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Philosophy II

Radically, Biblical, Apostolic, Christianity



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Advanced Philosophy

Introduction

The purpose of this lesson is to give a brief study of Alexander the Great, and show that he influenced all the nations of the world with his platonic philosophy and cultic training. It is also documented that Alexander the Great was a homosexual. (Bryan Magee, One in Twenty: a study of Homosexuality in men and women (New York: Stein and Day, 1966,P. 46).

From the influence of his father, and the influence of his mother, he eventually founded the city at Alexandria, Egypt. Ptolemy, I set up the Library at Alexandria using Alexander's teachings from Aristotle, and the cults of his mother.

It is from this Library that many Post Apostolic Fathers were educated in Platonic Grecian philosophy.

From the Post Apostolic Father's, the world was handed the Trinity doctrine, devised from Grecian and Platonic philosophy.

The Trinity doctrine was never taught by the Apostles of Christ, and was formulated by men who were drunk on the wine of the Mother of Harlots.

I have said a lot, but can I back it up with documentation? Let the following documentations and resources speak for themselves on this issue.

Bishop D.R. Vestal, Ph.D.

Let us first look at the brief summary of Alexander the Great:

Alexander the Great (356-323 B.C.)

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King of Macedonia, conqueror of the Persian Empire, and one of the greatest military geniuses of all times.

Alexander, born in Pella, the ancient capital of Macedonia, was the son of Phillip II, king of Macedonia, and of Olympias, a princess of Epirus. Aristotle was Alexander's tutor; he gave Alexander a thorough training in rhetoric and literature and stimulated his interest in science, medicine, and philosophy. In the summer of 336 B.C., Philip was assassinated, and Alexander ascended to the Macedonian throne. He found himself surrounded by enemies at home and threatened by rebellion abroad. Alexander disposed quickly of all conspirators and domestic enemies by ordering their execution. Then, he descended on Thessaly, where partisans of independence had gained ascendancy, and restored Macedonian rule. Before the end of the summer of 336 B.C., he had re-established his position in Greece and was elected by a Congress of States at Corinth. In 355 B.C., as general of the Greeks in a campaign against the Persians, originally planned by his father, he carried out a successful campaign against the defecting Thracians, penetrating to the Danube River. On his return, he crushed in a single week, the threatening Illyrians and then hastened to Thebes, which had revolted. He took the city by storm and razed it, sparing only the temples of the gods and the house of the Greek lyric poet, Pindar, and selling the surviving inhabitants, about 8,000 in number, into slavery. Alexander's promptness in crushing the revolt of Thebes brought the other Greek states into instant and abject submission.

Alexander began his war against Persia in the spring of 334 B.C., by crossing the Hellespont (modern Dardanelles) with an army of 35,000 Macedonian and Greek troops; his chief officers, all Macedonians, included Antigonus, Ptolemy, and Seleucus.

At the river Granicus, near the ancient city of Troy, he attacked an army of Persians and Greek *hoplites* (mercenaries) totaling 40,000 men. His forces defeated the enemy and, according to tradition, lost only 110 men; after this battle, all the states of Asia Minor submitted to him. In passing through Phrygia, he is said to have cut with his sword, the Gordian knot. Continuing to advance southward, Alexander encountered the main Persian army, commanded by King Darius III, at Issus, in northeastern Syria. The size of Darius's army is unknown; the ancient tradition that it contained 500,000 men, is now considered, a fantastic exaggeration. The Battle of Issus, in 333, ended in a great victory for Alexander. Cut off from his base, Darius fled northward, abandoning his mother, wife, and children to Alexander, who treated them with the respect due to royalty. Tyre, a strongly fortified seaport, offered obstinate resistance, but Alexander took it by storm, in 332, after a siege of seven months. Alexander captured Gaza next, and then passed on into Egypt, where he was greeted, as a deliverer. By these successes, he secured control of the entire eastern Mediterranean coastline. Later, in 332, he founded, at the mouth of the Nile River, the city of Alexandria, which later became the literary, scientific, and commercial center of the Greek world. Cyrene, the capital of the ancient North African Kingdom of Cyrenaica, submitted to Alexander soon afterward, extending his dominion to Carthaginian territory.

In the spring of 331, Alexander made a pilgrimage to the great temple and oracle of Amon-Ra, Egyptian god of the sun, whom the Greeks identified with Zeus. The earlier Egyptian pharaohs were believed to be sons of Amon-Ra; and Alexander, the new ruler of Egypt, wanted the god to acknowledge him, as his son. The pilgrimage apparently was successful, and it may have confirmed in him, a belief in his own divine origin. Turning northward again, he re-organized his forces at Tyre and started for Babylon with an army of 40,000 infantry and 7,000 cavalry. Crossing the Euphrates and the Tigris rivers, he met Darius at the head of an army of unknown size, which, according to the exaggerated accounts of antiquity, was said to number a million men; this army he completely defeated in the Battle of Gaugamela, on October 1, 331 B.C. Darius fled, as he had done at Issus, and was later slain by two of his own generals. Babylon

surrendered after Gaugamela, and the city of Susa, with its enormous treasures, was soon conquered. Then, in midwinter, Alexander forced his way to Persepolis, the Persian capital. After plundering the royal treasuries and taking other rich booty, he burned the city during a drunken binge, and thus, completed the destruction of the ancient Persian Empire. His domain now extended along and beyond the southern shores of the Caspian Sea, including modern Afghanistan and Balochistan, and northward into Bactria and Sogdiana, the modern Russian Turkestan, also known as Central Asia. It had taken Alexander only three years, from the spring of 330 B.C., to the spring of 327 B.C., to master this vast area.

In order to complete his conquest of the remnants of the Persian Empire, which had once included part of western India, Alexander crossed the Indus River in 326 B.C., and invaded the Punjab, as far as the river Hyphasis (modern Beas); at this point, the Macedonians rebelled and refused to go farther. He then constructed a fleet and passed down the Indus, reaching its mouth in September 325 B.C. The fleet then sailed to the Persian Gulf. With his army, he returned overland across the desert to Media. Shortages of food and water caused severe losses and hardship among his troops. Alexander spent about a year organizing his dominions and completing a survey of the Persian Gulf, in preparation for further conquests. He arrived in Babylon in the spring of 323 B.C. In June, he contracted a fever and died. He left his empire, in his own words, "to the strongest;" this ambiguous testament resulted in dire conflicts for a half a century.

Alexander was one of the greatest generals of all time, noted for his brilliance as a tactician and troop leader and for the rapidity with which he could traverse great expanses of territory. He was usually brave and generous, but could be cruel and ruthless when politics demanded. The theory has been advanced, that he was actually, an alcoholic having, for example, killed his friend, Clitus, in a drunken fury. He later regretted this act deeply. As a statesman and ruler, he had grandiose plans; according to many modern historians, he cherished a scheme for uniting the East and the West in

a world empire, a new and enlightened “world brotherhood of all men.” He trained thousands of Persian youths in Macedonian tactics and enrolled them in his army. He, himself, adopted Persian manners and married Eastern wives, namely, Roxana (died about 311 B.C.), daughter of Oxyartes of Sogdiana, and Barsine (or Stateira; died about 323 B.C.), the elder daughter of Darius; and he encouraged and bribed his officers to take Persian wives. Shortly before he died, Alexander ordered the Greek cities to worship him, as a god. Although he probably gave the order for political reasons, he was, in his own view and that of his contemporaries, of divine birth. The order was largely nullified by his death, shortly after he issued it.

To bind his conquests together, Alexander founded a number of cities, most of them named Alexandria, along his line of march; these cities were well-located, well-paved, and provided with good water supplies. Greek veterans from his army settled in them; young men, traders, merchants, and scholars were attracted to them; Greek culture was introduced; and the Greek language became widely known. Thus, Alexander vastly extended the influence of Greek civilization and prepared the way for the kingdoms of the Hellenistic period and the conquests of the Roman Empire.

Funk & Wagnalls Ency.

1995

“Aristotle was Alexander’s tutor, he gave Alexander a thorough training in rhetoric and literature and stimulated his interest in science, medicine, and philosophy. He founded the city of Alexandria, Egypt in 332 B.C. Alexander wanted Amon, Ra, the Egyptian god of the son to acknowledge him as his son. Alexander was an alcoholic and killed his friend Clilus in a drunken fury. He ordered the Greeks to worship him as a god.”

Funk & Wagnalls Ency.

1995

In looking at the information supplied by Funk & Wagnalls Encyclopedia we will note especially that Alexander was well educated by Aristotle. We will need to study Aristotle and see what exactly he taught to Alexander.

Before we do this, let us first zero in on Alexander's parents, and see how they had such an influence on him.

Alexander's father was king Philip of Macedonia, and his mother was Olympias. Let us look at the information given on Alexander's father, Philip.

Philip II of Macedonia (382-336 B.C.)

"King of Macedonia (359-336 B.C.) and father of Alexander the Great."

Funk & Wagnalls Ency.

1995

"Philip was a drunkard and had uncontrolled lusts. He was a friend of Aristotle and studied Aristotle's philosophy. Philip passed to Alexander the teaching of Aristotle."

The Outline of History

H.G. Wells

1949

Doubleday & Company

Let us now look at Alexander's mother.

“Olympias the mother of Alexander was an evil woman.

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Beneath the religion of the Greeks the land abounded with religious cults of an ancient kind, secret initiations, oragastic celebrations, and cruel and obscene rites. Greece had her Orphic, Dionysaic and Demeter cults. His mother Olympias was involved with these cults and she handled snakes. Alexander's father Philip give him power and fame, his mother Olympias gave him the cults. Alexander's mind was filled with the teachings of Aristotle and the cults from his mother.”

The Outline of History

H.G. Wells

1949

Doubleday & Company

Philip II (of Macedonia) (382-336 BC)

King of Macedonia (359-336 BC) and father of Alexander the Great, born in Pella. From 367 to 365, Philip was a hostage in Thebes, and during that period, he observed the military techniques of Thebes, then the greatest power in Greece. In 364, he returned to Macedonia. In 359, he was made regent for his infant nephew, Amyntas; later that year, he seized the throne for himself.

Faced by internal dissensions and attacked on all sides, Philip re-organized the Macedonian army on the model of the Theban phalanx. In less than two years, he had

secured the safety of his kingdom and firmly established himself on the throne. From then on, his policy was aggressive. In 357, he conquered the Athenian colony of Amphipolis in Thrace, gaining possession of the gold mines of Mount Pangaeus, which financed his subsequent wars. In 356, he captured Potidea in Chalcidice and Pydna on the Thermaic Gulf. In 355, he captured the Thracian town of Crenides, which, under its new name, Philippi, soon acquired great wealth and fame.

In 354, Philip conquered Methone, and then advanced into Thessaly. By 352, he had reached the pass of Thermopylae, which he did not attempt to take, because it was strongly guarded by the Athenians. In 351, the great Athenian orator, Demosthenes delivered the first of his *Philippics*, a series of speeches, warning the Athenians about the Macedonian menace to Greek liberty. By 348, Philip had conquered Thrace and Chalcidice. Two years later, he made peace with Athens, which had been at war with him in defense of its ally, the Chalcidian city, Olynthus. Philip was next requested by the Thebans, to interfere in the sacred war against Phocis. He marched into Phocis, in 346, and destroyed its cities. Thereafter, Macedonia replaced Phocis in the Amphictyonic League, giving Philip the right to participate in Greek political affairs; in 338, the council appointed Philip, commander of the league forces. The Athenians, aroused by Demosthenes, united with the Thebans against Philip, but their combined army was utterly defeated, in 338, at the Battle of Chaeronea. Philip's victory made him complete master of Greece. Two years later, while preparing to invade Persia, he was assassinated.

Philip was the greatest statesman and general of all time. He laid the foundation of the Macedonian military power employed by his son, Alexander the Great, to conquer and Hellenize the Middle East. A treasure-filled royal tomb, believed to be Philip's, was excavated at Vergina, near Thessalonika, Greece, in 1977.

1995

From the above references we now see that Alexander had the teaching of Aristotle and the teachings from his mother who was involved in the cults, that being Demeter, Orphic, and Dionysaic religions.

Let us now zero in on the teachings of Aristotle that had such influence on Alexander.

“Aristotle (384-322 B.C.) a Greek philosopher and scientist. He studied at Plato’s Academy for about 20 years. He suggested that God is not very suitable for religious purposes.”

Funk & Wagnalls Ency.

1995

Aristotle (384-322 BC)

Greek philosopher and scientist, who shares with Plato and Socrates, the distinction of being the most famous of ancient philosophers.

Aristotle was born at Stagira, in Macedonia, the son of a physician to the royal court. At the age of 17, he went to Athens to study at Plato’s Academy. He remained there for about 20 years, as a student and then, as a teacher.

When Plato died, in 347 B.C., Aristotle moved to Assos, a city in Asia Minor, where a friend of his, Hermias, was ruler. There, he counseled Hermias and married his niece and adopted daughter, Pythias. After Hermias was captured and executed by the Persians in 345 B.C., Aristotle went to Pella, the Macedonian capital, where he became the tutor of the king's young son, Alexander, later known as, Alexander the Great. In 335, when Alexander became king, Aristotle returned to Athens and established his own school, the Lyceum. Because much of the discussion in his school took place while teachers and students were walking about the Lyceum grounds, Aristotle's school came to be known as the Peripatetic ("walking" or "strolling") school. Upon the death of Alexander, in 323 B.C., strong anti-Macedonian feeling developed in Athens, and Aristotle retired to a family estate in Euboea. He died there the following year.

Works

Aristotle, like Plato, made regular use of the dialogue, in his earliest years, at the Academy, but lacking Plato's imaginative gifts, he probably never found the form congenial. Apart from a few fragments in the works of later writers, his dialogues have been wholly lost. Aristotle also wrote some short technical notes, such as a dictionary of philosophic terms and a summary of the doctrines of Pythagoras. Of these, only a few brief excerpts have survived. Still extant, however, are Aristotle's lecture notes for carefully outlined courses, treating almost every branch of knowledge and art. The texts on which Aristotle's reputation rests, are largely based on these lecture notes, which were collected and arranged by later editors.

Among the texts are treatises on logic, called *Organon* ("instrument"), because they provide the means by which positive knowledge is to be attained. His works on natural science include *Physics*, which gives a vast amount of information on astronomy,

meteorology, plants, and animals. His writings on the nature, scope, and properties of being, which Aristotle called, *First Philosophy (Prote philosophia)*, were given the title, *Metaphysics* in the first published edition of his works (60? B.C.), because in that edition they followed *Physics*. His treatment of the Prime Mover, or first cause, as pure intellect, perfect in unity, immutable, and, as he said, “the thought of thought,” is given in the *Metaphysics*. To his son, Nicomachus, he dedicated his work on ethics, called the *Nicomachean Ethics*. Other essential works include his *Rhetoric*, his *Poetics* (which survives in incomplete form), and his *Politics* (also incomplete).

Methods

Perhaps because of the influence of his father’s medical profession, Aristotle’s philosophy laid its principal stress on biology, in contrast to Plato’s emphasis on mathematics. Aristotle regarded the world, as made up of individuals (substances) occurring in fixed natural kinds (species). Each individual has its built-in specific pattern of development and grows toward proper self-realization, as a specimen of its type. Growth, purpose, and direction, are thus, built into nature. Although science studies general kinds, according to Aristotle, these kinds find their existence in particular individuals. Science and philosophy, must therefore, balance, not simply choose between, the claims of empiricism (observation and sense experience) and formalism (rational deduction).

One of the most distinctive of Aristotle’s philosophic contributions was a new notion of causality. Each thing or event, he thought, has more than one “reason,” that helps to explain what, why, and where it is. Earlier Greek thinkers had tended to assume, that only one sort of cause can be really explanatory; Aristotle proposed four. (The word, Aristotle uses, *aition*, “a responsible, explanatory factor” is not synonymous with the word, *cause*, in its modern sense).

These four causes are the material cause, the matter out of which a thing is made; the efficient cause, the source of motion, generation, or change; the formal cause, which is the species, kind, or type; and the final cause, the goal, or full development, of an individual, or the intended function of a construction or invention. Thus, a young lion is made up of tissues and organs, its material cause; the efficient cause, is its parents, who generated it; the formal cause, is its species, lion; and its final cause, is its built-in drive toward becoming a mature specimen. In different contexts, while the causes are the same four, they apply analogically. Thus, the material cause of a statue is the marble from which it was carved; the efficient cause, is the sculptor; the formal cause, is the shape the sculptor realized -- Hermes, perhaps, or Aphrodite; and the final cause, is its function, to be a work of fine art.

In each context, Aristotle insists that something can be better understood, when its causes can be stated in specific terms, rather than in general terms. Thus, it is more informative to know that a sculptor made the statue, than to know that an artist made it; and even more informative, to know that Polycleitus chiseled it, rather than simply that, a sculptor did so.

Aristotle thought his causal pattern was the ideal key for organizing knowledge. His lecture notes present impressive evidence of the power of this scheme.

Doctrines

Some of the principal aspects of Aristotle's thought can be seen in the following summary of his doctrines, or theories.

Physics, or Natural Philosophy

In astronomy, Aristotle proposed a finite, spherical universe, with the earth at its center. The central region is made up of four elements: earth, air, fire, and water. In Aristotle's physics, each of these four elements has a proper place, determined by its relative heaviness, its "specific gravity." Each moves naturally in a straight line -- earth down, fire up -- toward its proper place, where it will be at rest. Thus, terrestrial motion, is always linear and always comes to a halt. The heavens, however, move naturally and endlessly, in a complex circular motion. The heavens, therefore, must be made of a fifth, and different element, which he called, *aither*. A superior element, *aither*, is incapable of any change, other than change of place, in a circular movement. Aristotle's theory that linear motion always takes place through a resisting medium, is in fact, valid for all observable terrestrial motions. He also held, that heavier bodies of a given material fall faster than lighter ones when their shapes are the same, a mistaken view that was accepted, as fact, until the Italian physicist and astronomer, Galileo conducted his experiment with weights, dropped from the Leaning Tower of Pisa.

Biology

In zoology, Aristotle proposed a fixed set of natural kinds ("species"), each reproducing true to type. An exception occurs, Aristotle thought, when some "very low" worms and flies come from rotting fruit or manure by "spontaneous generation." The typical life cycles are epicycles: The same pattern repeats, but through a linear succession of individuals. These processes, are therefore, intermediate between the changeless circles of the heavens and the simple linear movements of the terrestrial elements. The species form a scale from simple (worms and flies at the bottom) to complex (human beings at the top), but evolution is not possible.

Aristotelian Psychology

For Aristotle, psychology was a study of the soul, insisting that form (the essence, or unchanging characteristic element in an object) and matter (the common undifferentiated substratum of things) always exist together. Aristotle defined a soul, as a “kind of functioning of a body, organized so that it can support vital functions.” In considering the soul, as essentially associated with the body, he challenged the Pythagorean doctrine, that the soul is a Spiritual entity, imprisoned in the body. Aristotle’s doctrine is a synthesis of the earlier notion, that the soul does not exist apart from the body and of the Platonic notion of a soul as a separate, non-physical entity. Whether any part of the human soul is immortal, and, if so, whether its immortality is personal, are not entirely clear in his treatise, *On the Soul*.

Through the functioning of the soul, the moral and intellectual aspects of humanity are developed. Aristotle argued, that human insight in its highest form, (*nous poetikos*, “active mind”) is not reducible to a mechanical physical process. Such insight, however, presupposes an individual “passive mind” that does not appear to transcend physical nature. Aristotle clearly stated the relationship between human insight and the senses, in what has become, a slogan of empiricism -- the view, that knowledge is grounded in sense experience. “There is nothing in the intellect,” he wrote, “that was not first in the senses.”

