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**BORN:** c. 500 bce • Clazomenae, Greece

**DIED:** c. 428 bce • Lampsacus, Greece

## *Greek philosopher*

Anaxagoras was one of the most famous of early Greek philosophers. He is credited with turning Athens into a center of ancient study and intellectual activity. Anaxagoras expanded on the work of earlier philosophers, especially those from the Milesian or Ionian School. These thinkers proposed that substances such as air, fire, water, or earth made up the universe. Anaxagoras, in contrast, proposed that the universe was made up of a substance that could be divided infinitely, or forever.

"Other things include a portion of everything, but mind is infinite and self-powerful and mixed with nothing ... over all that has life, both greater and less, mind rules."

Anaxagoras, like many other philosophers of his time, sought to find an explanation for the source of motion by searching for an organizing principle. Anaxagoras believed this principle was what he called *nous* or "mind." His theory was that *nous* set unarranged matter in the universe into motion and created order from it. Because of his focus on this principle, Anaxagoras has been credited both with an advance towards theism, the concept of a personal creator-god involved in human affairs, and with the first steps toward atheism, or the total disbelief in god or gods. In placing *nous* as the beginning of creation, Anaxagoras paved the way for believing in a single creative force, God. Ironically, his philosophical concept of *nous* also helped lead to a rejection of all gods, for the beginning of the world and creation could now be explained in scientific terms rather than religious ones.

## Early years

Anaxagoras was born in about 500 bce, into a wealthy and noble family in the town of Clazomenae in Ionia in [Asia Minor](#). This strip of land along the coast of what is modern-day western Turkey was part of Greece during Anaxagoras's lifetime. About fifty years before Anaxagoras's birth, Ionia had been conquered by the Persians under [Cyrus the Great](#). The Persians were harsh rulers, and in 498 bce the Greeks of Ionia rebelled against the current Persian ruler, Darius. The revolt was defeated in 492 bce, but led to the later [Persian Wars](#). In these wars, Persia attempted to punish Athens for having helped the Ionian citizens in their rebellion. Roughly fifty years of periodic warfare followed.

Anaxagoras was born into complex times. His focus, however, was on the mind rather than military and political affairs. Although little is known of these early years of Anaxagoras's life, it is believed that as a young man he gave up his noble position and wealth in order to concentrate on science. Most likely he was aware of the intellectual activity that was occurring in the nearby seaport of Miletus, which had no priesthood or king that ruled as God's representative on Earth. There early philosophers sought to describe the nature of the universe using reason and logic. They formed the Ionian or Milesian School of writers and thinkers, which was the birthplace of Greek philosophy.

Thinkers such as Thales (c. 636–c. 546 bce), Anaximander (c. 611–c. 547 bce), and Anaximenes (sixth century bce) focused their attention on the study of nature. They were searching for an elemental building block of matter or for one primary substance or originating principle, the *archê*. The one primary substance or originating principle refers to the one substance that existed at the beginning of time. Anaximander defined the primary source of everything as *apeiron*, or the unlimited and infinite (forever). Anaximenes believed that everything was originally composed of air or vapor, the thinning and thickening of which gave substance to life. Heraclitus (c. 535–c. 475 bce), from Ephesus on the coast of [Asia Minor](#), credited fire as the original substance that formed everything and declared change was the only constant in the universe. Such change, according to Heraclitus, was guided by *logos*, or reason. Heraclitus, though not Ionian, advanced this search for the primary building blocks of the universe by saying that there were four unchanging elements: earth, water, fire, and air. These elements were combined and separated by Love and Strife, his organizing principles.

Anaxagoras was aware of the work of these Ionian philosophers. Even before the age of twenty, when he departed for Athens, he saw that their arguments failed to explain movement and change. He was determined to create a theory that accounted for all aspects of the universe. In Athens, Anaxagoras became friends with the young statesman Pericles (c. 495–429 bce). Pericles rose to prominence in about 460 bce, becoming a popular political and military leader of the city. Anaxagoras was also said to

be friends with other important Athenians, and some say he was even a teacher of the famous philosopher Socrates (469–399 bce), though this is unlikely.

## Time in Athens

Anaxagoras's years in Athens were productive ones. By about 467 bce he produced his major work of writing, *On Nature*, only fragments of which exist today. Many quotations from Anaxagoras come from the works of later philosophers. In *On Nature*, Anaxagoras attempted to further the work of the earlier Ionian School thinkers. Instead of air, fire, water, and earth as the four elements of creation, Anaxagoras said that there were an infinite number of particles or "seeds" (*spermata*) that combined to create everything in the universe. These seeds, or building blocks, could be divided into smaller parts, or combined to form larger items. Anaxagoras claimed that this ability of matter to be divided or combined together accounted for the vast variety of forms in the universe.

### Anaxagoras's creation of the cosmos

Anaxagoras held that these seeds were eternal and have always been in existence. For Anaxagoras, there was no such thing as a void or empty space. At the beginning of the cosmos (universe), such seeds were initially in one huge mass without shape or form. Through nous, or organizing principle, this mass was set in rotary motion. This motion caused the mass to separate out into smaller elements.

Anaxagoras believed the creation of the world was due to this separating of the seeds and by the effect of the spinning motion on these seeds. The formation of the universe or cosmos took place in two stages. First was the revolving process, which separated and then remixed the particles. In this stage, all the dark particles came together to form night, and the fluid seeds joined to make the oceans. The friction in this rotary motion in turn caused heat, which set the stars and sun on fire.

