vast improvement on autocratic rule by single person. Although the system probably only worked in Greece due to the small size of the cities, the effects of the change on Athenian society were dramatic.

By giving more of the citizens a personal stake in the welfare of the city, the new style of government gave rise to a great groundswell of Athenian pride and achievement. With all the labor of the city done by slaves and women, the male citizens of Athens were able to concentrate on intellectual and cultural advancement. They began by looking for solutions other than the power of the gods for the mysteries of life. Although the Greeks respected the gods, they tried to look beyond them and find new explanations for what they saw through logic and reason. In so doing, they provided the foundations for the modern scientific method.

The results were remarkable. Pythagoras devised a mathematical proof for the Pythagorean Theorem (although the principle was known centuries earlier) and used it to show the existence of irrational numbers, which greatly expanded the field of mathematics. Aristotle proved that the world was a sphere, using several arguments, including the evidence that the Earth's shadow on the Moon is an arc. Euclid wrote a text outlining a complete system of mathematical geometry. A Greek named Pytheas sailed out of the Mediterranean and discovered the tides of the ocean (which are not noticeable in the Mediterranean), though no one believed him. Eratosthenes correctly calculated the circumference of the Earth, though he also was not believed.

Culture also bloomed during the Golden Age of Athens (generally regarded as 460 BC to the start of the Peloponnesian wars). Socrates taught rhetoric and logic and greatly influenced the development of modern philosophy. His student Plato founded the first university for advanced study. Aristotle also taught and wrote, founded a university that competed with Plato's, and tutored Alexander the Great. Hippocrates attempted to apply reason and logic to the practice of medicine (formerly the domain of the gods) and developed an ethical code for physicians. Homer wrote the *Odyssey* and the *Iliad*, epic poems that would have great influence on Western literature. Numerous other philosophers, poets, and logicians wrote, spoke, taught, argued, and lectured in the streets and bath-houses of Athens.

Greek reason and logic were also applied to the mechanics of warfare, with excellent results. The Greeks favored infantry tactics; of all the Greek cities, only Thessaly and Boeotia produced horsed soldiers. The Greek hoplite was a free citizen-soldier who could vote and who bought his own armor. He drilled in precise maneuvers and close-order fighting. The phalanx was the main Greek formation; though it was rather inflexible, a properly drilled phalanx could engage in devastating charges which would break up an enemy line quickly, allowing the Greek soldiers to easily dispatch the enemy with spears and swords. The Greeks were also the first to employ artillery. The engineers of King Dionysius from the city of Syracuse, following the designs of the great mathematician Archimedes, invented the world's first catapult, a huge bow that threw a boulder instead of an arrow.

Much of the success of the Roman Empire can be attributed to their acceptance of and respect for the science of the Greeks. Unlike their inquisitive-minded neighbors, however, the Romans had little interest in pursuing pure science; they were more interested in what could be done with the knowledge the Greeks had gathered than in gathering more of it. While the Greeks were scientists, the Romans were master engineers and builders. They inherited some know-how from the Etruscans, who had discovered the secret of using the arch to span long distances and carry heavy loads. By 312 BC the Romans had learned how to build excellent aqueducts and even better roads, structures so sturdy that many of them still stand today. Some Roman roads are still used for modern traffic. The Romans built many beautiful and stately monuments in their cities, but their admiration for Greek culture was so strong that these structures all tend to look more or less Greek. The Romans had little independent artistic culture of their own.

The soldiers of Rome had their own specialized formation, more flexible and responsive than the Greek phalanx, called the legion. While the foot soldier was still the backbone of the formation, a legion could also include javelin-throwers and cavalry. A typical legionnaire wore a cuirass of mail or segmented plate plus a bronze helmet, and carried a shield. His weapons were the javelin or thrusting spear and the short sword. At first, the Roman legionnaire was a citizen-soldier like his Greek counterpart, but shortly before the fall of the Republic and the establishment of the Roman Empire the Roman army became a body of professional soldiers who signed up for twenty-year terms of service. This was the start of the supremacy of the military that eventually contributed to the breakdown of authority and the fall of the Empire, but for several hundred years it gave Rome military power surpassing that of any other civilization.