Ethics

It seemed, to Aristotle, that the individual’s freedom of choice made an absolutely accurate analysis of human affairs impossible. “Practical science,” then, such as politics or ethics, was called science, only by courtesy and analogy. The inherent limitations on practical science are made clear in Aristotle’s concepts of human nature and self-realization. Human nature certainly involves, for everyone, a capacity for forming habits; but the habits that a particular individual forms, depend on that individual’s culture and repeated personal choices. All human beings want “happiness,”

an active, engaged realization of their innate capacities, but this goal can be achieved in a multiplicity of ways.

Aristotle's *Nicomachean Ethics* is an analysis of character and intelligence, as they relate to happiness. Aristotle distinguished two kinds of "virtue," or human excellence: moral and intellectual. Moral virtue is an expression of character, formed by habits reflecting repeated choices. A moral virtue is always a means between two less desirable extremes. Courage, for example, is a means between cowardice and thoughtless rashness; generosity, between extravagance and parsimony. Intellectual virtues are not subject to this doctrine of the means. Aristotle argued for an elitist ethics: Full excellence can be realized only by the mature male adult of the upper class, not by women, or children, or barbarians (non-Greeks), or salaried "mechanics" (manual workers) for whom, indeed, Aristotle did not want to allow voting rights.

In politics, many forms of human association can obviously be found; which one is suitable depends on circumstances, such as the natural resources, cultural traditions, industry, and literacy of each community. Aristotle did not regard politics as a study of ideal states in some abstract form, but rather as an examination of the way in which ideals, laws, customs, and property inter-relate in actual cases. He thus approved the contemporary institution of slavery, but tempered his acceptance, by insisting that masters should not abuse their authority, since the interests of master and slave are the same. The Lyceum Library contained a collection of 158 constitutions of the Greek and other states. Aristotle himself, wrote the *Constitution of Athens*, as part of the collection, and after being lost, this description was re-discovered in a papyrus copy, in 1890. Historians have found the work of great value in re-constructing many phases of the history of Athens.

Logic

In logic, Aristotle developed rules for chains of reasoning that would, if followed, never lead from true premises to false conclusions (validity rules). In reasoning, the basic links are syllogisms: pairs of propositions that, taken together, give a new conclusion. For example, "All humans are mortal" and "All Greeks are humans," yield the valid conclusion, "All Greeks are mortal." Science results from constructing more complex systems of reasoning. In his logic, Aristotle distinguished between dialectic and analytic. Dialectic, he held, only tests opinions for their logical consistency; analytic works deductively from principles resting on experience and precise observation. This is clearly an intended break with Plato's Academy, where dialectic was supposed to be the only proper method for science and philosophy, alike.

Metaphysics

In his metaphysics, Aristotle argued for the existence of a divine being, described as the Prime Mover, who is responsible for the unity and purposefulness of nature. God is Perfect, and therefore, the aspiration of all things in the world, because all things desire to share perfection. Other movers exist, as well -- the intelligent movers of the planets and stars (Aristotle suggested, that the number of these is "either 55 or 47"). The Prime Mover, or God, described by Aristotle, is not very suitable for religious purposes, as many later philosophers and theologians, have observed. Aristotle limited his "theology," however, to what he believed science requires and can establish.

Influence

Aristotle's works were lost, in the West, after the decline of Rome. During the 9th century A.D., Arab scholars introduced Aristotle, in Arabic translation, to the Islamic world. The 12th-century Spanish-Arab philosopher, Averroes is the best known of the Arabic scholars, who studied and commented on Aristotle. In the 13th century, the Latin West renewed its interest in Aristotle's work, and Saint Thomas Aquinas found in it, a philosophical foundation for Christian thought. Church officials, at first, questioned Aquinas's use of Aristotle; in the early stages of its re-discovery, Aristotle's philosophy was regarded with some suspicion, largely because his teachings were thought to lead to a materialistic view of the world. Nevertheless, the work of Aquinas was accepted, and the later philosophy of scholasticism continued the philosophical tradition, based on Aquinas's adaptation of Aristotelian thought.

The influence of Aristotle's philosophy has been pervasive; it has even helped to shape modern language and common sense. His doctrine of the Prime Mover, as final cause, played an important role in theology. Until the 20th century, logic meant Aristotle's logic. Until the Renaissance, and even later, astronomers and poets, alike, admired his concept of the universe. Zoology rested on Aristotle's work, until British scientist, Charles Darwin modified the doctrine of the changelessness of species, in the 19th century. In the 20th century, a new appreciation has developed of Aristotle's method and its relevance to education, literary criticism, the analysis of human action, and political analysis.

Not only the discipline of zoology, but also the world of learning, as a whole, seems to amply justify Darwin's remark, that the intellectual heroes of his own time, "were mere schoolboys compared to old Aristotle."

Peripatetics, the students and followers of Aristotle. The name may be derived from Aristotle's

cus-

tom of walking about (*peripatein*), while lecturing, or from the *peripatos* (“covered walk”) of the Lyceum, the park-like area outside Athens, where he lectured. Aristotle’s followers developed certain points of his logic and metaphysics, but they were more concerned with studying nature and popularizing the study of ethics. Many spent their time arranging and explaining Aristotle’s writings. The most prominent Peripatetic philosophers were Theophrastus of Lesbos, a friend of Aristotle, as well as cofounder of the school and famed for his *Characters*, a series of sketches; Eudemus of Rhodes (flourished 4th century B.C.), who was interested mainly in the ethical aspects of Aristotelianism; Strato of Lampsacus, who championed mechanism, in nature, and denied the existence of a transcendent deity; and Andronicus of Rhodes, who edited many of Aristotle’s works. The later Peripatetics leaned toward eclecticism and borrowed heavily from Stoicism.

Funk & Wagnalls Ency.

1995

We see from documentation that Aristotle was educated by Plato and passed his teaching on to Alexander. What was the teaching of Plato? Let us now look at the teachings of Plato.

“Plato (428-347 B.C.) Greek philosopher, one of the most creative and influential thinkers in Western philosophy. He became a disciple of Socrates. Plato founded the Academy in Athens. Justinian I, objected to the pagan teachings of Plato’s Academy.”

Funk & Wagnalls Ency.

Plato (circa 428-c. 347 B.C.), Greek philosopher, one of the most creative and influential thinkers in Western philosophy. He was a homosexual (Bryan Magee, *One in Twenty: a study of homosexuality in men and women* (New York: Stein and Day, 1966, p.46).

Life

Plato was born to an aristocratic family in Athens. His father, Ariston, was believed to have descended from the early kings of Athens. Perictione, his mother, was distantly related to the 6th-century B.C., lawmaker, Solon. When Plato was a child, his father died, and his mother married Pyrilampes, who was an associate of the statesman, Pericles.

As a young man, Plato had political ambitions, but he became disillusioned by the political leadership in Athens. He eventually became a disciple of Socrates, accepting his basic philosophy and dialectical style of debate: the pursuit of truth through questions, answers, and additional questions. Plato witnessed the death of Socrates, at the hands of the Athenian democracy, in 399 B.C. Perhaps, fearing for his own safety, he left Athens temporarily and traveled to Italy, Sicily, and Egypt.

In 387, Plato founded the Academy in Athens, the institution often described, as the first European

University. It provided a comprehensive curriculum, including such subjects as astronomy, biology, mathematics, political theory, and philosophy. Aristotle was the Academy's most prominent student.

Pursuing an opportunity to combine philosophy and practical politics, Plato went to Sicily, in 367, to tutor the new ruler of Syracuse. Dionysius the Younger, in the art of philosophical rule. The experiment failed. Plato made another trip to Syracuse, in 361, but again, his engagement in Sicilian affairs met with little success. The concluding years of his life were spent lecturing at the Academy and writing. He died at about the age of 80, in Athens, in 348 or 347 B.C.

Works

Plato's writings were in dialogue form; philosophical ideas were advanced, discussed, and criticized in the context of a conversation or debate, involving two or more persons. The earliest collection of Plato's work includes 35 dialogues and 13 letters. The authenticity of a few of the dialogues and most of the letters has been disputed.

Early Dialogues

The dialogues may be divided into early, middle, and later periods of composition. The earliest represent Plato's attempt to communicate the philosophy and dialectical style of Socrates. Several of these dialogues take the same form. Socrates, encountering someone who claims to know much, professes to be ignorant and seeks assistance from the one who knows. As Socrates begins to raise questions, however, it becomes clear, that the one reputed to be wise, really does not know what he claims to know, and Socrates

emerges, as the wiser one, because he, at least knows, that he does not know. Such knowledge, of course, is the beginning of wisdom. Included in this group of dialogues are *Charmides* (an attempt to define temperance), *Lysis* (a discussion of friendship), *Laches* (a pursuit of the meaning of courage), *Protagoras* (a defense of the thesis that virtue is knowledge and can be taught), *Euthyphro* (a consideration of the nature of piety), and Book I of the *Republic* (a discussion of justice).

Middle and Late Dialogues

The dialogues of the middle and later periods of Plato's life reflect his own philosophical development. The ideas in these works are attributed by most scholars to Plato himself, although Socrates continues to be the main character in many of the dialogues. The writings of the middle period include *Gorgias* (a consideration of several ethical questions), *Meno* (a discussion of the nature of knowledge), the *Apology* (Socrates' defense of himself at his trial against the charges of atheism and corrupting Athenian youth), *Crito* (Socrates' defense of obedience to the Laws of the State), *Phaedo* (the death scene of Socrates, in which he discusses the theory of Forms, the nature of the soul, and the question of immortality), the *Symposium* (Plato's outstanding dramatic achievement, which contains several speeches on beauty and love), the *Republic* (Plato's supreme philosophical achievement, which is a detailed discussion of the nature of justice).

The works of the later period include the *Theaetetus* (a denial that knowledge is to be identified with sense perception), *Parmenides* (a critical evaluation of the theory of Forms), *Sophist* (further consideration of the theory of Ideas, or Forms), *Philebus* (a discussion of the relationship between pleasure and the good), *Timaeus* (Plato's views on natural science and cosmology), and the *Laws* (a more practical analysis of political and social issues).

Theory of Forms

At the heart of Plato's philosophy is his theory of Forms, or Ideas. Ultimately, his view of knowledge, his ethical theory, his psychology, his concept of the state, and his perspective on art, must be understood in terms of this theory.

Theory of Knowledge

Plato's theory of Forms and his theory of knowledge are so interrelated, that they must be discussed together. Influenced by Socrates, Plato was convinced that knowledge is attainable. He was also convinced of two essential characteristics of knowledge. First, knowledge must be certain and infallible. Second, knowledge must have as its object, that which is genuinely real, as contrasted with that which is an appearance only. Because that which is fully real, must for Plato, be fixed, permanent, and unchanging; he identified the real with the ideal realm of being as opposed to the physical world of becoming. One consequence of this view, was Plato's rejection of empiricism, the claim that knowledge is derived from sense experience. He thought that propositions derived from sense experience have, at most, a degree of probability. They are not certain. Furthermore, the objects of sense experience are changeable phenomena of the physical world. Hence, objects of sense experience are not proper objects of knowledge.

Plato's own theory of knowledge is found in the *Republic*, particularly in his discussion of the image of the divided line and the myth of the cave. In the former, Plato distinguishes between two levels of awareness: opinion and knowledge. Claims or assertions about the physical or visible world, including both, commonsense observations and the propositions of science, are opinions only. Some of these opinions are well founded; some are not, but none of them counts, as genuine knowledge. The higher level of awareness is knowledge, because there, reason rather

than sense experience, is involved. Reason, properly used, results in intellectual insights that are certain, and the objects of these rational insights are the abiding universals, the eternal Forms or substances that constitute the real world.

The myth of the cave describes individuals chained deep within the recesses of a cave. Bound so, that vision is restricted, they cannot see one another. The only thing visible is the wall of the cave, upon which, appear shadows cast by models or statues of animals and objects that are passed before a brightly burning fire. Breaking free, one of the individuals escapes from the cave into the light of day. With the aid of the sun, that person sees for the first time, the real world and returns to the cave with the message that the only things they have seen, heretofore, are shadows and appearances, and that, the real world awaits them if they are willing to struggle free of their bonds. The shadowy environment of the cave symbolizes, for Plato, the physical world of appearances. Escape into the sun-filled setting outside the cave symbolizes the transition to the real world, the world of full and perfect being, the world of Forms, which is the proper object of knowledge.

Nature of Forms

The theory of Forms, may best be understood, in terms of mathematical entities. A circle, for instance, is defined as a plane figure composed of a series of points, all of which, are equidistant from a given point. No one has ever actually seen such a figure, however.

What people have actually seen are drawn figures that are more or less close approximations of the ideal circle. In fact, when mathematicians define a circle, the points referred to, are not spatial points at all; they are logical points. They do not occupy space. Nevertheless, although the Form of a circle has never been seen -- indeed, could never be seen -- mathematicians and others do, in fact, know what a

circle is. That they can define a circle, is evidence, that they know what it is. For Plato, therefore, the Form “circularity” exists, but not in the physical world of space and time. It exists, as a changeless object in the world of Forms or Ideas, which can be known, only by reason. Forms have greater reality than objects in the physical world, both because of their perfection and stability and because they are models, resemblance to which gives ordinary physical objects whatever reality they have. Circularity, squareness, and triangularity are excellent examples, then, of what Plato meant by Forms. An object existing in the physical world may be called a circle or a square or a triangle, only to the extent that it resembles (“participates in,” is Plato’s phrase), the Form, “circularity” or “squareness” or “triangularity.”

Plato extended his theory beyond the realm of mathematics. Indeed, he was most interested in its application in the field of social ethics. The theory was his way of explaining how the same universal term can refer to so many particular things or events. The word, *justice*, for example, can be applied to hundreds of particular acts, because these acts have something in common, namely, their resemblance to, or participation in, the Form, “justice.” An individual is human, to the extent that he or she resembles or participates in the Form, “humanness.” If “humanness” is defined in terms of being a rational animal, then an individual is human to the extent, that he or she is rational. A particular act is courageous or cowardly to the extent, that it participates in its Form. An object is beautiful to the extent, that it participates in the Idea, or Form, of beauty. Everything in the world of space and time is what it is, by virtue of its resemblance to, or participation in, its universal Form. The ability to define the universal term, is evidence, that one has grasped the Form, to which that universal refers.

Plato conceived the Forms, as arranged hierarchically; the supreme Form is the Form of the Good, which, like the sun in the myth of the cave, illuminates all the other Ideas. There is a sense, in which the Form of the Good, represents Plato’s movement in the direction of an ultimate principle of explanation. Ultimately, the theory of Forms is

intended to explain how one comes to know, and also, how things have come to be, as they are. In philosophical language, Plato's theory of Forms is both, an epistemological (theory of knowledge) and an ontological (theory of being) thesis.

Political Theory

The *Republic*, Plato's major political work, is concerned with the question of justice, and therefore, with the questions "what is a just state" and "who is a just individual?"

The ideal state, according to Plato, is composed of three classes. The economic structure of the state is maintained by the merchant class. Security needs are met by the military class, and political leadership is provided by the philosopher-kings. A particular person's class is determined by an educational process that begins at birth and proceeds until that person has reached the maximum level of education, compatible with interest and ability. Those who complete the entire educational process become philosopher-kings. They are the ones whose minds have been so developed that they are able to grasp the Forms and, therefore, to make the wisest decisions. Indeed, Plato's ideal educational system, is primarily structured, so as to produce philosopher-kings.

Plato associates the traditional Greek virtues with the class structure of the ideal state. Temperance is the unique virtue of the artisan class; courage is the virtue peculiar to the military class; and wisdom characterizes the rulers. Justice, the fourth virtue, characterizes society, as a whole. The just state is one in which each class performs its own function well without infringing on the activities of the other classes.

Plato divides the human soul into three parts: the rational part, the will, and the appetites. The just person is the one in whom the rational element, supported by the will, controls the appetites. An obvious analogy exists here with the threefold class structure of the state, in which the enlightened philosopher-kings, supported by the soldiers, govern the rest of society.

Ethics

Plato's ethical theory rests on the assumption, that virtue is knowledge and can be taught, which has to be understood in terms of his theory of Forms. As indicated previously, the ultimate Form, for Plato, is the Form of the Good, and knowledge of this Form, is the source of guidance in moral decision making. Plato, also argued, that to know the good is to do the good. The corollary of this, is that anyone who behaves immorally, does so out of ignorance. This conclusion follows from Plato's conviction, that the moral person is the truly happy person, and because individuals always desire their own happiness, they always desire to do that which is moral.

Art

Plato had an essentially antagonistic view of art and the artist, although he approved of certain religious and moralistic kinds of art. Again, his approach is related to his theory of Forms. A beautiful flower, for example, is a copy or imitation of the universal Forms, "flowerness" and "beauty." The physical flower is one step removed from reality, that is, the Forms. A picture of the flower is, therefore, two steps removed from reality. This also meant, that the artist is two steps removed from knowledge, and, indeed, Plato's frequent criticism of the artists, is that they lack genuine knowledge of what they are doing. Artistic creation, Plato observed, seems to be rooted in a kind of inspired madness.

Influence

Plato's influence, throughout the history of philosophy, has been monumental. When he died, Speusippus became head of the Academy. The school continued in existence until A.D., 529, when it was closed by the Byzantine emperor, Justinian I, who objected to its pagan teachings. Plato's impact on Jewish thought is apparent in the work of the 1st-century Alexandrian philosopher, Philo Judaeus. Neo-Platonism, founded by the 3rd-century philosopher, Plotinus, was an important later development of Platonism. The theologians, Clement of Alexandria, Origen, and St. Augustine were early Christian exponents of a Platonic perspective. Platonic ideas have had a crucial role in the development of Christian theology, and also, in medieval Islamic thought.

During the Renaissance, the primary focus of Platonic influence was the Florentine Academy, founded in the 15th century, near Florence. Under the leadership of Marsilio Ficino, members of the Academy studied Plato in the original Greek. In England, Platonism was revived in the 17th century, by Ralph Cudworth and others, who became known as the Cambridge Platonists. Plato's influence has been extended into the 21st century, by such thinkers as Alfred North Whitehead, who once paid him tribute by describing the history of philosophy as simply, "a series of footnotes to Plato."

We see, in brief, that Plato was a disciple of Socrates. According to Justinian I, his Academy was full of pagan teachings. What then did Socrates teach that influenced Plato?

"Socrates (470-399 B.C.), Greek philosopher who influenced Plato. He familiarized himself with the rhetoric and dialectics of Sophists, the speculations of the Ionian

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Socrates (470?-399? B.C.), Greek philosopher, who profoundly affected Western philosophy through his influence on Plato. Born in Athens, the son of Sophroniscus, a sculptor, and Phaenarete, a midwife, he received the regular elementary education in literature, music, and gymnastics. Later, he familiarized himself with the rhetoric and dialectics of the Sophists, the speculations of the Ionian philosophers, and the general culture of Periclean Athens. Initially, Socrates followed the craft of his father; according to a former tradition, he executed a statue group of the three Graces, which stood at the entrance to the Acropolis, until the 2nd century A.D. In the Peloponnesian War with Sparta, he served as an infantryman with conspicuous bravery at the battles of Potidaea, in 432-430 B.C., Delium in 424 B.C., and Amphipolis in 422 B.C. Socrates believed in the superiority of argument over writing, and therefore, spent the greater part of his mature life in the marketplace and public places of Athens, engaging in dialogue and argument with anyone who would listen or who would submit to interrogation. Socrates was reportedly unattractive in appearance and short of stature but was also extremely hardy and self-controlled. He enjoyed life immensely and achieved social popularity, because of his ready wit and a keen sense of humor, that was completely devoid of satire or cynicism. Socrates was a homosexual (Bryan Magee, *One in Twenty: a study of homosexuality in men and women*: Stein and Day, 1966, p.46).