The development of all living things came in the second stage, when the same types of seeds or particles attracted others like them. The separation of the seeds by the rotary motion was imperfect, as Anaxagoras noted, and therefore, according to his theory, there are a few seeds of everything in everything else. What makes something what we believe it to be is that it has a majority of seeds of one type. For example, white is white because it has a majority of white seeds, but it also contains black seeds. Hair is hair, because most of its seeds are of the hair type, but it also has parts of everything else in creation in it.

### Ordering the universe and studying it

An important factor of Anaxagoras's theory is the action he claimed nous had upon the organization of the universe. This approach was popular with later philosophers such as Socrates (469–399 bce), Plato (428–348 bce), and Aristotle (384–322 bce), all of whom were highly concerned with ethical problems and how to live a good life. For them, the concept of an ordering principle to the universe, such as nous, was appealing. They criticized Anaxagoras, however, for not taking his theory further and explaining the purpose of such an ordering principle. Anaxagoras simply explained his theory of matter and motion but did not ask why it happened as it did.

Anaxagoras was also known for his work in astronomy (the study of the sun, moon, planets, stars, and objects found in space), which may have been inspired by the fall of a large meteorite, or mass of matter that falls to Earth from space, near Aegypotomi in 467 bce. He believed that the sun was a blazing ball of metal about the size of the Peloponessus, the major island of southern Greece. Anaxagoras went further, however, and said that the moon was made of similar matter as Earth and shone because it reflected light from the sun. From this, he went on to describe how Earth moves between the sun and moon, blocking the light and causing lunar eclipses. He also explained how the moon sometimes moves between Earth and sun, causing a solar eclipse.

## Anaxagoras accused

Anaxagoras's theories of the universe angered some citizens of Athens because they challenged the accepted beliefs of the time. His friendship with Pericles may also have caused Anaxagoras trouble. Pericles had enemies, and these enemies ultimately targeted his friends. Some time around 450 bce Anaxagoras was imprisoned and charged with impiety, or disbelief in the gods. The reason for his imprisonment was his claim that the sun was only a huge mass of hot metal and not a god, as was commonly believed at the time. He was also accused of maintaining secret communications with the Persians, the enemy of Athens, and was sentenced to death. Pericles used his influence and had the death sentence changed to one of exile, which meant Anaxagoras's life was spared, but he was forced to live outside of Athens.

### Exile in Lampsacus

Anaxagoras left Athens for Lampsacus, an ancient Greek city in northwestern Asia Minor. Many young Greeks came to study with him until his death in 429 bce. Few specifics are known of Anaxagoras's work in exile. However, a much later Roman

author and architect mentioned that Anaxagoras created theater designs that allowed viewers to better see objects in the front and back of the stage. This suggests that Anaxagoras also may have done some philosophical work on perspective, perhaps the earliest of its kind. Perspective is the appearance to the eye of objects in respect to their relative distance and position.

## Pericles

Pericles, a well-known speaker and patron of learning and the arts, was born around 493 bce in Athens. Although for much of his early life he was concerned with the theatre, in 461 bce he became involved in politics. He helped organize a vote in the popular assembly that took power away from the Areopagus, the ancient aristocratic council that ruled Athens. The vote left the Areopagus basically a legal court rather than a ruling council.

Pericles then initiated a number of democratic reforms in Athens, including the payment of salaries to state officials and the opening of such offices to commoners. He introduced laws that limited the power of the Athenian aristocrats, although this won him many enemies. He also established a truce with Athens's longtime rival, Sparta, which created a golden age of peace in the city.

During his involvement in politics, Pericles continued to support the arts. Around 447 bce he also began to show a strong interest in building and architecture. He oversaw the construction of the Parthenon, which he envisioned as a monument to the power of Athens. The Parthenon was built on the central fortified hill of the city, the Acropolis.

Pericles was eventually driven from office by political enemies, but was reelected the city's military commander in 428 bce. He died shortly thereafter.

Anaxagoras was not the last of the great philosophers of ancient Greece to be accused of not believing in the gods. Socrates was also tried for this offense and put to death. Aristotle was accused of the same crime, but fled from Athens, saying he refused to allow the Athenians to sin against philosophy a third time.

## Effects on thought

Anaxagoras's work had a significant effect on philosophy and thought. His theory of nous proved an inspiration for Socrates, though the latter was sorry Anaxagoras had not taken his argument further. For Socrates, nous seemed to be simply a mechanical means of organizing the universe, a force without morality or goal. Socrates believed there was more than this to the universe. Nevertheless, Anaxagoras's theory of creation is historically important because some of its aspects were adopted by later scientists. These include his theory of the rotating cosmic mass at the beginning of time and his idea that the basic building blocks of life could be divided.

More importantly, by attempting to explain the process of creation without relying on gods as the driving factor, Anaxagoras helped to pave the way for criticism of religious ideas about the origin of the universe. His explanation of the formation of heavenly bodies such as the sun, stars, and the moon ultimately led to doubts in God's existence (agnosticism) or possibly even a complete lack of belief in God or gods (atheism). Some historians, however, call Anaxagoras the father of theism, the belief in a personal god that created the universe, or even of monotheism, the belief in one supreme being. Although it was never referred to as a god, the nous Anaxagoras believed in was the thing that set the early cosmos in motion and organized life. This was taken by some to mean that Anaxagoras's theory focused on one power or force in the universe, rather than a pantheon, or group, of gods as the Greeks had believed. Therefore, the father of agnosticism or atheism is sometimes also called the father of monotheism.

## For More Information

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