Attitude Toward Politics

Socrates was obedient to the Laws of Athens, but he generally steered clear of politics, restrained by what he believed to be, divine warning. He believed, that he had received a call to pursue philosophy and could serve his country best, by devoting himself to teaching, and by persuading the Athenians to engage in self-examination and in tending to their souls. He wrote no books and established no regular school of philosophy. All that is known with certainty about his personality and his way of thinking, is derived from the works of two of his distinguished scholars: Plato, who at times, ascribed his own views to his master, and the historian, Xenophon, a prosaic writer, who probably failed to understand many of Socrates's doctrines. Plato portrayed Socrates, as hiding behind an ironical profession of ignorance, known as, Socratic irony, and possessing a mental acuity and resourcefulness that enabled him to penetrate arguments with great facility.

Teachings

Socrates's contribution to philosophy was essentially ethical in character. Belief in a purely objective understanding of such concepts as justice, love, and virtue, and the self-knowledge that he inculcated, were the basis of his teachings. He believed that all vice is the result of ignorance, and that no person is willingly bad; correspondingly, virtue is knowledge, and those who know the right, will act rightly. His logic placed particular emphasis on rational argument and the quest for general definitions, as evidenced in the writings of his younger contemporary and pupil, Plato, and of Plato's pupil, Aristotle. Through the writings of these philosophers, Socrates profoundly affected the entire subsequent course of Western speculative thought.

Another thinker befriended and influenced by Socrates was Antisthenes, the founder of the Cynic school of philosophy. Socrates was also the teacher of Aristippus, who founded the Cyrenaic philo-

sophy of experience and pleasure, from which, developed the more lofty philosophy of Epicurus. To such Stoics, as the Greek philosopher, Epictetus, the Roman philosopher, Seneca the Elder, and the Roman emperor, Marcus Aurelius, Socrates appeared, as the very embodiment and guide of the higher life.

The Trial

Although a patriot and a man of deep religious conviction, Socrates was nonetheless regarded with suspicion by many of his contemporaries, who disliked his attitude toward the Athenian state and the established religion. He was charged, in 399 B.C., with neglecting the gods of the state and introducing new divinities, a reference to the *daemonion*, or mystical inner voice, to which, Socrates often referred. He was also charged with corrupting the morals of the young, leading them away from the principles of democracy; and he was wrongly identified with the Sophists, possibly because he had been ridiculed by the comic poet, Aristophanes, in his play, *The Clouds*, as the master of a “thinking-shop” where young men were taught to make the worse reason appear the better reason.

Plato’s *Apology* gives the substance of the defense made by Socrates at his trial; it was a bold vindication of his whole life. He was condemned to die, although the vote was carried by only a small majority. When, according to Athenian legal practice, Socrates made an ironic counterproposition to the court’s death sentence, proposing only to pay a small fine, because of his value to the state as a man with a philosophic mission, the jury was so angered by this offer, that it voted by an increased majority, for the death penalty.

Socrates’ friends planned his escape from prison, but he preferred to comply with the Law and die for his cause. His last day was spent with his friends and admirers, and in the evening, he calmly fulfilled his sentence by drinking a cup of hemlock, according to

a customary procedure of execution. Plato described the trial and death of Socrates, in the *Apology*, the *Crito*, and the *Phaedo*.

We see that Socrates was influenced by the Ionian philosophers and the Sophists. The Sophists were known as the 7 Wise Men, or 7 Sages of Greece. The Ionian school was founded by the philosopher, Thales.

We now urge the student to study closely, the documentation given on the Sophists, Demeter, Orphism, Eleusinian Mysteries, Mysteries, Persephone, Pythagoras, Thales, and the 7 Sages of Greece.

We will show, after careful study of some of the 7 Wise Men of Greece, along with their mystery religions, how their influence and teachings played a major role in the training of Socrates, Plato, and Aristotle.

Sophists (Greek *sophistes*, “expert, master craftsman, man of wisdom”), originally, name applied by the ancient Greeks to learned men, such as the Seven Wise Men of Greece; in the 5th century B.C., a name applied to itinerant teachers, who provided instruction in several higher branches of learning, for a fee.

Individuals sharing a broad philosophic outlook, rather than a school, the Sophists popularized the ideas of various early philosophers; but based on their understanding of this prior philosophic thought, most of them concluded that truth and morality were essentially matters of opinion. Thus, in their own teaching, they tended to emphasize forms of persuasive expression, such as the art of rhetoric, which provided pupils with skills useful for achieving success in life, particularly public life.

The Sophists were popular, for a time, especially in Athens; however, their skeptical view on absolute truth and morality, eventually provoked sharp criticism. Socrates, Plato, and Aristotle challenged the philosophic basis of the Sophists' teaching, and Plato and Aristotle further condemned them, for taking money. Later, they were accused, by the State, of lacking morality. As a result, the word, *sophist* acquired a derogatory meaning, as in the modern term, *sophistry*, which can be defined, as subtle and deceptive or false argumentation or reasoning.

The Sophists were of minor importance in the development of Western philosophic thought. They were, however, the first to systematize education. Leading 5th-century Sophists included Protagoras, Gorgias, Hippias of Elis, and Prodicus of Ceos.

Demeter, in Greek mythology, goddess of corn and the harvest, and daughter of the Titans, Cronus and Rhea. When her daughter, Persephone was abducted by Hades, god of the underworld, Demeter's grief was so great, that she neglected the land; no plants grew, and famine devastated the earth. Dismayed at this situation, Zeus, the ruler of the universe, demanded that his brother, Hades return Persephone to her mother. Hades agreed, but before he released the girl, he made her eat some pomegranate seeds that would force her to return to him for four months each year. In her joy at being reunited with her daughter, Demeter caused the earth to bring forth bright spring flowers and abundant fruit and grain for the harvest. However, her sorrow returned each fall, when Persephone had to go back to the underworld.

The desolation of the winter season and the death of vegetation, were regarded as the yearly manifestation of Demeter's grief, when her daughter was taken from her. Demeter and Persephone were worshiped in the rites of the Eleusinian Mysteries. The cult spread from Sicily to Rome, where the goddesses were worshiped, as Ceres and Proserpine.

Orphism, in classical religion, mystic cult of ancient Greece, believed to have been drawn from the writings of the legendary poet and musician, Orpheus. Fragmentary poetic passages, including inscriptions on gold tablets found in the graves of Orphic followers from the 6th century B.C., indicate that Orphism was based on a cosmogony that centered on the myth of the god, Dionysus Zagreus, the son of the deities, Zeus and Persephone. Furious, because Zeus wished to make his son ruler of the universe, the jealous Titans dismembered and devoured the young god. Athena, goddess of wisdom, was able to rescue his heart, which she brought to Zeus, who swallowed it and gave birth to a new Dionysus. Zeus, then punished the Titans, by destroying them with his lightning and from their ashes, created the human race. As a result, humans had a dual nature: the earthly body was the heritage of the earth-born Titans; the soul came from the divinity of Dionysus, whose remains had been mingled with that of the Titans.

According to the tenets of Orphism, people should endeavor to rid themselves of the Titanic or evil element in their nature and should seek to preserve the Dionysiac or divine nature of their being. The triumph of the Dionysiac element would be assured by following the Orphic rites of purification and asceticism. Through a long series of reincarnated lives, people would prepare for the afterlife. If they had lived in evil, they would be punished, but if they had lived in Holiness, after death, their souls would be completely liberated from Titanic elements and reunited with the divinity.

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Eleusinian Mysteries

Sacred rituals that were the most important of the religious festivals in ancient Greece. Like the Eleusinia, a biennial festival in honor of the Greek divinities, Demeter and Perse-

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phone, the Eleusinian Mysteries derived their name from the town of Eleusis, in Attica, near Athens. Long before the rise of Athens, the people of Eleusis observed the Mysteries, which were subsequently adopted, by Athens, as an official festival. The Eleusinian priesthood was retained, in charge. The most important part of the festival, the initiation of the candidates, took place every year for centuries in the Telesterion at Eleusis. This initiation climaxed a series of rituals that began early in the spring with the celebration of the Lesser Mysteries at Agrae, near Athens. At that time, the mystoe, the candidates for the first of four stages in the revelation of the Mysteries, were told the legend of Demeter and Persephone, the latter of whom was referred to as Kore (Greek, "the maiden"). Purification rites were also part of the ceremony of the Lesser Mysteries. The autumn ceremonies, called the Greater Mysteries, began with the fetching of sacred objects from Eleusis to Athens, by youths known as, *ephebi*. The ceremonies included an address by a priest to the candidates, a cleansing in the sea, a sacrificial rite, and a great procession from Athens to Eleusis, where the initiation occurred in secret ceremonies.

It is believed that the tale of Demeter's search through the underworld for her daughter, Persephone, which was probably enacted at the initiation, was related to the seeking after immortality and happiness in a future world, the presumed purpose of the ceremonies. The Eleusinian mysteries were probably celebrated until the 4th century A.D., when Alaric I, king of the Visigoths, destroyed Eleusis. Near the village of Lefsina, on the site of Eleusis, modern archaeologists have found the remains of the Telesterion and other sacred buildings.

Mysteries

Secret rites and ceremonies connected with various religious worships of ancient Greece and Rome. These rites and ceremonies were known to, and practiced by, congregations of men and women who had been duly initiated; no other persons were allowed to participate. The origin and purpose of the Mysteries are unknown. The theory that the Mysteries concealed deep truths and remnants of a primitive revelation, too profound for the popular mind, is no longer believed, but undoubtedly the sacred rituals brought to them, initiates secret religious doctrines, which in many instances, were concerned with the continuance of life beyond the grave. The Mysteries consisted of purifications, sacrificial offerings, processions, songs, dances, and dramatic performances. Often the birth, suffering, death, and resurrection of a god were enacted in dramatic form. The aim of the Mysteries seems to have been twofold, namely, to give comfort and moral instruction for life on earth, and to inspire hope for life after death.

The earliest and most important Greek Mysteries were the Orphic, the Eleusinian, and the Dionysiac. The Orphic Mysteries were those of a mystic cult, founded, according to tradition, by the legendary poet and musician, Orpheus, to whom was attributed, a great mass of religious literature. Far more celebrated, were the Eleusinian Mysteries, connected with the worship of the goddesses, Demeter and Persephone, at Eleusis in Attica; with these divinities were associated Pluto, god of the underworld; Lacchus, a name of the youthful Dionysus, god of vegetation and of wine; and other gods. The worship of Dionysus, or Bacchus, at Athens was accompanied by feasts, processions, and musical and dramatic performances. In later times, the mysteries associated with Dionysus became occasions for intoxication and gross licentiousness. They were forbidden at Thebes, and later elsewhere, in Greece. As the Bacchanalia, these rites were introduced into Rome, early in the 2nd century B.C. At first, the Mysteries were celebrated only by women; when they were opened to men, the gatherings were

suspected of gross immoralities, and in 186 B.C., the Roman Senate attempted to suppress the rites by decree.

Secret rites were a part of the worship of several Greek deities, such as Hera, queen of the gods, Aphrodite, goddess of love, and Hecate, goddess of the underworld. Many foreign religions, adopted by the Greeks and Romans had mysteries connected with the worship of the divinity; these religions included the worship of the Phrygian goddess, Cybele, the "great mother" of the gods; the Egyptian Isis, goddess of the moon, nature, and fertility; and the Persian Mithras, god of the sun. The worship of these deities spread throughout the Greco-Roman world and was extremely popular in the early centuries of the Roman Empire. Isis, who at an early date, has been identified with Demeter, was worshiped in Italy, as late as the 5th century A.D.

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Persephone

In Greek mythology, daughter of Zeus, father of the gods, and of Demeter, goddess of the earth and of agriculture. Hades, god of the underworld, fell in love with Persephone and wished to marry her. Although Zeus gave his consent, Demeter was unwilling. Hades, therefore, seized the maiden, as she was gathering flowers, and carried her off to his realm. As Demeter wandered in search of her lost daughter, the earth grew desolate. All vegetation died, and famine devastated the land. Finally, Zeus sent Hermes, the messenger of the gods, to bring Persephone back to her mother. Before Hades would let her go, he asked her to eat a pomegranate seed, the food of the dead.

She, was thus, compelled to return to the underworld for one-third of the year. As both, the goddess of the dead and the goddess of the fertility of the earth. Persephone was a personification of the revival of nature in spring. The Eleusinian Mysteries were held in honor of her and her mother. Proserpine was the Latin counterpart of Persephone.

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Pythagoras (582?-500? B.C.),

Greek philosopher and mathematician, whose doctrines strongly influenced Plato.

Born on the island of Samos, Pythagoras was instructed in the teachings of the early Ionian philosophers, Thales, Anaximander, and Anaximenes. Pythagoras is said to have been driven from Samos, by his disgust for the tyranny of Polycrates. About 530 B.C., Pythagoras settled in Crotona, a Greek colony in southern Italy, where he founded a movement with religious, political, and philosophical aims, known as, Pythagoreanism. The philosophy of Pythagoras is known only through the work of his disciples.

Basic Doctrines

The Pythagoreans adhered to certain mysteries, similar in many respects, to the Orphic Mysteries. Obedience and silence, abstinence from food, simplicity in dress, and possessions, and the habit of frequent self-examination were prescribed. The Pythagoreans believed in immortality and in the transmigration of souls. Pythagoras, himself, was said to have claimed that he had been Euphorbus, a warrior in the Trojan

War, and that he had been permitted to bring into his earthly life, the memory of all his previous existences.

Theory of Numbers

Among the extensive mathematical investigations, carried on by the Pythagoreans, were their studies of odd and even numbers and of prime and square numbers. From this arithmetical standpoint, they cultivated the concept of number, which became for them the ultimate principle of all proportion, order, and harmony in the universe. Through such studies, they established a scientific foundation for mathematics. In geometry, the great discovery of the school was the hypotenuse theorem, or Pythagorean theorem, which states, that the square of the hypotenuse of a right triangle is equal to the sum of the squares of the other two sides.

Astronomy

The astronomy of the Pythagoreans marked an important advance in ancient scientific thought, for they were the first to consider the earth, as a globe revolving with the other planets, around a central fire. They explained the harmonious arrangement of things, as that of bodies in a single, all-inclusive sphere of reality, moving according to a numerical scheme. Because the Pythagoreans thought that the heavenly bodies are separated from one another by intervals corresponding to the harmonic lengths of strings, they held, that the movement of the spheres gives rise to a musical sound -- the "harmony of the spheres."

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Seven Wise Men of Greece,

Also known as the Seven Sages, Greek sages of the 7th and 6th centuries B.C., who were active in science, philosophy, and politics. Although their identities do not agree in all accounts, the Seven Sages usually appear as Bias of Priene (flourished 6th century B.C.), Chilon of Sparta (flourished 6th century B.C.), Cleobulus of Lindus (flourished 6th century B.C.), Periander of Corinth (died 585 B.C.), Pittacus of Mitylene (650?-570? B.C.), Solon of Athens, and Thales of Miletus.

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Seven Sages of Greece

The **Seven Sages (of Greece)** (c. 620 BCE-550 BCE), was primarily the title given by Greek tradition to seven men of note, considered to be wise. The major questions are, who considered them to be wise, on what basis, and why the number, seven.

The wisdom of the sages

Sages and sagacity descend from remote prehistoric times, and are found in all cultures. Claims by Greek writers that the seven sages, or any sages, represent a first in sagacity, could be viewed as somewhat brash.

The context of sagacity

The Iliad (3.146) has its sages, such as Oukalegon and Antenor, two Trojan demogerontes ("senators") who were "both sage," pepnumeno ampho, in the dual number. Pepnumeno is related to pneuma, "breath, Spirit" and has the morphology of a

stative, a current state, resulting from a perfected action; that is, at some point, they were inspired by divinity and remain so, in public life.

From the beginning of literature, a sage was never wise as a private individual (idios), but always, in some social way. He was a success, a famous man, a man of stature and note, who had a kleos, a reputation. At the same time, he was not to have such brashness, or arrogance (hybris), as to ascribe this wisdom to his own abilities. Deity must take the credit. This duality led to a social tension. Later, the cynics were to bark and howl at the stereotype of fame from their location in the streets.

At the time the seven appeared, the word for wise man was sophos (adjectival substantive) or sophistes (produced noun), both with a short o in soph-. The root is not of securely known origin, although Brugmann reconstructed an Indo-European root, tuoguhos. It might not be Indo-European and the root is not widely accepted.

The seven sages, in Greek, were the hepta sophoi or hepta sophistai, which translates into Latin as, septem sapientes (among other words). The root is from Indo-European sep-, "taste, perceive." The Roman sage was a perceptive man, rather than an inspired one.

Sophistes (plural sophistai) forms an agent noun from the adjective, sophos. The sophist dispensed wisdom, professionally. The concept was honorable until Socrates seized it and gave it a fatal shake. Socrates restored the humility of the view, that wisdom was inspired and was nothing you could teach.

The sagacity of action

The seven appeared, at a time of incipient reunification of the Greek city states, after a time of civil disorder and population displacements, consequent on the fall of Mycenaean civilization. Unity was expressed, in such common institutions, as the Panhellenic Games and the oracle, at Delphi. There were many oracles, and more than one of Apollo (god of truth), but Delphi was preferred, perhaps because of its central, sheltered, and scenic location, and was fast rising to dominance.

The times required men of action. Ordinary people were illiterate and did not have the time or patience for the lengthy considerations of indecisive men. They mistrusted the literate, running playwrights out of town, burning the Pythagorean schools and assassinating the Pythagoreans, and characterizing the philosophers, as fools with their heads in the clouds, or being so stupid, as to step into a well, while looking at the stars. Look at the earth around you, they said. Pay attention to earning money. And yet, it was on these people that the burden of constructing the new Hellas fell.

The successful and dominant Dorians had brought a succinct and somewhat hard-boiled tradition of action with them from up-country. For example, when emissaries came from the Persian Great King demanding earth and water from Sparta as a token of submission, the Spartans threw them into a well, exclaiming, "dig it out yourselves."

This technique was admired everywhere. Poetry grew shorter and epigrammatic. The tombstones became eloquent. Nutshell advice was sought from the oracles, who were happy to comply. The Pythia, as she was called, when asked a question (and paid for the answer), would come under the influence of an intoxicating substance in the temple (perhaps, natural gas) and make an utterance, which would be made readable and versified by the priests.

These succinct utterances never gave a direct answer. They were always in the form of an ainigma, or riddle. The meaning, would then be unfolded, by action. The oracle, in a

sense, gave you the authority of solving your own problem, by not telling you what to do. If it went wrong, then you guessed wrong. It is the privilege of free men of action, that they make and pay for their own mistakes. The Greeks loved it.

The Greeks valued the true and the effective, but they wanted it simple, and they wanted it now. In response to the need arose the paroimion, Latin proverbium, a simple principle of truth and action. A body of these developed, the koinai gnomai, “common knowledge,” put forth as the sagacity of the sages. Aristophanes, the comedian, in *Knights* (348), depicts the democratic sausage-monger, giving a speech around the theme of a paroimion, and then pacing the streets all night long, repeating it over and over in triumph.

To the seven sages were attributed the most memorable of the pithy maxims.

The best were engraved in the pronaos of the temple of Apollo, at Delphi, as dedications to the god of truth. Pausanias (10.24.1) lists the sages, as stated below. The maxims have been filled in from other sources. Pausanias mentions two: “know thyself” and “nothing in excess” without tell us who said them.

The standard list is:

- Solon of Athens - “Nothing in excess”
- Chilon of Sparta - “Know thyself”
- Thales of Miletus - “To bring surety brings ruin”
- Bias of Priene - “Too many workers spoil the work”
- Cleobulus of Lindos - “All moderation is impeccable”
- Pittacus of Mitylene - “Know thine opportunity”
- Periander of Corinth - “Forethought in all things”

Pausanias must have seen the engravings, as he wanted to substitute Myson of Chenae, who appears in Plato's list, instead of Periander, a tyrant. This is evidence that the basis of selection was not general wisdom, but the ability to produce great *paromia*. There were, at least, twenty men whom someone in antiquity, called one of the Seven. Moreover, different authors attribute the sayings to different sages.

Other quotes attributed to the sages include: "Master anger;" "Look to the end of life;" "Avoid responsibility for others' debts;" and the characteristically Greek; "Call no man happy, until he is dead."

The institution of sagacity

The sources seem to tell us everything about the sages, except who singled them out as sage and for what purpose. The Hellenes, we are told, but entire populations rarely act, except through representatives.

The trophy-swapping stories in Diogenes Laertius (under Thales) give something of a clue. First, there is the tripod brought up with a catch of fish and claimed by the purchasers of the fish, who appealed to the oracle and were told to give the tripod to the wisest. They chose Thales, but he passed it on to another, etc., until it came back to him. Then, he sent it to Apollo, as only the god is wise.

In another version, the trophy was a bowl bequeathed to him, who did the most good with his wisdom. It went the round also, and ended up at Delphi. In a third version, it was a gift from Croesus to the wisest.

The bowl gives us a hint, as to how men became officially sage. Diogenes evidently read the inscription on the bowl, as he quotes it:

“Thales, the Milesian, son of Examyas (dedicates this) to Delphian Apollo, after twice winning the prize from all the Greeks.”

What prize was that, and what contest? Such language is spoken of victors in the Panhellenic Games. The Pythian Games featured a declamation contest for poets, and probably would-be sages. Diogenes Laertius quotes these verses attributed to Thales:

“Of all things that are, the most ancient is God, for He is uncreated.

The most beautiful, is the universe, for it is God’s.

The greatest is space, for it holds all things.

The swiftest is mind, for it speeds everywhere.

The strongest, necessity, for it masters all.

The wisest, time, for it brings everything to light.”

Chance has not revealed to us the exact origin of the seven sages. However, the fact that the paroimia on the wall of the naon, were dedicated to Apollo, may indicate that they were the winning words of a contest. Perhaps, in the Pythian Games of archaic Greece, a standing board of one winner and seven follow-ups existed.

This circumstance would account for the large number of people said to be in the seven, and also would have given Croesus and Cyrus, a guest list for their courts, as they were patrons of the arts. There were still seven sages at the court of Chosroes I, a king of the Sassanid dynasty, 531-579.

Delphi was not the only seat of Apollo. Another existed at Didyma, ten miles south of Miletus, where there was a temple, the Didymaion, at which oracles were given, and games, the Megala Didymeia, including recitation in the open, next to a grove. Didyma were rivals to Delphi. The sages could have won, at Didyma, and have dedicated their prizes and sayings, at Delphi.

Thales (625?-546? B.C.),

Greek philosopher, born in Miletus, Asia Minor. He was the founder of Greek philosophy, and was considered one of the Seven Wise Men of Greece. Thales became famed for his knowledge of astronomy after predicting the eclipse of the sun, that occurred, on May 28, 585 B.C. He is also said to have introduced geometry, in Greece. According to Thales, the original principle of all things, is water, from which, everything proceeds and into which, everything is again resolved. Before Thales, explanations of the universe were mythological, and his concentration on the basic physical substance of the world, marks the birth of scientific thought. Thales left no writings; knowledge of him is derived from an account in Aristotle's, *Metaphysics*.

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Thales

Thales of Miletus (ca. 624 B.C.-ca. 546 B.C.),

Also known as **Thales the Milesian**, was a pre-Socratic Greek philosopher and one of the Seven Sages of Greece. Many regard him, as the first philosopher in the Greek tradition, as well as the father of science.

Life

Thales lived in the city of Miletus, in Ionia, now western Turkey.

Background

The dates of Thales' life are not known exactly. There are two traditions, about 10 years apart, one that he lived to be about 90, and the other, about 80. The time of his life is roughly established by a few dateable events, mentioned in the sources, and an estimate of his length of life. According to Herodotus (1.74), Thales predicted a solar eclipse, which has been determined by modern methods, to have been on May 28, 585 B.C. Pliny's (*Natural History* 2.53), places it in 584, which is considered close enough for verification purposes. According to Thales, however, he obtained knowledge of the eclipse, from Egyptian astronomers.

According to Diogenes Laertius (DL 1.37-38), the chronicle of Apollodorus says, that Thales died at 78, in the 58th Olympiad. DL says, that Sosicrates said he was 90. The year of his birth was the first year of the 35th Olympiad, or 640 B.C. Thales would have been about 40, during the eclipse.

(DL 1.22), and others say, that Thales was the son of Examyas and Cleobulina, and that they were of the Thelidae family (hence, Thales), who were of noble Phoenician descent from Cadmus of ancient Thebes. After repeating a story, that Thales had been naturalized, or recently enrolled, as a citizen, DL asserts, that he was "a right-born Milesian."

When the Greeks settled Miletus, it included a Carian population. Families on monuments have both, Greek and Carian names. Thales' father's name is of the Carian type, like Cheramydes and Panamydes.

According to DL (125.26), there are two stories about Thales' reproductive life, one that he married and had a son, Cybisthus, or adopted his nephew. The second, is that he never married, telling his mother, as a young man, that it was too early to marry, and as an older man, that it was too late.

The well-traveled Ionians had many dealings with Egypt and Babylon, and Thales may have studied, in Egypt, as a young man. In any event, Thales almost certainly had exposure to Egyptian mythology, astronomy, and mathematics, as well as to other traditions, alien to the Homeric traditions of Greece. Perhaps, because of this, his inquiries into the nature of things, took him beyond traditional mythology.

Thales involved himself in many activities, taking the role of an innovator. Some say that he left no writings, others that he wrote, "On the Solstice" and "On the Equinox." Neither have survived. DL (1.43-44), quotes letters of Thales to Pherecydes and Solon, offering to review the book of the former, on religion, and offering to keep company with the latter, on his sojourn from Athens. Thales identifies the Milesians, as Athenians.

Business

Several anecdotes suggest, that Thales was not solely a thinker; he was involved in business and politics. One story recounts, that he bought all the olive presses, in Miletus, after predicting the weather and a good harvest for a particular year. Another version of this same story, states that he bought the presses, to demonstrate to his fellow Milesians, that he could use his intelligence to enrich himself. However, looking at his way of thinking, getting rich was not his intent; merely, to show people that by

being a philosopher, It was easy to enrich himself without it being the point of the exercise.

Politics

Thales' political life had mainly to do with the involvement of the Ionians in the defense of Anatolia, against the growing power of the Iranians, who were then, new to the region. A king had come to power in neighboring Lydia, Croesus, who was somewhat too aggressive for the size of his army. He had conquered most of the states of coastal Anatolia, including the cities of the Ionians. The story is told in Herodotus, Book 1.

The Lydians were at war with the Medes, a remnant of the first wave of Iranians in the region, over the issue of refuge the Lydians had given to some Scythian soldiers of fortune, inimical to the Medes. The war endured for five years, but in the sixth (the Battle of Halys), an eclipse of the sun (mentioned above), spontaneously halted, a battle in progress.

It seems that Thales had predicted this eclipse. The Seven Sages, were most likely, already in existence, as Croesus was also heavily influenced by Solon, another sage. Whether Thales was present at the battle, is not known, nor are the exact terms of the prediction, but based on it, the Lydians and Medes made peace immediately, swearing a blood oath.

The Medes were dependencies of the Persians under Cyrus. Croesus now sided with the Medes, against the Persians, and marched in the direction of Iran (with far fewer men than he needed). He was stopped by the river, Halys, then unbridged. This time, he had Thales with him, perhaps by invitation. Whatever his status, the king gave the problem to him, and he got the army across, by digging a diversion upstream so as to

reduce the flow, making it possible to ford the river. The channels ran around both sides of the camp.

The two armies engaged, at Pteria, in Cappadocia. As the battle was indecisive, but paralyzing to both sides, Croesus marched home, dismissed his mercenaries, and sent emissaries to his dependents and allies, to ask them to dispatch fresh troops to Sardis. The issue became more pressing, when the Persian army showed up, at Sardis. Diogenes Laertius (1.25) tells us, that Thales gained fame, as a counsellor, when he advised the Milesians not to engage in a *symmachia*, a “fighting together,” with the Lydians. This has sometimes been interpreted, as an alliance, but you do not ally with your subjects.

Croesus was defeated before the city of Sardis, by Cyrus, who subsequently spared Miletus, because it had taken no action. The Great King was something of a philosopher, himself. He was so impressed by Croesus’ wisdom and his connection with the sages, that he spared him and took his advice on various matters.

The Ionians were now free. Herodotus says, that Thales advised them to form an Ionian state; that is, a *bouleuterion* (“deliberative body”), to be located, at Teos, in the center of Ionia. The Ionian cities should be *demoi*, or “districts.” Miletus, however, received favorable terms from Cyrus. The others remained in an Ionian League of 12 cities (excluding Miletus, now) and were subjugated by the Persians.

Ethics

The ethics of Thales can be estimated from the sayings attributed to him, reported in Diogenes Laertius. First, he recognizes a transcendental God, who has neither, beginning nor end. He believes, that God is just and expects men to behave justly. Neither a man, being unjust, nor thinking injustice, escape the notice of the gods. In this

form of polytheism, the transcendental god expresses himself, through gods, so that a man can say, theoi, and mean God.

Thales' idea of justice includes both, the letter of the law and the Spirit of the law. Under the heading of letter, he advises that adultery and perjury about it in court, are equally bad. His value of Civic Law, is supplemented, by some practical advice. Expect the same support from your children, that you give to your parents. Don't let talk influence you against those whom you have come to trust. Be rich, yes, for success is sweet. However, don't be rich, badly.

As to the Spirit of the law, we find Thales expressing a rather well-known principle, for leading the best and most just life:

“That for which we blame others, let us not do ourselves.”

This principle resembles the foundation principle of Jewish Law, “do not unto thy neighbor what is hateful to thyself.” Was Thales Jewish? Not likely, but some have emphasized his supposed “Semitic” ancestry. After all, Hebrew and Phoenician are closely related, coming from a common ancestor, about the time of Cadmus.

There is no known connection between Thales and any Hebrew speakers, however. He might have picked up the principle anywhere or have devised it himself. His view of enemies is not quite Old Testamental, being possibly more severe. The Old Testament supports an equal exchange of penalties: an eye for an eye, etc. According to Thales, a man can better bear adversity, if he sees that his enemies are worse off.

There are certain other prejudices that some of us would find jarring today: men are better than women and Greeks are better than barbarians (this coming from a man, whose proudest ancestor was dethroned, in Thebes, for being a barbarian).

Democratic, Thales was not. One story has him living with Thrasybulus, tyrant of Miletus. In his letter to Solon, he offers to live elsewhere with Solon, seeing that the latter, finds tyranny so offensive.

However, ancient philosophers, in general, tended to support or advocate benign tyranny, such as Plato's ideal philosopher-king. Their record, at attempting this role, is a miserable one, generally resulting in the expulsion or murder of the tyrant and the massacre of the philosophers. Unquestionably, sages were more at home with absolutism, than with democratic forms of government. They could not resist undertaking to reform the morals of the citizens, with well-known results.

In addition to his social ethic, Thales had a set of personal principles, as well. Judging from his long life, he may have practiced them. According to Thales, a happy man is defined, as one

“Who is healthy in body, resourceful in soul and of a readily teachable nature,”

in which, again, the reader may recognize the Roman “mens sana in corpore sano,” our “sane mind in a healthy body.” Perhaps, Thales did exercise, but he did not cultivate the body, as he preached, not beautifying the appearance, but practicing the good.

Sagacity

Diogenes Laertius (1.22) tells us that the Seven Sages were created in the archonship of Damasius, at Athens, about 582 B.C., and that Thales, was the first sage. The same story, however, asserts that Thales emigrated to Miletus. There is also a report that he did not become a student of nature, until after his political career. Much as we would like to have a date on the Seven Sages, we must reject these stories and the tempting date, if we are to believe that Thales was a native of Miletus, predicted the eclipse, and was with Croesus in the campaign against Cyrus.

Thales had no instruction, but that of Egyptian priests, we are told. Whether we should believe that story, is a different matter. It was fairly certain, that he came from a wealthy and established family, and the wealthy, customarily educated their children. Moreover, the ordinary citizen, unless he was a seafaring man or a merchant, could not afford the grand tour in Egypt, and in any case, did not consort with noble lawmakers, such as Solon. Perhaps, the source only meant, that Thales had not been instructed, in philosophy, before proposing his theories about nature.

He did participate in some games, most likely Panhellenic, at which, he won a bowl, twice. He dedicated it to Apollo, at Delphi. As he was not known to have been athletic, his event was probably declamation, and it may have been victory, in some specific phase of this event, that led to his being designated, sage.

Another trophy, a tripod, is said to have been bestowed upon him and was given, by him, to another sage, going the rounds until it came back to him, at which time, he dedicated it to Apollo. The oracle given to the Coans, in obedience to which the tripod was given to Thales (in this story), said that it should go to “Who is wise in the things that are, the things that will be, and the things that were” which is delivered in dactylic hexameter, the verse form of the Iliad, and contains a formula said of Calchas (Book 1, first part), a Homeric mantis, or “seer.” Thales did predict an eclipse. Perhaps, it was

on that basis, that he was pronounced sage. One of the verses attributed to him proclaims that “Time is the wisest, because it discovers everything”

The ability to predict also, is a hallmark of good science, but not all the sages were known for their ability to predict.

The time, place, and reasons for Thales being declared officially sage, remain obscure, although the sources made some good guesses, one or more of which, were probably right. The essence of his wisdom seems to have been simplicity of theory with emphasis on insight and inspiration, as these words of a song attributed to him by DL indicate:

“Never did many words declare a mindful teaching: strive after a single wise thing, pick one thing you can depend on.”

It is ironic that a man, with this principle, had many and various achievements.

Death

Thales, is said, to have died in his seat, while watching an athletic contest.

Theories

Before Thales, the Greeks explained the origin and nature of the world through myths of anthropomorphic gods and heroes. Phenomena, like lightning or earthquakes, were attributed to actions of the gods.

Nature, as the principles, in the form of matter

By contrast, Thales attempted to find naturalistic explanations of the world, without reference to the supernatural. He explained earthquakes by imagining that the Earth floats on water, and that earthquakes occur when the Earth is rocked by waves. As we shall see in the section on Thales' beliefs in divinity, he was not consistent in his quest for nature.

More specifically, a supernatural point of view presupposes the existence of passive, inanimate objects that are animated and made to do what they do by divine powers external to them. Fire, for example, is not naturally hot, but is moved to hotness by the daemon of fire.

Thales, according to Aristotle, asked what was the nature (Greek *physis*, Latin *natura*) of the object so that it would behave in its characteristic way. *Physis* comes from *phuein*, "to grow," related to our word, "be." (L)*natura* is the way a thing is "born," again, with the stamp of what it is in itself.

Aristotle (*Metaphysics* 983 b6) characterizes most of the philosophers, "at first," as thinking that the "principles, in the form of matter, were the only principles of all things," where "principle" is *arche*, "matter" is *hule* ("wood") and "form" is *eidōs*.

"Principle" translates *arche*, but the two words do not have precisely the same meaning. A principle of something, is merely prior, (related to *pro-*) to it, either chronologically or logically. An *arche* ("to rule") dominates an object, in some way. If the *arche* is taken to be an origin, then specific causality is implied; that is, B is supposed to be characteristically B, just because it comes from A, which dominates it.

The archai that Aristotle had in mind in his well-known passage on the first Greek scientists, are not necessarily chronologically prior to their objects, but are constituents of it. For example, in pluralism, objects are composed of earth, air, fire, and water, but those elements do not disappear with the production of the object. They remain, as archai, within it, as do the atoms of the atomists.

What Aristotle is really saying, is that the first philosophers were trying to define the substance(s), of which, all material objects are composed. As a matter of fact, that is exactly what modern scientists are trying to do, in nuclear physics, which is a second reason why Thales is described, as the first scientist.

Water, as a first principle

Thales' most famous belief was his cosmological doctrine, which held that the world originated from water. Aristotle considered this belief, roughly equivalent to the later ideas of Anaximenes, who held that everything in the world, was composed of air.

The best explanation of Thales' view, is the following passage from Aristotle's, *Metaphysics* (983 b6). The passage is given, in translation, with key phrases transliterated from the Greek, for the reader's benefit. The reader will see, in the transliteration, words from the theory of somewhat literal, for purposes of accuracy.

“That from which is everything that exists, and from which it first becomes, and into which it is rendered, at last (eis ho phtheiretai teleutaion), its substance remaining under it, but transforming in qualities, that they say is the element and principle of things that are.”

And again,

“For it is necessary, that there be some nature, either one or more than one, from which become the other things of the object being preserved... Thales says, that it is water.”

Aristotle’s depiction of the change problem and the definition of substance could not be more clear. If an object changes, is it the same or different? In either case, how can there be a change from one to the other? The answer, is the substance, which, “is saved,” but acquires or loses different qualities (the things you “experience”).

A deeper dip into the waters of the theory of matter and form, is properly reserved to other articles. The question for this article is, how far does Aristotle reflect Thales? He was probably not far off, and Thales was probably an incipient matter-and-formist.

The essentially non-philosophic DL states, that Thales taught as follows:

“Water constituted (“stood under”) the principle of all things.”

Heraclitus Homericus (Quaes. Hom. 22, not the same as Heraclitus of Ephesus), states that Thales drew his conclusion from seeing moist substance turn into air, slime, and earth. It seems clear, that Thales viewed the Earth, as solidifying from the water on which it floated and which surrounded Ocean.

Beliefs in divinity

Thales applied his method to objects that changed to become other objects, such as water into earth (he thought). But what about the changing itself? Thales did address the topic, approaching it through magnets and amber, which, when electrified by rubbing, attracts also. A concern for magnetism and electrification never left science, being a major part of it today.

How was the power to move other things, without the mover's changing, to be explained? Thales saw a commonality with the powers of living things to act. The magnet and the amber must be alive, and if that were so, there could be no difference between the living and the dead. When asked why he didn't die, if there was no difference, he replied, "because there is no difference."

Aristotle defined the soul, as the principle of life, that which imbues the matter and makes it live, giving it the animation, or power to act. The idea did not originate with him, as the Greeks, in general, believed in the distinction between mind and matter, which was ultimately, to lead to a distinction, not only between body and soul, but also between matter and energy.

If things were alive, they must have souls. This belief was no innovation, as the ordinary ancient populations of the Mediterranean did believe that natural actions were caused by divinities. Accordingly, the sources say, that Thales believed all things possessed divinities. In their zeal to make him the first, in everything, they said he was the first to hold the belief, which even they must have known, was not true.

However, Thales was looking for something more general, a universal substance of mind. That also, was in the polytheism of the times. Zeus was the very personification of supreme mind, dominating all the subordinate manifestations. From Thales on, however, philosophers had a tendency to depersonify or objectify mind, as though it were the substance of animation, per se, and not actually a god, like the other gods.

The end result was a total removal of mind from substance, opening the door to a non-divine principle of action. This tradition persisted until Einstein, whose cosmology is quite a different one and does not distinguish between matter and energy.

Classical thought, however, had proceeded only a little way along that path. Instead of referring to the person, Zeus, they talked about the great mind:

“Thales,” says Cicero, “assures that *water* is the principle of all things; and that God, is that Mind, which shaped and Created all things from water.” (Cicero: “De Nat Deorum,” I., 10).

The universal mind appears, as a Roman belief, in Virgil, as well:

*“In the beginning, SPIRIT within strengthens Heaven and Earth,
The watery fields, and the lucid globe of Lina, and then --
Titan stars; and mind infused through the limbs
Agitates the whole mass, and mixes itself with GREAT MATTER”*
(Virgil: “Aeneid,” vi., 724 ff.)

Geometry

Thales was known for his innovative use of geometry. His understanding was theoretical, as well as practical. For example, he said:

Megiston topos: hapanta gar chorei

“Place is the greatest thing, as it contains all things.”

Topos is in Newtonian-style space, since the verb, chorei, has the connotation of yielding before things, or spreading out to make room for them, which is extension. Within this extension, things have a position. Points, lines, planes, and solids, related by distances and angles, follow from this presumption.

Some have argued, that his geometry was simply, a lucky happenstance, resulting from empirical method worked out by the Babylonians or Egyptians, and that he had no understanding of the basic principles involved. This over skeptical view neglects Thales own predilection for insight, and also, human nature. The mathematics of the times, was not especially difficult or obscure, and we have a convincing story from DL, that when he had inscribed a right triangle, in a circle, he sacrificed an ox. According to Loneragan, in his noted study called, "Insight," such behavior is a typical of insights, or sudden realizations of the truth. Better known, is Archimedes' shouting, eureka! ("I have found it!") with reference to Archimedes' Principle, into which, he had just had an insight. Less dramatically, most of us, just evidence the behavior associated with being startled.

Thales understood similar triangles and right triangles, and what is more, used that knowledge in practical ways. The story is told in DL (loc.cit.), that he measured the height of the pyramids by their shadows at the moment when his own shadow was equal to his height. A right triangle with two equal legs is a 45-degree right triangle, all of which, are similar. The length of the pyramid's shadow, measured from the center of the pyramid, at that moment, must have been equal to its height.

This story reveals, that he was familiar with the Egyptian seqt, or seked, defined by Problem 57 of the Rhind papyrus, as the ratio of the run to the rise of a slope, which is currently the cotangent function of trigonometry. It characterizes the angle of rise.

Our cotangents require the same units for run and rise, but the papyrus uses cubits for rise and palms for run, resulting in different (but, still characteristic) numbers. Since there were 7 palms in a cubit, the seqt was 7 times, the cotangent.

To use an example, often quoted in modern reference works, suppose the base of a pyramid is 140 cubits and the angle of rise 5.25 seqt. The Egyptians expressed their fractions, as the sum of fractions, but the decimals are sufficient for the example. What is the rise in cubits? The run is 70 cubits, 490 palms. X , the rise, is 490 divided by 5.25 or 93.33 cubits. These figures sufficed for the Egyptians and Thales. We would go on to calculate the cotangent, as 70 divided by 93.33 or .75003, and looking that up in a table of cotangents, find that the angle of rise is a few minutes over 53 degrees.

Whether the ability to use the seqt, which preceded Thales, by about 1,000 years, means that he was the first to define trigonometry, is a matter of opinion. More practically, Thales used the same method to measure the distances of ships at sea, said Eudemus, as reported by Proclus ("in Euclidem"). According to Kirk & Raven, all you need for this feat, is three straight sticks pinned at one end and knowledge of your altitude. One stick goes vertically into the ground. A second is made level. With the third, you sight the ship and calculate the seqt from the height of the stick, and its distance, from the point of insertion to the line of sight.

The seqt is a measure of the angle. Knowledge of two angles (the seqt and a right angle) and an enclosed leg (the altitude) allows you to determine, by similar triangles, the second leg, which is the distance. Thales, probably had his own equipment rigged and recorded his own seqts, but that is only a guess.

Thales' Theorem is stated in another article. In addition, Eudemus attributed to him, the discovery that a circle is bisected by its diameter, that the base angles of an isocetes triangle are equal, and that vertical angles are equal. It would be hard to imagine civilization without these theorems.

It is possible, of course, to question whether Thales really did discover these principles. On the other hand, it is not possible to answer such doubts definitively. The sources are all that we have, even though they sometimes contradict each other.

Astronomy

According to Diogenes Laertius, Lobon of Argos wrote that he saw a statue of Thales, at Miletus, with an inscription describing him as, “most senior in wisdom of all the astronomers.” The word, astrologoi, could mean what it does today, the divination of human affairs from the positions of the stars, but it also meant, scientific astronomy, as in the case of Thales.

Thales was said, to be able to predict eclipses and fix the solstices, which abilities made him a very useful man in business and politics. Whether he was the first to do these things, as the enthusiastic DL claims, is another matter.

He set the seasons of the year and divided the year into 365 days. These abilities presume that he had, to some degree, an effective theory of the path of the sun, but we don't know what it was. He estimated the size of the sun, at 1/720th of its path, and that of the moon, at the same ratio of its smaller path. He was able to estimate the heights of the pyramids from the lengths of their shadows. He knew and taught the value of Ursa Minor, to navigators, which the sources say he got from the Phoenicians, but as far as they were concerned, he “discovered it.”

We know that he observed the stars, as he is related to have fallen into a ditch one night. Answering his cries for help, an old woman (in DL) wanted to know how he expected to know anything about the stars when he didn't even know what was on the Earth at his feet. Plato makes the ditch, a well and questioner, a witty and attractive,

Thracian slave girl, unless we presume, he fell twice and elicited the same sort of comment.

In terms of modern science, Thales had as high a batting average, as anyone in the ancient world. He was totally wrong about a few things. His reason for the yearly flooding of the Nile, for example, was that seasonal winds, blowing upstream, impeded the water.

Interpretations

In the long sojourn of philosophy on the earth, there has existed hardly a philosopher or historian of philosophy, who did not mention Thales and try to characterize him, in some way. He is generally recognized, as having brought something new to human thought. Mathematics, astronomy, and medicine already existed. Thales added something to these different collections of knowledge to produce a universality, which, as far as writing tells us, was not in tradition before, but resulted in a new field, science.

Ever since, interested persons have been asking what that new something is. Answers fall into (at least) two categories, the theory and the method. Once an answer has been arrived at, the next logical step, is to ask how Thales compares to other philosophers, which leads to his classification (rightly or wrongly).

Theory

The most natural epithets of Thales are “materialist” and “naturalist,” which are based on *ousia* and physics. The Catholic Encyclopedia goes so far as to call him, a physiologist, a person who studied physics, despite the fact that we already have physiologists. On the other hand, he would have qualified as an early physicist, as did Aristotle. They studied *corpora*, “bodies,” the medieval descendants of substances.

Most agree that Thales' stamp, on thought, is the unity of substance, hence Bertrand Russell ("Wisdom of the West"):

"The view that all matter is one, is quite a reputable scientific hypothesis." "...
But, it is still a handsome feat to have discovered, that a substance remains the same in different states of aggregation."

Russell was only reflecting an established tradition; for example, Nietzsche, in his "Philosophy in the Tragic Age of the Greeks," (3), wrote:

"Greek philosophy seems to begin with an absurd notion, with the proposition that *water* is the primal origin and the womb, of all things. Is it really necessary for us to take serious notice of this proposition? It is, and for three reasons. First, because it tells us something about the primal origin of all things; second, because it does so, in language devoid of image or fable, and finally, because contained in it, if only embryonically, is the thought, "all things are one."

This sort of materialism, however, should not be confused with deterministic materialism. Thales was only trying to explain the unity observed in the free play of the qualities. The arrival of uncertainty, in the modern world, made possible a return to Thales; for example, John Elof Boodin writes, ("God and Creation"):

"We cannot read the universe from the past..."

Boodin defines an “emergent” materialism, in which the objects of sense emerge uncertainly from the substrate. Thales is the innovator of this sort of materialism.

Method

Thales represents something new, in method, as well. Edmund Husserl (“the Vienna Lecture”), attempts to capture it, as follows. Philosophical man is a new cultural configuration, based on a rejection of tradition in favor of an inquiry into what is true in itself; that is, an ideal of truth. It begins with isolated individuals, such as Thales, but they are supported and cooperated with as time goes on. Finally, the ideal transforms the norms of society, leaping across national borders.

Classification

The term, Pre-Socratic, derives ultimately from Aristotle, a qualified philosopher (“the father of philosophy”), who distinguished the early philosophers, as concerning themselves with substance. This is not entirely true.

Diogenes Laertius, on the other hand, took a strictly geographic and ethnic approach. Philosophers were either, Ionian or Italian. He used Ionian, in a broader sense, including also the Athenian academics, who were not Pre-Socratics. From a philosophic point of view, any grouping at all, would have been just as effective. There is no basis for an Ionian or Italian unity. Some scholars, however, concede to Diogenes’ scheme, as far as referring to an “Ionian” school. There was no such school, in any sense.

The most popular approach refers to a Milesian school, which is more justifiable socially and philosophically. They sought for the substance of phenomena and may have studied with each other. Some ancient writers qualify them, as Milesioi, “of Miletus.”

Influence on others

Thales had a profound influence on other Greek thinkers, and therefore, on Western history. Some believe, Anaximander was a pupil of Thales. Early sources report, that one of Anaximander's more famous pupils, Pythagoras, visited Thales, as a young man, and that Thales advised him to travel to Egypt, to further his philosophical and mathematical studies.

Many philosophers followed Thales' lead, in searching for explanations in nature, rather than in the supernatural; others returned to supernatural explanations, but couched them in the language of philosophy, rather than of myth or of religion.

When you specifically look at the influence Thales had in the pre-Socrates era, he was one of the first thinkers, who thought more in the way of *logos* than *mythos*. The difference between these two more profound ways of seeing the world, is that *mythos* is concentrated around the stories of Holy origin, while *logos* is concentrated around the argumentation. When the mythical man wants to explain the world the way he sees it, he explains it, based on gods and powers. Mythical thought does not differentiate between things and persons, and furthermore, it does not differentiate between nature and culture. The way a *logos* thinker would present a world view, is radically different from the way of the mythical thinker. In its concrete form *logos* is a way of thinking, not only about individualism, but also, the abstract. Furthermore, it focuses on sensible and continuous argumentation. This lays the foundation of philosophy and its way of explaining the world, in terms of abstract argumentation, and not in the way of gods and mythical stories.

Sources

Our sources, on the Milesian philosophers (Thales, Anaximander, and Anaximenes), were either, roughly contemporaneous (such as, Herodotus), or lived within a few hundred years of his passing. Moreover, they were writing from a tradition that was well-known. Compared to most persons, places, and things of classical antiquity, we know a great deal about Thales. Most modern dissension comes from trying to interpret what we know.

Diogenes Laertius lists two works, quoted above, that he wrote, also relating the strange tradition, that he did not write. Diogenes, however, had access to two of Thales' letters, which he quotes. Those writings are two more than the surviving works of Socrates, which are none. And yet, thanks to Plato, we know as much about Socrates, as anyone. More than likely, the non-writing tradition, about Thales, is a complaint that such a famous man did not leave enough to be quoted by the secondary sources.

The main secondary source, concerning the details of Thales' life and career, is Diogenes Laertius (DL, here), "*Lives of Eminent Philosophers*." This is primarily a biographical work, as the name indicates. Compared to Aristotle, DL is not much of a philosopher. He is the one who, in the Prologue to that work, is responsible for the division of the early philosophers into "Ionian" and "Italian," but he places the Academics in the Ionian school, and otherwise, evidences considerable disarray and contradiction, especially in the long section on forerunners of the "Ionian School." DL does give us that extant primary sources on Thales (the two letters and some verses).

Most philosophic analyses of the philosophy of Thales come from Aristotle, an Academic and a professional philosopher, tutor of Alexander the Great. Aristotle may or may not have had access to the now mysterious possible works of Thales. There was also, an extensive oral tradition. Both, the oral and the written, were commonly read or known by all educated men in the region.

Aristotle was an Academic. Academic philosophy had a distant stamp: it professed the theory of matter and form, which modern scholastics have dubbed hylo-morphism. Though once very widespread, it was not generally adopted by rationalist and modern science, as it mainly is useful in metaphysical analyses, but does not lend itself to the detail that is of interest to modern science. It is not clear, that the theory of matter and form, existed, as early as Thales, and if it did, whether Thales espoused it.

Anaximenes (circa 570-500 B.C.),

Greek philosopher of nature, the last member of the Ionian school, founded by the philosopher, Thales. Born at Miletus, Ionia, in Asia Minor, he held that air is the primary element to which everything else can be reduced. To explain how solid objects are formed from air, he introduced the notions of condensation and rarefaction. These processes, he claimed, make air, in itself invisible, visible as water, fire, and solid matter. He thought that air becomes warmer and turns to fire, when it is rarefied, and that it becomes colder and turns solid, when it is condensed. His importance lies, not in his cosmology, but in his attempt to discover the ultimate nature of reality.

Anaximander (circa 611-c. 547 B.C.),

Greek philosopher, mathematician, and astronomer, born in Miletus, in what is now, Turkey. He was a disciple and friend of the Greek philosopher, Thales. Anaximander is said to have discovered the obliquity of the ecliptic, that is, the angle at which the plane of the ecliptic is inclined to the celestial equator. He is credited with introducing the sundial, into Greece, and with inventing cartography. Anaximander's outstanding contribution, was his authorship of the earliest prose work, concerning the cosmos and the origins of life. He conceived of the universe, as a number of concentric cylinders, of which, the outermost is the sun, the middle is the moon, and the innermost is the stars. Within these cylinders, is the earth, unsupported and drum-shaped. Anaximander postulated the origin of the universe, as the result of the separation of opposites from the primordial material. Hot moved outward, separating from cold, and then dry from

wet. Further, Anaximander held, that all things eventually return to the element from which they originated.

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Chilon of Sparta

Chilon of Sparta or **Chilo of Sparta** was a Lacedaemonian, son of Damagetus and one of the Seven Sages of Greece. As an ephor, he strengthened that position, in Sparta. It is recorded, that he composed verses, in elegiac metre, to the number of two hundred. Chilon, was also, the first person who introduced the custom of joining the ephors to the kings, as their counselors, though Satyrus attributes this institution to Lycurgus.

Some of his sayings:

- “Do not speak evil of the dead.”
- “Honor old age.”
- “Prefer punishment to disgraceful gain; for the one is painful, but once, but the other, for one’s whole life.”
- “Do not laugh at a person in misfortune.”
- “If one is strong, be also merciful, so that one’s neighbors may respect one, rather than fear one.”
- “Learn how to regulate one’s own house well.”
- “Do not let one’s tongue outrun one’s sense.”

- “Restrain anger.”
- “Do not dislike divination.”
- “Do not desire what is impossible.”
- “Do not make too much hast on one’s road.”
- “Obey the laws.”
- “Nothing in excess.”

Chilon flourished around the beginning of the 6th century B.C. The tradition was that he died of joy in the arms of his son, who had just gained a prize at the Olympic games.

Periander

Periander was the second tyrant of Corinth, Greece in the 7th century B.C. He was the son of the first tyrant, Cypselus.

Periander succeeded his father in 627 B.C. He upgraded Corinth’s port, and built a ramp across the Isthmus of Corinth, so that ships could be dragged across (*the diolkos*), avoiding the sea route around the Peloponnese. The money gained from the *diolkos* allowed Periander to abolish taxes, In Corinth.

However, Periander was later considered the typical evil tyrant (for example, by Aristotle). Herodotus says he learned his “savagery” from Thrasylbulus, the tyrant of Miletus, who instructed Periander to get rid of anyone who could conceivably take power from him. Among his acts were sending young boys from Corcyra to be castrated in Lydia, and the murder of his own wife, Melissa. Their son, Lycophon discovered that his father was the murderer, so Periander exiled him from Corinth and

forbade any of his subjects to shelter him. Periander later tried to reconcile with Lycophron, but Lycophron refused to return, unless Periander abdicated. However, the inhabitants of Corcyra killed Lycophron, to prevent Periander from arriving.

Periander was listed, by most authors, as one of the Seven Sages of Greece. According to Herodotus, Periander also held the musical contest that was won by the poet, Arion.

Xenophon (430?-355? B.C.),

Greek historian, soldier, and essayist, whose works contribute greatly to knowledge of Greece and Persia in the 4th century B.C.

Born in Athens, Xenophon was the son of an Athenian knight. As a youth, he was a disciple of Socrates. In 401 B.C., Xenophon joined an army of Greek mercenaries in the service of Cyrus the Younger, prince of Persia, and took part in a campaign against Cyrus's brother, King Artaxerxes II. After the death of Cyrus in the Battle of Cunaxa, the commanding officers of the Greek mercenaries were treacherously murdered by the Persian satrap, Tissaphernes. Xenophon was among the new officers chosen to command the Greek force, totaling about 10,000 men, without a leader, in the heart of the hostile Persian Empire. Assuming responsibility for directing the retreat, Xenophon led his men to safety in the ancient Greek colony of Trapezus (now Trabzon, Turkey) on the Black Sea, a 2,414-km (1,500-mi) march, lasting five months. Their triumphant survival has been attributed largely to Xenophon's resourcefulness, foresight, and tact. In his most celebrated book, the *Anabasis*, he describes the retreat through an unknown country against disheartening obstacles of terrain and weather, savage enemies, and failure of supplies.

From Trapezus, Xenophon and the “Ten Thousand” moved on to Chrysopolis (now Uskudar, Turkey). Shortly after their arrival, they entered the service of the Spartans in their campaigns against the Persian satraps of Asia Minor. The ransom Xenophon collected from a wealthy Persian prisoner, in this campaign, enabled him to live in comfort for the rest of his life. From these foreign adventures, he returned to Greece in 394 B.C., as a member of the staff of Agesilaus II, king of Sparta. In that capacity, he was present at the Battle of Coronea, in which the Spartans defeated the Athenians and their Theban allies. The Athenians retaliated, by condemning him, as a traitor, and sentencing him to banishment. The Spartan government presented him with an estate at Scillus, in Elis, where he lived the life of a country gentleman for 24 years. After the military power of Sparta was broken, at Leuctra, in 371, he was driven from his home. Athens lifted the ban of exile against him, but instead of returning home, he apparently spent the rest of his life in Corinth.

Apart from the *Anabasis*, Xenophon’s most important writings are *Hellenica*, a continuation, covering the period 411 to 363 B.C., of Thucydides’ *History of the Peloponnesian War*; *Cyropaedia*, an idealized biography of Cyrus the Great; and *Memorabilia*, recollections of Socrates and Socratic conversations. He also wrote an encomium of Agesilaus; a group of political and economic treatises; a series of essays on horsemanship, hunting, and cavalry warfare; and several additional Socratic dialogues.

As soldier, orator, philosopher, essayist, and historian, Xenophon was the prototype of the talented, Athenian. He found the austere Spartan way of life, more congenial than the democratic Spirit of his native Athens, however. The value of his historical writings is impaired by strong pro-Spartan bias and by the lack of a sense of proportion. His Socratic writings reveal a mind that did not fully comprehend the philosophy of his master, and his own ideas are generally derivative, moralistic, and commonplace. Sincerity and common sense are his strongest characteristics. His style is simple,

elegant, and uncomplicated, and he is considered a master of clear exposition. His work, *Anabasis*, is usually one of the first books read by modern students of Greek.

After carefully researching all the previous presented documentations, we can see clearly that the baton of philosophy was passed from the 7 Sages of Greece to Socrates. Socrates passed the baton of philosophy to Plato. Plato passed the baton of philosophy to Aristotle, and Aristotle passed the baton of philosophy to Philip II and on to Alexander the Great.

Along with the philosophies of Greece, the cultic mysteries of Orphism, Demeter, and Persephone, were also passed down to Alexander. The Eleusinian Mysteries were a great influence on Alexander and his mother, Olympias.

Time Line

Thales	625-546 B.C.
Anaximander	611-547 B.C.
Pythagoras	582-500 B.C.
Anaximenes	570-500 B.C.
Socrates	470-399 B.C.
Xenophon	430-355 B.C.
Plato	428-347 B.C.
Aristotle	384-322 B.C.
Philip II	382-336 B.C.
Alexander the Great	356-323 B.C.
Alexandria, Egypt	332 B.C.

Let us now turn again to Alexander the Great and see how he used the influence of his teachings from Aristotle and the cultic mysteries of his mother.

“When Alexander invaded Egypt, he found the gods Apis, bull worship, and evidences of the cults, his mother had worshipped. With the teachings of his father and Aristotle and the cults, from his mother, he founded Alexandria in Egypt. The gods of Egypt took possession of his mind.”

The Outline of History

H.G. Wells 1949

Doubleday & Company

Let the student study very carefully, the documentation presented on Alexandria, Egypt, the Library, and the librarians, who were in charge.

Alexandria (Egypt),

City and major seaport in northern Egypt, in the Nile River delta, on a ridge that separates Lake Mareotis from the Mediterranean Sea. The city was founded in 332 B.C., by Alexander the Great, king of Macedonia, who planned it as one of the finest ports of the ancient world. A mole (breakwater made of large stones or masonry) nearly 1.6 km (1 mi.) in length, called the Heptastadium (“seven furlongs”), was built to the island of Pharos, enclosing a spacious harbor. A famous lighthouse, considered one of the Seven Wonders of the World, was also built on Pharos. Another smaller harbor was

open to the west. A canal joined Lake Mareotis to the Canopic branch of the Nile.

The ancient city was about 6.4 km (about 4 mi.) long, and regularly built, with streets crossing at right angles and colonnades adorning the principal streets. The most magnificent quarter of the city, called the Brucheium, was situated on the eastern harbor. Farther west, was the Serapeion, or temple of the Egyptian deity, Serapis; the Soma, or mausoleum of Alexander and the Ptolemies; the Poseidonium, or temple of Poseidon, god of the sea; the museum; the great theater; and the emporium, or exchange. The northeastern quarter was occupied by the Jews. In Alexandria, the Jews came into contact with Greek learning, which profoundly influenced, the later religious thought of the world; here the Greek translation of the Old Testament, called the Septuagint, was made before A.D. 100. Later, philosophers attempted to fuse the doctrines of Christianity with the ideals of Greek philosophy.

Soon after the city was founded, the population, consisting chiefly of Greeks, Jews, and Egyptians, numbered 300,000 free citizens, exclusive of slaves and foreigners. Alexandria was made the capital of Egypt, numerous palaces were built by the Ptolemies, the Alexandrian Library and Museum were founded, and influential schools of philosophy, rhetoric, and other branches of ancient learning, were established. During the early 3rd century B.C., the Alexandria Library had almost 500,000 volumes, the largest collection of books in the ancient world. However, the collection was destroyed over several centuries.

Under the Ptolemies, the city became the literary and scientific center of the ancient world. After the defeat of Cleopatra, queen of Egypt, at Actium in 31 B.C., and her suicide the following year, the city came under the rule of Octavian, later the Roman emperor, Augustus, and was governed by a prefect, appointed by him. Its position made it the center of commerce between East and West, and fleets of grain ships sailed from Alexandria to Italy, year after year. Gradually, however, the city lost its prosperity. A Jewish revolt, in A.D. 116, resulted in the annihilation of the Jewish population and the destruction of a large portion of the city. In 215, the Roman emperor, Caracalla

ordered a massacre of the male inhabitants of the entire city, for reasons that remain obscure, but might have involved a punishment for some form of seditious conduct. The founding of Constantinople, further eclipsed, the Egyptian metropolis. The Muslims, under the general Amr ibn-al-As, besieged, captured, and almost destroy the city in 638, and again about 646. Under Muslim rule, the city declined, particularly after the rise of Cairo, after about 968, and the opening of the sea route to India, in the 15th century. Alexandria was captured and held from 1798 to 1801, by Napoleon I.

The modern city is situated mainly on a peninsula about the mole, reaching to and including the island of Pharos, and on the portion of the mainland, immediately south of the eastern harbor. The part of the modern city, on the peninsula, is a characteristically Egyptian town; the European quarter is on the mainland. Alexandria has had, since ancient times, two harbors, of which, the western one is the chief commercial center and the site of the customs house and many warehouses for cotton, grain, sugar, and wool. More than 80 percent of the imports and exports of the country, pass through the city. Population (1992 estimate) 3,380,000.

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Alexandria, Library of,

Famous ancient library, considered to have the greatest collection of books in the ancient world. Founded by Ptolemy I Soter, king of Egypt, in the city of Alexandria, it was expanded by his son, Ptolemy II Philadelphus, early in the 3rd century B.C. The scholars in charge included the ablest Alexandrian men of letters of the period. Zenodotus of Ephesus, whose specialty was the classification of poetry, was the first to hold the position of librarian. The poet, Callimachus made the first general catalog of

the books, and apparently, was also a librarian. The two most noted librarians were Aristophanes of Byzantium and Aristarchus of Samothrace, both great editors and grammarians. In the time of Ptolemy II, according to one historian, the main library in the Alexandrian Museum contained nearly 500,000 volumes, or rolls, and an annex in the Temple of Serapis contained some 43,000 volumes. Most of the writings of antiquity were preserved in these collections, from which, copies were made and disseminated to libraries throughout the civilized world.

It is largely, through such copies, that ancient works have survived to modern times, for the Alexandrian Library was partially or wholly destroyed, on several occasions. In 47 B.C., during the Civil War between Julius Caesar and the followers of Pompey the Great, Caesar was besieged in Alexandria; a fire that destroyed the Egyptian fleet, spread through some stores of books, about 40,000, of which, were ruined. A few years later, the Roman emperor, Mark Antony presented to Cleopatra, queen of Egypt, books from the library of the city of Pergamum, in Asia Minor. According to legend, the Library at Alexandria was burned three times: in A.D. 272, (by order of the Roman emperor, Lucius Domitius Aurelian), in 391, (under the Roman emperor, Theodosius I), and in 640, (by Muslims under the caliph, Umar I, 581?-644).

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Library of Alexandria

The **Royal Library of Alexandria** in Alexandria, Egypt was once the largest library in the world. It is generally thought to have been founded at the beginning of the 3rd century B.C., during the reign of Ptolemy II of Egypt, after his father had built, what would become, the first part of the library complex, the Temple of the Muses - the Musaion (whence, we get *museum*).

It has been reasonably established, that the library or parts of the collection, were destroyed by fire on a number of occasions (library fires were common enough and replacement of handwritten manuscripts was very difficult, expensive, and time-consuming). To this day, the details of the destruction (or destructions) remain a lively source of controversy. The Bibliotheca Alexandrina was inaugurated, in 2003, near the site of the old library.

Problems of Historiography

While the Library of Alexandria is referred to, in numerous contemporary sources, there is not a great deal of material directly describing the library itself. By the modern era, the library had come to symbolize the entirety of knowledge in the ancient world. Important to this symbolism are claims about the size of the library; the comprehensiveness of its collection, (especially regarding books that are no longer extant); and the circumstances of its destruction. Various authors explicitly blame certain individuals or groups for having destroyed the library, and this has given rise to complex accusations of bias. It is quite possible, that the library suffered numerous, complete, or partial destructions, in its long history.

The Library as a Research Institution

According to our earliest source for the library, the pseudepigraphic *Letter of Aristeas*, the library was initially organized by Demetrius of Phaleron. Demetrius was a student of Aristotle.

Initially, the library was closely linked to a “museum,” or research center, that seems to have focused primarily on editing texts. Libraries were important for textual research in the ancient world, since the same text often existed in several different versions of

varying quality and veracity. The editors, at the Library of Alexandria, are especially well-known for their work on Homeric texts. The more famous editors, generally also held, the title of head librarian, and included:

- Zenodotus of Ephesus (late 3rd Century B.C.)
- Aristophanes of Byzantium (early 2nd Century B.C.)
- Aristarchus of Samothrace (early-mid 2nd Century B.C.) Often considered the most prominent Homeric scholar of antiquity.
- Didymus (First Century B.C.) Grammarian.

The geographical diversity of the scholars suggests that the library was, in fact, a major center for research and learning. In 2004, a Polish-Egyptian team claimed to have discovered a part of the library, while excavating in the Bruchion region. The archaeologists claimed to have found thirteen “lecture halls,” each with a central podium. Zahi Hawass, the president of Egypt’s Supreme Council of Antiquities, said that all together, the rooms uncovered, so far, could have seated 5,000 students. The picture, thus presented, is of a fairly massive research institution.

The library likely encompassed several buildings, with the main book depositories, either located directly attached to, or close to the oldest building, the Museum, and a daughter library, in the younger Serapeum, which was also a Temple, dedicated to the god, Serapis. It is not always clear in the sources, whether a phrase refers to a particular building, or to the institution, as a whole. This has served to add to the confusion, about when and by whom, the library was “destroyed.” By the early 2nd century B.C., Eumenes II of Mysia, had founded a competing library and research center in Pergamum.

The Collection

It has been said, that Aristotle's personal library formed the initial collection of the library. This does not seem likely, as there is no such dispensation, in his will. Another story concerns how its collection grew so large: By decree of Ptolemy III of Egypt, all visitors to the city were required to surrender all books and scrolls in their possession; these writings were then swiftly copied, by official scribes. The originals were put into the library, and the copies were delivered to the previous owners. This process, also helped to create, a reservoir of books in the relatively new city.

The library's collection was already famous in the ancient world, and became even more storied, in later years. It is impossible, however, to determine how large the collection was, in any era. The collection was made of papyrus scrolls. Later, parchment codices (predominant, as a writing material, after 300 A.D.) may have been substituted for papyrus. A single piece of writing might occupy several scrolls, and this division into self-contained "books," was a major aspect of editorial work. King Ptolemy II Philadelphus (309-246 B.C.), is said to have set 500,000 scrolls, as an objective. Mark Antony was supposed to have given Cleopatra over 200,000 scrolls for the library.

No index of the library survives, and it is not possible to know, with certainty, how large and how diverse, the collection was. It is likely, for example, that even if the library had hundreds of thousands of scrolls (and thus, perhaps, tens of thousands of individual *works*), that many of these were duplicate copies or alternate versions of the same texts.

The Destruction of the Library

Ancient and modern sources name four possible occasions for the destruction of the library: Caesar's campaign in 48 B.C., the attack of Aurelian in the 3rd century A.D., the

decree of Theophilus in 391 A.D., and the Muslim conquest in 642 A.D., or thereafter. Each of these has been viewed, with suspicion by other scholars, as an effort to place the blame on particular actors. Moreover, each of these events, is historically problematic. In the first and second case, there is clear evidence, that the library was not, in fact, destroyed. The third episode, is often regarded, as a myth, and the fourth episode, is simply not documented.

Plutarch's, *Lives*, describes a battle, in which, Caesar was forced to burn his own ships, which in turn, set fire to the docks and then, the Library, destroying it. This would have occurred in 48 B.C., during the fighting between Caesar and Ptolemy XII. However, there is no corroborating evidence, that the library was, in fact, destroyed, at this time. Only 25 years later, Strabo saw the library and worked in it. Thus, any damage sustained by this battle, was probably, slight.

The library seems to have been maintained, and continued in existence, until its contents were largely lost, during the taking of the city by the Emperor, Aurelian (270-275 A.D.), who was suppressing a revolt. The smaller library, located at the Serapeum, survived, but part of its contents may have been taken off to Constantinople, to adorn the new capital, in the course of the 4th century.

In 391, Emperor Theodosius I, ordered the destruction of all Pagan Temples, and Patriarch Theophilus of Alexandria, complied with this request. Socrates Scholasticus provides the following account of the destruction of the Temples in Alexandria, in the fifth book of his, *Historia Ecclesiastica*:

“At the solicitation of Theophilus, bishop of Alexandria, the emperor issued an order, at this time, for the demolition of the Heathen Temples in that city; commanding also, that it should be put in execution under the direction of Theophilus. Seizing this opportunity, Theophilus exerted himself to the utmost, to expose the Pagan

mysteries, to contempt. And to begin with, he caused the Mithreum to be cleaned out, and exhibited to public view, the tokens of its bloody mysteries. Then he destroyed the Serapeum, and the bloody rites of the Mithreum, he publicly caricatured; the Serapeum also, he showed full of extravagant superstitions, and he had the phalli of Priapus carried through the midst of the forum. Thus, this disturbance, having been terminated, the governor of Alexandria, and the commander-in-chief of the troops in Egypt, assisted Theophilus, in demolishing the Heathen Temples.”

The Serapeum housed part of the library, but it is not known how many books were contained in it, at the time of destruction. Notably, Paulus Orosius admitted, in the sixth book of his, *History against the Pagans*: “Today, there exists in temples, book chests, which we ourselves have seen, and, when these temples were plundered, these, we are told, were emptied by our own men, in our time, which, indeed, is a true statement.” Some, or all of the books, may have been taken, but any books left in the Serapeum, at the time, would have been destroyed when it was razed to the ground.

As for the Museum, Mostafa El-Abbadi writes, in *Life and Fate of the ancient Library of Alexandria* (Paris 1992):

“The Mouseion, being at the same time, a ‘shrine of the Muses,’ enjoyed a degree of sanctity, as long as other Pagan Temples remained, unmolested. Synesius of Cyrene, who studied under Hypatia, at the end of the fourth century, saw the Mouseion and described the images of the philosophers in it. We have no later reference to its existence, in the fifth century. As Theon, the distinguished mathematician, and father of Hypatia, herself a renowned scholar, was the last recorded scholar-member (c. 380), it is likely, that the Mouseion did not long survive the promulgation of Theodosius’ decree, in 391, to destroy all Pagan Temples, in the city.”

It is alleged, by some sources, that a final destruction of the library, took place in 642 A.D., at the time of the Arab conquest.

It is clear, however, that the library had ceased to function, in any important capacity, by the 8th century A.D. Alexandria was not a major research center for the Islamic world. Moreover, if the collection had survived to the early 700's, it would very likely, have been incorporated into the Library of the Al-Azhar Mosque (and later, university), in Cairo. This collection has come down to the present intact, but does not include Alexandrine texts.

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Aristarchus of Samothrace

Aristarchus (220?-143 B.C.), from the Greek island of Samothrace, was a grammarian and is noted, as the most influential of all scholars of Homeric poetry. He was the librarian of the Library of Alexandria, and seems to have succeeded his teacher, Aristophanes of Byzantium, in that role.

He established the most historically important critical edition of the Homeric poems, and he is said to have applied his teacher's accent system to it, pointing the texts with a careful eye, for metrical correctness. It is likely, that he or, more probably, another predecessor at Alexandria, Zenodotus, was responsible for the division of the *Iliad and Odyssey*, into twenty-four books, each. According to the Suda, Aristarchus wrote 800 treatises, on various topics, all lost, but for fragments preserved in the various Scholia.

Accounts of his death vary, though they agree, that it was during the persecutions of Ptolemy VIII Physcon. One account has him, having contracted incurable edema, starving himself to death, while in exile on Cyprus.

The historical connection of his name to literary criticism has created the term, *aristarch*, for someone who is a judgmental critic.

Aristophanes of Byzantium

Aristophanes of Byzantium (Byzantium, 257 - Alexandria, 180 B.C.), was a Greek scholar, particularly renowned for his work in Homeric scholarship, but also for work on other classical authors, such as Pindar and Hesiod. He succeeded Eratosthenes, as head librarian of the Library of Alexandria.

Aristophanes is credited with the invention of the accent system, used in Greek, to designate pronunciation, as the tonal, pitched system of archaic and classical Greek was giving way (or had given way) to the stress-based system of koine. This was also a period when Greek, in the wake of Alexander's conquests, was beginning to act as a *lingua franca*, for the Eastern Mediterranean (replacing various Semitic languages). The accents were designed to assist in the pronunciation of Greek, in older literary works.

Callimachus

Callimachus (ca. 305 B.C. - ca. 240 B.C.), was a native of Cyrene and a descendant of Battiadae. He was a noted poet, critic, and scholar of the Library of Alexandria, and enjoyed the patronage of Ptolemy II; although he was never made chief librarian, he was responsible for producing the catalogue of all the volumes contained in the library. His *Pinakes* (tablets), 120 volumes long, provided the complete and chronologically arranged catalogue of the library, laying the foundation for later work on the history of Greek literature. As one of the earliest critic-poets, he typifies Hellenistic scholarship.

Elitist and erudite, asserting, "I abhor all common things," Callimachus is best known for his short poems and epigrams. During the Hellenistic period, a major trend in Greek-language poetry was to reject the epic, instead idealizing a form of poetry that was brief, yet carefully formed and worded, and Callimachus excelled at this style. "Big book, big evil" was one of his verses, attacking long, old-fashioned poetry, using the very style Callimachus proposed, to replace it. Callimachus also wrote poems in praise of his royal patron and a wide variety of other poetic styles, as well as prose and criticism.

Because of Callimachus' strong stance against the epic, he and his student, Apollonius Rhodius, who favored epic and wrote the *Argonautika*, had a long and bitter feud, trading barbed comments, insults, and *ad hominem* attacks, for over thirty years. It is

now known, through a papyrus fragment, from Oxyrhynchus, listing the earliest chief librarians of the Library of Alexandria, that Ptolemy II, never offered the post to Callimachus, but passed him over for Callimachus' younger student, Apollonius Rhodius. Some classicists, such as Peter Green, speculate that this contributed to the poet's long feud.

Though Callimachus was an opponent of 'big books,' the Suda puts his number of works, at (a possibly exaggerated) 800, suggesting that he found large quantities of small works, more acceptable. Of these, only six hymns, sixty-four epigrams, and some fragments, are extant; a considerable fragment of the *Hecale*, one of Catallus' few longer poems treating epic material, has also been discovered in the *Rainer papyri*. His, *Coma Berenices*, is known only from a fragmentary papyrus text and the celebrated Latin imitation of Catullus (Catullus 66). His, *Aitia*, ("Causes"), another rare longer work, was a collection of elegiac poems, in four books, dealing with the foundation of cities, religious ceremonies, local traditions, and other customs. The extant hymns are extremely learned, and written in a style that some have criticized, as labored and artificial. The epigrams, are more widely respected, and have been incorporated in the Greek Anthology.

According to Quintilian (10.1.58), he was the chief of the elegiac poets; his elegies were highly esteemed, by the Romans, and imitated by Ovid, Catullus, and especially Propertius. Many modern classicists, regard Callimachus, for his major influence on Latin poetry.

Zenodotus

Zenodotus, Greek grammarian, literary critic, and scholar on Homer; first librarian of the Library of Alexandria; pupil of Philetas of Cos; a native of Ephesus. He lived during

the reigns of the first two Ptolemies, and was at the height of his reputation, about 280 B.C.

He was the first superintendent of the Library of Alexandria and the first critical editor (*diorthotes*) of Homer. His colleagues in the librarianship were Alexander of Aetolia and Lycophron of Chalcis, to whom were allotted the tragic and comic writers, respectively, Homer and other epic poets, being assigned to Zenodotus.

Although he has been reproached with arbitrariness and an insufficient knowledge of Greek, in his recension, he undoubtedly laid a sound foundation for future criticism. Having collated the different manuscripts in the library, he expunged or obelized doubtful verses, transposed or altered lines, and introduced new readings. It is probable, that he was responsible for the division of the Homeric poems into twenty-four books, each (using capital Greek letters for the *Iliad*, and lower-case for the *Odyssey*), and possibly was the author of the calculation of the days of the *Iliad* in the *Tabula Iliaca*.

He does not appear to have written any regular commentary on Homer, but his Homeric (*glossai*, lists of unusual words), probably formed the source of the explanations of Homer, attributed by the grammarians to Zenodotus. He also lectured upon Hesiod, Anacreon, and Pindar, if he did not publish editions of them. He is further called, an epic poet, by Suidas, and three epigrams in the *Greek Anthology*, are assigned to him.

There appears to have been at least two other grammarians of the same name:

1. *Zenodotus of Alexandria*, surnamed (*ho en astei* -"the one from the city," i.e., Alexandria).
2. *Zenodotus of Mallus*, the disciple of Crates, who like his master, attacked

Aristarchus of Samothrace.

Plotinus

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Plotinus (ca. 205-270), the ancient philosopher, is widely considered, the father of Neoplatonism. Much of our biographical information, about Plotinus, comes from Porphyry's preface to his edition of Plotinus,' *Enneads*. His metaphysical writings have inspired centuries of Christian, Jewish, Muslim, and Gnostic metaphysicians and mystics.

Biography

Porphyry believed Plotinus was sixty-six years old when he died in 270, the second year of the reign of the emperor, Claudius II, thus giving us the year of his teacher's birth, as around 205. Plotinus had an inherent distrust of materiality (an attitude common to Platonism), holding to the view, that phenomena and forms, were a poor image or mimicry (mimesis) of something "higher and intelligible" [VI.I] which was the "truer part of genuine Being." This distrust extended to the body, including his own; it is reported by Porphyry, that at one point, he refused to have his portrait painted, presumably for much the same reasons of dislike. Likewise, Plotinus never discussed his ancestry, childhood, or his place or date of birth. Eunapius, however, reports that he was born in the Deltaic Lycopolis (Latin: Lyco) in Egypt, as he may have been a Hellenized Egyptian. From all accounts, his personal and social life exhibited the highest moral and Spiritual standards.

Plotinus took up the study of philosophy, at the age of twenty-seven, around the year 232, and traveled to Alexandria to study. There, Plotinus was dissatisfied with every teacher he encountered, until an acquaintance suggested he listen to the ideas of Ammonius Saccas. Upon hearing Ammonius lecture, he declared to his friend, "this

was the man I was looking for,” and began to study intently under his new instructor. Besides Ammonius, Plotinus was also influenced by the works of Alexander of Aphrodisias, Numenius, and various Stoics.

Expedition to Persia and return to Rome

He spent the next eleven years in Alexandria when, by now 38, he decided to investigate the philosophical teachings of the Persians and the Indians. In the pursuit of this endeavor, he left Alexandria and joined the army of Gordian III, as it marched on Persia. However, the campaign was a failure, and on Gordian’s eventual death, Plotinus found himself abandoned in a hostile land, and only with difficulty, found his way back to safety, in Antioch.

At the age of forty, during the reign of Philip the Arab, he came to Rome, where he stayed for most of the remainder of his life. There he attracted a number of students. His inner most circle included Porphyry, Gentilianus Amelius of Tuscany, the Senator Castricius Firmus, and Eustochius of Alexandria, a doctor who devoted himself to learning from Plotinus and attended to him, until his death. Other students included: Zethos, an Arab by ancestry, who died before Plotinus, leaving him a legacy and some land; Zoticus, a critic and poet; Paulinus, a doctor of Scythopolis; and Serapion from Alexandria. He had students amongst the Roman Senate besides Castricius, such as Marcellus Orontius, Sabinillus, and Rogantianus. Women were also numbered amongst his students, including Gemina, in whose house he lived during his residence in Rome, and her daughter, also Gemina; and Amphiclea, the wife of Ariston the son of Iamblichus. Finally, Plotinus was a correspondent of the philosopher, Cassius Longinus.

Later life

While in Rome, Plotinus also gained the respect of the Emperor Gallienus and his wife, Salonica. At one point, Plotinus attempted to interest Gallienus in rebuilding an abandoned settlement in Campania, known as the 'City of Philosophers', where the inhabitants would live under the constitution set out in Plato's *Laws*. An Imperial subsidy was never granted, for reasons unknown to Porphyry, who reports the incident.

Porphyry subsequently went to live in Sicily, where word reached him, that his former teacher had died. The philosopher spent his final days in seclusion on an estate in Campania, which his friend Zethos, had bequeathed him. According to the account of Eustochius, who attended him at the end, Plotinus' final words were: "Strive to give back the Divine in yourselves to the Divine in the All." Eustochius records, that a snake crept under the bed where Plotinus lay, and slipped away through a hole in the wall; at the same moment the philosopher died.

Plotinus wrote the essays that became the *Enneads* over a period of several years, from ca. 253 until a few months before his death, seventeen years later. Porphyry makes note that the *Enneads*, before being compiled and arranged by himself, were merely the enormous collection of notes and essays, which Plotinus used in his lectures and debates, rather than a formal book. Plotinus was unable to revise his own work, due to his poor eyesight, yet his writings required extensive editing, according to Porphyry: his master's handwriting was atrocious, he did not properly separate his words, and he cared little for niceties of spelling. Plotinus intensely disliked the editorial process, and turned the task to Porphyry, who not only polished them, but put them into the arrangement we now have.

Plotinus' theory

The One

Plotinus taught that there is a supreme, totally transcendent “One,” containing no division, multiplicity, or distinction; likewise, it is beyond all categories of being and non-being. The concept of “being” is derived by us from the objects of human experience, and is an attribute of such objects, but the infinite, transcendent One is beyond all such objects, and therefore, is beyond the concepts that we derive from them. The One, “cannot be any existing thing,” and cannot be merely the sum of all such things (compare the Stoic doctrine of disbelief in non-material existence), but “is prior to all existents.” Thus, no attributes can be assigned to the One.

For example, thought cannot be attributed to the One, because thought implies distinction between a thinker and an object of thought. Likewise, self-sentient willing cannot be ascribed to the One, however, the One is, by nature, Will, and its attribute or indefinite-dyad is the attributive nature of same, the willing (to other), the Nous or 2nd hypostases.

Plotinus implicitly denies sentience/self-aware-Being to the One [V.VI.VI], rather that the One, is a sheer Dynamis which radiates outwards as the necessary resultant of its attributive nature (i.e., that wills nature is to will). At [V.VI.IV], Plotinus compared the One to “light,” the Nous (will) to the “Sun,” and lastly, the Soul to the “Moon,” whose light is merely, a “derivative conglomeration of light from the “Sun.” As Plotinus explains in [V.VI.III] and elsewhere, it is impossible for the One to be Being or a self-sentient entity/Creationist-like God.

The One, being beyond all attributes, including being and non-being, is the source of the world, not through any act of Creation, willful or otherwise, since activity cannot be ascribed to the unchangeable, immutable One. Plotinus resorts to a logical principle that the “less perfect” must, of necessity, “emanate,” or issue forth, from the “perfect” or “more perfect.” Thus, all of “Creation” emanates from the One, in succeeding stages of lesser and lesser perfection. These stages are not temporally isolated, but occur

throughout time, as a constant process. Later, Neoplatonic philosophers, especially Iamblichus, added hundreds of intermediate beings, as emanations between the One and humanity; but, Plotinus' system was much simpler in comparison.

Emanation by the One

Plotinus offers an alternative to the Orthodox Christian notion of Creation *ex nihilo* ('out of nothing'), which would make God suffer the deliberations of a mind and actions of a will, although Plotinus never mentions Christianity in any of his works. Emanation *ex deo* ('out of God'), confirms the absolute transcendence of the One, making the unfolding of the cosmos purely a *consequence* of its existence; the One is in no way affected or diminished by these emanations. Plotinus uses the analogy of the Sun, which emanates light indiscriminately without thereby "lessening" itself, or reflection in a mirror, which in no way, diminishes or otherwise, alters the object being reflected.

The first emanation is *Nous* ('Thought'), identified with the "demiurge" in Plato's *Timaeus*. From *Nous* proceeds the "World Soul," which Plotinus subdivides into "upper" and "lower," identifying the lower aspect of Soul with Nature. From the World Soul proceed individual human souls, and finally, matter, at the lowest level of being, and thus, the least perfected level of the cosmos. Despite this relatively negative assessment of the material world, Plotinus asserted the ultimately divine nature of material Creation, since it ultimately derives from the One, through the mediums of *Nous* and the World Soul.

The essentially devotional nature of Plotinus' philosophy may be further illustrated by his concept of attaining "ecstatic" union with the One (Epistrophe, the mystical 'Oneing'). Porphyry relates that Plotinus attained such a union, several times, during the years he knew him. This may be related, of course, with "enlightenment," "liberation," and other concepts of mystical union, common to many Eastern and Western traditions. Many scholars have compared Plotinus' teachings to the Hindu school of Advaita Vedanta

(*advaita* “not two,” or “non-dual”), and of presecular Buddhism: “Gotama is a teacher of Monism (*advayavada*)” -Kathavatthu 204; also: “Gotama teaches the path to union with the One (*Ekam*)” -Itivuttaka.

Neoplatonism, was sometimes used, as a philosophical foundation for Paganism, and as a means of defending the theoretic of Paganism against Christianity. However, many Christians were also influenced by Neoplatonism, most notably St. Augustine who, though often referred to, as a “Platonist,” acquired his Platonist philosophy through the mediation of Plotinus’ teachings. Indeed, Plotinus’ philosophy still exerts influence today: in the 21st century, American philosopher, Ken Wilber has drawn heavily upon the *Enneads*, in his cosmology, reaching some metaphysical conclusions comparable to Plotinus’ own.

Many of the great Indian philosophers of great renown, such as S. Radhakrishnan, Dr. A. K. Coomara swamy and others, used the writing of Plotinus in their own texts as a superlative elaboration upon Indian Monism, specifically Upanishadic and Advaita Vedantic thought.

Philo Judaeus,

Also Philo of Alexandria (circa 20 B.C. -A.D. 50), Jewish-Hellenistic philosopher; although considered the greatest Jewish philosopher of his age, he appropriated so completely, the doctrines of Greek philosophy, that he must be considered also a Greek philosopher, who combined the elements borrowed from various sources into an original unity.

Philo was born in Alexandria, Egypt, to a wealthy, aristocratic, Jewish family and received a thorough education in the Old Testament and in Greek literature and philosophy. He had an intimate knowledge of the works of Homer and of the Greek

tragedians, but his chief studies were in Greek philosophy, especially the teachings of the Pythagoreans, Plato, and the Stoics.

To Philo, the divinity of the Jewish law, was the basis and test, of all true philosophy. He maintained, that the greater part of the Pentateuch, in both its historical and legal portions, could be explained allegorically, and that its deepest and truest significance is to be found through such interpretation. He conceived of God, as a being without attributes better than virtue and knowledge, better than the beautiful and the good, a being so exalted above the world, that an intermediate class of beings is required to establish a point of contact between him and the world. These beings he found in the Spiritual world of ideas - not merely ideas in the Platonic sense, but real, active powers, surrounding God, as a number of attendant beings. All these intermediate powers are known as the Logos, the divine image in which persons are Created, and through which they participate in the deity. An individual's duties consist of veneration of God and love and righteousness toward others. Humans are immortal, by reason of their heavenly nature, but just as degrees in this divine nature exist, degrees of immortality also exist. Mere living after death, common to all humanity, differs from the future existence of the perfect souls, for whom, paradise is Oneness with God.

Many of the numerous extant works of Philo are concerned with the exposition and allegorical interpretation of Genesis and with the exposition of the Law of Moses for Gentiles. His other writings include biographies of Biblical characters and a series of works on the Ten Commandments.

Funk & Wagnalls Encyl.

1995

After the student has researched the previous documentations in this lesson, let us now quote from other reliable sources:

“Ptolemy carried out the ideal of Aristotle that influenced the court of Philip of Macedon. The library of Alexandria drew a vast number of students. Alexandria was a great factory and exchange of religious ideas. The library represented the Aristotelian, the Hellenic, and Macedon element. In Alexandria, three types of mind and Spirit met, the criticism of the Aryan Greek, the Monotheism of the Jew, the ancient cultic mysteries of Greece. These three were the permanent elements of the Alexandrian blend.” (page 384)

The Outline of History

H. G. Wells

“The teaching was that of Jupiter, Zeus, Ammon, Bel-Marduk, Assur, Dagon, Osiris, Apis, Serapis, were the same god, in different aspects. This fusing of one god with another is called, theocrasia, and it was greatly practiced in Alexandria.”

“Only two peoples resisted it, the Jews, who already had the one God of Heaven and Earth, Jehovah, and the Persians, who had a Monotheistic sun worship.” (page 385)

The Outline of History

H. G. Wells

“It was Ptolemy I, who set up the museum in Alexandria, and the Serapeum, devoted to the worship of a Trinity of gods, which represented the result of a process of theocrasia, applied more particularly to the gods of Greece and Egypt.”

“This Trinity consisted of the god, Serapis, the goddess Isis, and the child-god, Horus. In one way or another almost every other god was identified with one or another of these three aspects of the one god, even the sun god, Mithras of the Persians, and they were each other; they were three, but they were also one.” (pages 385-386)

The Outline of History

H. G. Wells

“Christianity has worn, and still in many countries, wears to this day, were certainly woven in the cult and temples of Jupiter-Serapis, and Isis, that spread now, from Alexandria throughout the civilized world in the age of theocrasia in the second and first centuries, before Christ.”

(page 387)

The Outline of History

H. G. Wells

“The Jew would have none other gods, but the One True God. In Rome, as in Jerusalem, the Jew stood out against the worship of the god-Caesar.” (page 527)

The Outline of History

H. G. Wells

“St. Paul studied under Jewish teachers and was well versed in the Hellenic theologies of Alexandria, and his language was Greek.” (page 541)

“He was acquainted with the jargon of the Hellenistic schools and that by Stoicism. St. Paul taught at Jerusalem, Antioch, Athens, Corinth, Ephesus, and Rome.” (page 543)

The Outline of History

H. G. Wells

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Let the student please note, that St. Paul never studied at the Library in Alexandria, Egypt. He studied under the teachings of Gamaliel. We have no record, in the Bible, where St. Paul ever went to Alexandria in his missionary travels. His doctrine was the doctrine of the Apostles, the Acts 2:38 doctrine, given by St. Peter on the Day of Pentecost. The only Trinity Paul ever knew, at that time, was the Trinity of gods, which emanated from Alexandria.

St. Paul gave warnings of these false teachers from Alexandria, in Colossians 2:8-9. “Beware, lest any man spoil you through philosophy and vain deceit, after the tradition of men, after the rudiments of the world, and not after Christ. For, in Him, dwelleth all the fulness of the Godhead bodily.”

Paul warned the Church at Colosse about the philosophy of men, that was rampant throughout the Roman Empire. He came face to face with Grecian philosophy at Athens. The people of Athens rejected his Acts 2:38 doctrine and his One God message.

“Paul failed at Athens, the Greeks only wanted to play with ideas and thoughts. They rejected the truth of Jesus Christ.”

The Story of The Church

Walter Russell Bowie

Abington Press, N.Y.

“Early Christianity acquired a theology in the hand of St. Paul.”

The Outline of History

H. G. Wells

St. Paul’s doctrine was rejected and he was put to death, around 45 A.D., during the Herodian persecution.

“Much of the history of the Christians, in the first two centuries, is very obscure. They spread far and wide throughout the world. They had no settled creeds.”

The Outline of History

H. G. Wells

“To bow before the statue of the Emperor was like saluting the flag. The early Christians of Rome would not go to the amphitheaters and watch sports, would not burn incense before the statue, would not worship in Roman Temples. They met from house

to house and had their secret meals they called, communion. They despised the gods and were called atheists.”

The Story of the Church

Walter Russell Bowie

Abington Press, N. Y.

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St. Paul's doctrine was rejected and he was killed by the Romans. The true Christians of Christ were slaughtered, by the thousands, as history records. St. Peter was never in Rome and history seems to agree, that he died upside down in Babylon (Iraq).

The other Apostles of Christ suffered death in many horrible ways. The Apostolic Church went underground, and many fled to other countries such as England, Germany, Spain, India, Persia, Russia, etc.

Titus, the Roman general, destroyed Jerusalem in 70 A.D., and put an end to Jewish worship in the Temple.

St. John was the last living Apostle and was banished to the Isle of Patmos in the Aegean Sea around 95 A.D. His Acts 2:38 doctrine was not accepted by Rome. Caesar worship was now the norm of the day, and Alexandria, Egypt was their educational center with Grecian philosophy and cultic religions.

The student should now note, that with Jerusalem destroyed, the Christians, killed by the thousands, many escaping to other countries, and very few were left for Rome to deal with, and deal with them they did.

The Grecian philosophy and cultic practices of Alexandria, Egypt began to take hold in the Roman Empire, on a larger scale.

“The antique Spirit before the Greek thinkers was not Science, but Mythology. The work of hard and disciplined thinking, by means of carefully analyzed words and statements, which was begun by the Greek thinkers and resumed by the scholastic philosophers in the middle ages, was a necessary preliminary to the development of modern Science.”

Page | 105

“The mind of the Hebrews concluded that salvation of man could only come through submitting ourselves to the One God of Heaven and Earth.”

“The Greeks were not prepared with the same idea of a patriarchal deity, they lived in a world, in which, there was not a God, but the gods.”

The Outline of History

H. G. Wells

“During this indefinite time, a considerable amount of a sort of theocrasia, seems to have gone on between the Christian cult and the almost equally popular and widely diffused Mithraic cult, and the cult of Serapis-Isis-Horus.”

“The contributions of the Alexandrine cult to Christian thought and practices were even more considerable.” (page 543)

The Outline of History

H. G. Wells

“Neoplatonism, Gnosticism, and Philonism abounded in the Alexandrian world. The writings of Origen, Platinus, and Augustine witness to the give and take of the time.”
(page 545)

The Outline of History

H. G. Wells

“The greatest scholars of Islam came to the Library at Alexandria, Egypt to study the six thousand-odd manuscripts, which were there, the works of Pythagoras, Heraclitus, Zeno, Plato, Aristotle, Appollonius, Porphyry, Galen, Euclid, and others. The library passed on the contents of these men to the West, which had forgotten them.” (page 195)

Alexander the Great

Jacques Benoist-Mechin

Hawthorne Books, N.Y.

1966

“The Library at Alexandria did not really contribute to the fusion of civilizations; it ensured the preponderance of the Greek genius. This was due to the fact that 99% of the works assembled, as well as the professors who lectured, were of Greek origin.”
(page 241)

Alexander the Great

Jacques Benoist-Mechin

Hawthorne Books, N.Y.

1966

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The student will find it interesting to note, that Athanasius was born in Alexandria, Egypt, studied at the Library, and was Bishop of Alexandria. Clement of Alexandria, Origen, and St. Augustine studied Plato philosophy there.

Tertullian was also familiar with Grecian philosophy and the Alexandrian Library in Egypt.

It can be documented, from several sources, that the Catholic Church and Alexandrian philosophers, during this time period, began to alter the Scriptures, from the Apostles, to produce a Bible to be used throughout the Roman Empire. They rejected the Syrian family of manuscripts, which originated at Antioch.

Not only did the Alexandrian philosophers alter the Scriptures, they also began to change the Apostolic doctrines and theology, that St. Paul had preached.

“Origen obtained copies of the writings of the Apostles and began to correct the passages he disagreed with. This was done while at Alexandria, Egypt.” (page 12)

The Monarch of the Books

Dr. Peter Ruckman

Baptist Bible Bookstore

Pensacola, Fla. 1980

“The first real Bible critic and commentator, was Origen, he produced the HEXAPLA.”

The Monarch of the Books

Dr. Peter Ruckman

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“The Roman Catholic Church and the scribes in Rome, mishandled the Textus Receptus from Antioch, when they got their hands on it. Exactly as Rome has added tradition and the “Church Councils” to the Bible as authorities sources of revelation, so many of the Western Bible translators, added to the Scripture where they felt like it.”
(page 15)

The Monarch of the Books

Dr. Peter Ruckman

“The Catholic Church tampered with the Scriptures at Alexandria, Egypt which was founded by heathen philosophers.”

“The Alexandrian texts (Hesychain) was used for the New ASV and the New RSV. Constantine ordered his Bibles from Eusebius. This text was used by Jerome, to translate the so-called Vulgate.” (page 7)

The Monarch of the Books

Dr. Peter Ruckman

The student will note that the philosophers of Alexandria would not accept the Acts 2:38 doctrine and teaching of Monotheism of the Apostles. There were many ideas and different views concerning the nature of God throughout the Empire. Rome was being pressed by the Barbarians from the North, the Empire was divided over theology, and Constantine sought to unite the Empire before it fell apart completely. In order to do this, he felt he needed the support, also, of those who disagreed with the school of Alexandria.

The real Christians of Acts 2:38 would not be of use to him, the ones that were left were called atheists or branded with other slanderous names.

In 325 A.D., Constantine called for the meeting of Nicaea. It was here, at Nicaea, that the Acts 2:38 doctrine of the Apostles of Christ was rejected, and the Trinity was presented for the first time.

Athanasius and Tertullian were the main founders of this Grecian cultic term. The Trinity doctrine was rejected by many, at Nicaea, and throughout the Empire. Let the following documentation be presented on this subject:

“There is no clear evidence that the Apostles of Jesus entertained the doctrine of the Trinity.”

(page 530)

The Outline of History

H. G. Wells

“Jesus did not say a word about the worship of His mother. Was Jesus God? Had God Created Him? Was He identical with God or separate from God?”

“The Christians argued with one another about the nature of God. The chief views are those of the Arians, Sebellians, and the Trinitarians.”

“The Arians followed Arius, who taught that Christ was less than God; the Sabellians taught that He was a mode or aspect of God - God was Creator, Saviour, and Comforter, just as one man may be father, trustee, and guest, the Trinitarians of whom, Athanasius was the great leader, taught that the Father, the Son, and The Holy Ghost were three distinct persons, but One God. One can read the Athanasian Creed for the exact expression of the Trinity mystery.”

(page 545)

The Outline of History

H. G. Wells

“The Trinity is a disastrous ebullition of the human mind, entirely inconsistent with the plain account of Jesus preserved for us in the Gospels. Of these, it is chiefly the Trinitarian documents that survive.”

“Most of the barbarian invaders of the Roman Empire were Arians, probably because their simple minds found the Trinitarian position incomprehensible.” (page 546)

“The history of the Christian body in the fourth and fifth centuries is largely a record of these unhappy disputes, that must not blind us to the fact, that the Spirit of Jesus did live and enable many lives, among the Christians. The text of the Gospels was tampered with during this period, yet not destroyed.” (page 546)

The Outline of History

H. G. Wells

“The philosophers, who now assumed the unworthy office of directing the blind zeal of persecution, had diligently studied the nature and genius of the Christian religion; and as they were not ignorant that the doctrines of the faith were supposed to be contained

in the writings of the prophets, of the evangelists, and of the Apostles, and presbyters should deliver all their Sacred Books into the hands of the magistrates, who were commanded under severest penalties, to burn them in public and solemn manner.”

The Outline of History

H. G. Wells

The student should note, that under Diocletian and Galerius, Christians were killed, houses and Churches were burned, along with their Scriptures. The Catholic Church tried to burn all the copies of the Holy Writ, the Apostles of Christ, had produced. They only wanted the world to have the altered Scriptures, they produced, from Alexandria, Egypt.

“They sought to abolish the worship and government of the Christians and persecute all who should still reject the religion of nature, of Rome, and of their ancestors.”

“There was a hunt for the Holy Writ, and systematic destruction of Christian Churches.”

“The views that prevailed, at Nicaea, are embodied in the Nicene Creed, a strictly Trinitarian statement, and Constantine sustained the Trinitarian position.” (page 552)

“Nicaea handed the world the exact definition of Christian teaching by the Nicene Creed. There were profound differences between the fully developed Christianity of Nicaea and the teaching of Jesus.” (page 552)

“Christianity had taken on an extraordinary outward resemblance to the cults of Serapis, Ammon, or Bel-Marduk.” (page 553)

“Christianity was changed, from simple preaching and faith in God, to priestly religion of ritual sacrifices, a High Priest. A type already familiar to the world for thousands of years.”

“Constantine played a great role in the fixation of Christianity. The Councils of Nicaea, Constantinople, Ephesus, and Chalcedon were called together by imperial power.”

“The Christianity, at this time, manifested the Spirit of Constantine, more than the Spirit of Jesus.” (page 553)

The Outline of History

H. G. Wells

The student of Advanced Philosophy should now see that Christianity, at this time, (post-Apostolic), became what Constantine and the Councils determined it to be, and it was stamped as, “Christian Catholicism,” and forced upon the world, as Apostolic. This type of Christianity (Catholicism) was spread to other countries, and is seen in many Churches across America today.

Conclusion

This lesson on Advanced Philosophy is not an in-depth study, by all means, I have barely scratched the surface, to show that the cults and mysteries of ancient Greece were planted by Alexander the Great, in Alexandria, Egypt.

Athanasius, a student of Alexandria, steeped in Grecian philosophy and cultic religions, presented the doctrine of the Trinity, at Nicaea.

It was accepted by Constantine and he tried to force it upon his empire and the rest of the world, as Apostolic Christianity.

The student is left to search the Scriptures for truth, in regard to Jesus Christ, and the Gospel preached and taught by the Apostles of Christ and the Apostle Paul.

D. R. Vestal, Ph. D.

President

The following pages are additional notes for the student to study to see how this Grecian philosophy spread into the Western world.

Greek Philosophy,

The body of philosophical concepts developed by the Greeks, particularly during the flowering of Greek civilization between 600 and 200 B.C. Greek philosophy formed the basis of all later philosophical speculation in the Western world. The intuitive hypotheses of the ancient Greeks foreshadowed many theories of modern science, and many of the moral ideas of Pagan Greek philosophers, have been incorporated into Christian moral doctrine. The political ideas, set forth by Greek thinkers, influenced political leaders as different as the framers of the U.S. Constitution and the founders of various 20th-century totalitarian states.

The Ionian School

Greek philosophy may be divided between those philosophers who sought an explanation of the world in physical terms and those who stressed the importance of non-material forms or ideas. The first important school of Greek philosophy, the Ionian or Milesian, was largely materialistic. Founded by Thales of Miletus in the 6th century B.C., it began with Thales' belief, that water is the basic substance out of which, all matter is created. A more elaborate view was offered by Anaximander, who held, that the raw material of all matter is an eternal substance, that changes into the commonly experienced forms of matter. These forms, in turn, change and merge into one another, according to the rule of justice, that is, balance and proportion. Heraclitus taught, that fire is the primordial source of matter, but he believed that the entire world is in a constant state of change or flux, and that most objects and substances are produced by a union of opposite principles. He regarded the soul, for example, as a mixture of fire and water. The concept of *nous* ("mind"), an infinite and unchanging substance that enters into and controls every living object, was developed by Anaxagoras, who also believed, that matter consisted of infinitesimally small particles, or atoms. He epitomized the philosophy of the Ionian school, by suggesting a non-physical governing principle and a materialistic basis of existence.

Pythagoras, the Eleatic School, and the Sophists

The division between idealism and materialism became more distinct. Pythagoras stressed the importance of form, rather than matter in explaining material structure. The Pythagorean school also laid great stress on the importance of the soul, regarding the body only, as the soul's "tomb." According to Parmenides, the leader of the Eleatic school, the appearance of movement and the existence of separate objects in the world are mere illusions; they only seem to exist. The beliefs of Pythagoras and Parmenides formed the basis of the idealism that was to characterize later Greek philosophy.

A more materialistic interpretation was made by Empedocles, who accepted the belief that reality is eternal, but declared that it is composed of chance combinations of the four primal substances: fire, air, earth, and water. Such materialistic explanations reached their climax in the doctrines of Democritus, who believed that the various forms of matter are caused by differences in the shape, size, position, and arrangement of component atoms. Materialism applied to daily life inspired the philosophy of a group, known as the Sophists, who were active in the 5th century B.C. With their stress on the importance of human perception, such Sophists, as Protagoras, doubted that humanity would ever be able to reach objective truth through reason and taught that material success, rather than truth, should be the purpose of life.

Socrates

In contrast were the ideas of Socrates, with whom Greek philosophy attained its highest level. His avowed purpose was “to fulfill the philosopher’s mission of searching into myself and other men.” After a proposition had been stated, the philosopher asked a series of questions, designed to test and refine the proposition by examining its consequences and discovering whether it was consistent with the known facts. Socrates described the soul, not in terms of mysticism, but as “that in virtue of which we are called wise or foolish, good, or bad.” In other words, Socrates considered the soul, a combination of an individual’s intelligence and character.

Plato and Aristotle

The idealism of Socrates was organized, by Plato, into a systematic philosophy. In his theory of Ideas, Plato regarded the objects of the real world, as being merely, shadows of eternal Forms or Ideas. Only these changeless, eternal Forms can be the object of true knowledge; the perception of their shadows, that is, the real world as heard, seen, and felt, is merely, opinion. The goal of the philosopher, he said, is to know the eternal Forms and to instruct others, in that knowledge.

Plato's theory of knowledge is implicit in his theory of Ideas. He argued, that both the material objects perceived and the individual perceiving them, are constantly changing; but, since knowledge must be concerned, only, with unchangeable and universal objects, knowledge, and perception are fundamentally different.

In place of Plato's doctrine of Ideas with a separate and eternal existence of their own, Aristotle proposed a group of universals, that represent the common properties of any group of real objects. The universals, unlike Plato's Ideas, have no existence outside of the objects they represent. Closer to Plato's thought, was Aristotle's definition of *form*, as a distinguishing property of objects, but with an independent existence, apart from the objects in which it is found. Describing the material universe, Aristotle stated, it consists of the four elements, fire, air, earth, and water, plus a fifth element, that exists everywhere and is the sole constituent of the heavenly bodies "above" the moon.

In the writings of Plato and Aristotle, the dominant strains of idealism and materialism, in Greek philosophy, reached, respectively, their highest expression, producing a body of thought that continues to influence philosophical inquiry. Subsequent Greek philosophy, reflecting a historical period of civil unrest and individual insecurity, was less concerned with the nature of the world, than with the problems in the individual. During this period, four major schools of largely materialistic, individualistic philosophy arose: that of the Cynics, and those espousing Epicureanism, Skepticism, and Stoicism.

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Philosophy, Western

(Greek *philosophia*, “love of wisdom”), the rational and critical inquiry into basic principles. Philosophy, is often divided into four main branches: metaphysics, the investigation of ultimate reality; epistemology, the study of the origins, validity, and limits of knowledge; ethics, the study of the nature of morality and judgment; and aesthetics, the study of the nature of beauty in the fine arts. The two distinctively philosophical types of inquiry are *analytic* philosophy, which is the logical study of concepts, and *synthetic* philosophy, which is the arrangement of concepts into a unified system.

As used originally by the ancient Greeks, the term, *philosophy* meant the pursuit of knowledge for its own sake. Philosophy comprised all areas of speculative thought and included the arts, sciences, and religion. As special methods and principles were developed in the various areas of knowledge, each area acquired its own philosophical aspect, giving rise to the philosophy of art, of science, and of religion. The term, *philosophy*, is often used popularly, to mean a set of basic values and attitudes toward life, nature, and society - thus, the phrase, “philosophy of life.” Because the lines of distinction between the various areas of knowledge are flexible and subject to change, the definition of the term, *philosophy* remains a subject of controversy.

Western philosophy, from Greek antiquity to modern times, is surveyed in the remainder of this course.

Greek Philosophy

Western philosophy, is considered generally, to have begun in ancient Greece, as speculation about the underlying nature of the physical world. In its earliest form, it was indistinguishable from natural science. The writings of the earliest philosophers no longer exist, except for a few fragments cited by Aristotle and by other writers of later times.

The Ionian School

The first philosopher of historical record was Thales of the city of Miletus, on the Ionian coast of Asia Minor, who practiced about 580 B.C. Thales, who was revered by later generations, as one of the Seven Wise Men of Greece, was interested in astronomical, physical, and meteorological phenomena, and his scientific investigations led him to speculate, that all natural phenomena are different forms of one fundamental substance, which he believed to be water, because he thought evaporation and condensation to be universal processes. Anaximander, a disciple of Thales, maintained, that the first principle from which all things evolve, is an intangible, invisible, infinite substance that he called, *apeiron*, "the boundless." He realized, however, that no observable substance could be found in all things; thus, his notion of the boundless, anticipated the modern notion of an unbounded universe. This substance, he maintained, is eternal and indestructible. Out of its ceaseless motion, the more familiar substances, such as warmth, cold, earth, air, and fire, continuously evolve, generating, in turn, the various objects and organisms that make up the recognizable world.

The third great Ionian philosopher, Anaximenes, returned to Thales' assumption, that the primary substance is something familiar and material, but he claimed it to be air, rather than water. He believed, that the changes things undergo could be explained in terms of rarefaction and condensation of air. Thus, Anaximenes was the first philosopher to explain qualitative differences, in terms of quantitative differences, a method fundamental to physical science.

In general, the Ionian school made the initial radical step from mythological to scientific explanation of natural phenomena; it discovered the important scientific principles of the permanence of substance, the natural evolution of the world, and the reduction of quality to quantity.

The Pythagorean School

About 530 B.C., the philosopher, Pythagoras founded at Croton, in southern Italy, a school of philosophy that was more religious and mystical than the Ionian school. It fused the ancient mythological view of the world with the developing interest in scientific explanation. The system of philosophy that became known as, Pythagoreanism combined ethical, supernatural, and mathematical beliefs into a Spiritualistic view of life. The Pythagoreans taught and practiced a way of life based on the belief, that the soul is a prisoner of the body, is released from the body at death, and reincarnated in a higher or lower form of life, depending on the degree of virtue achieved. The highest purpose of humans should be to purify their souls, by cultivating intellectual virtues, refraining from sensual pleasures, and practicing various religious rituals. The Pythagoreans, having discovered the mathematical laws of musical pitch, inferred that planetary motions produce a “music of the spheres,” and developed a “therapy through music” to bring humanity in harmony with the celestial spheres. They identified science with mathematics, maintaining that all things are made up of numbers and geometrical figures. They made important contributions to mathematics, musical theory, and astronomy.

The Heraclitean School

Heraclitus of Ephesus, continuing the search of the Ionians for a primary substance, claimed it to be fire. He noticed that heat produces changes in matter, and thus, anticipated the modern theory of energy. Heraclitus maintained, that all things are in a state of continuous flux, that stability is an illusion, and that only change and the law of change, or Logos, are real. The Logos doctrine of Heraclitus, which identified the laws of nature with a divine mind, developed into the pantheistic theology of Stoicism.

The Eleatic School

In the 5th century B.C., Parmenides founded a school of philosophy at Elea, a Greek colony on the Italian peninsula. Parmenides took a position opposite from that of Heraclitus on the relation between stability and change, maintaining that the universe, or the state of being, is an indivisible, unchanging, spherical entity and that all reference to change or diversity, is self-contradictory. Nothing, he claimed, can be truly asserted except that "being is." Zeno of Elea, a disciple of Parmenides, tried to prove the unity of being, by arguing that the belief in the reality of change, diversity, and motion leads to logical paradoxes. The paradoxes of Zeno became famous intellectual puzzles, that philosophers and logicians of all subsequent ages, have tried to solve. The concern of the Eleatics with the problem of logical consistency, laid the basis for the development of the science of logic.

The Pluralists

The speculation about the physical world begun by the Ionians was continued in the 5th century B.C., by Empedocles and Anaxagoras, who developed a philosophy replacing the Ionian assumption of a single primary substance with an assumption of a plurality of such substances. Empedocles maintained, that all things are composed of four irreducible elements: air, water, earth, and fire, which are alternately combined and separated by two opposite forces, love and strife. By that process, the world evolves from chaos to form and back to chaos again, in an eternal cycle. Empedocles regarded the eternal cycle, as the proper object of religious worship and criticized the popular belief in personal deities, but he failed to explain the way in which the familiar objects of experience could develop out of elements that are totally different from them. Anaxagoras, therefore, suggested that all things are composed of very small particles, or "seeds," which exist in infinite variety. To explain the way in which these particles combine to form the objects that constitute the familiar world, Anaxagoras developed a theory of cosmic evolution. He maintained, that the active principle of this evolutionary process is a world mind that separates and combines the particles. His concept of elemental particles led to the development of an atomic theory of matter.

The Atomists

It was a natural step from pluralism to atomism, the theory that all matter is composed of tiny, indivisible particles differing only, in simple physical properties such as size, shape, and weight. This step was taken in the 4th century B.C., by Leucippus and his more famous associate, Democritus, who is generally credited, with the first systematic formulation of an atomic theory of matter. His conception of nature was thoroughly materialistic, explaining all natural phenomena in terms of the number, shape, and size of atoms. He thus, reduced the sensory qualities of things, such as warmth, cold, taste, and odor, to quantitative differences among atoms. The higher forms of existence, such as plant and animal life and even human thought, were explained by Democritus in these purely physical terms. He applied his theory to psychology, physiology, theory of knowledge, ethics, and politics, thus presenting the first comprehensive statement of deterministic materialism, in which, all aspects of existence are claimed to be rigidly determined, by physical laws.

The Sophists

Toward the end of the 5th century B.C., a group of traveling teachers called, Sophists became famous throughout Greece. The Sophists played an important role in developing the Greek city-states from agrarian monarchies into commercial democracies. As Greek industry and commerce expanded, a class of newly rich, economically powerful merchants began to wield political power. Lacking the education of the aristocrats, they sought to prepare themselves for politics and commerce, by paying the Sophists for instruction in public speaking, legal argument, and general culture. Although the best of the Sophists made valuable contributions to Greek thought, the group, as a whole, acquired a reputation for deceit, insincerity, and demagoguery. Thus, the word, *sophistry* has come to signify these moral faults. The

famous maxim of Protagoras, one of the leading Sophists, that “man is the measure of all things,” is typical of the philosophical attitude of the Sophist school. Sophists held, that individuals have the right to judge all matters for themselves. They denied the existence of an objective knowledge, that everyone can be expected to believe, asserted that natural science and theology are of little or no value, because they have no impact on daily life, and declared that ethical rules need be followed, only when it is to one’s practical advantage to do so.

Socratic Philosophy

Perhaps the greatest philosophical personality in history was Socrates. Born in 469 B.C., Socrates maintained a philosophical dialogue with his students until he was condemned to death and took his own life in 399 B.C. Unlike the Sophists, Socrates refused to accept payment for his teachings, maintaining that he had no positive knowledge to offer, except the awareness of the need for more knowledge. Socrates left no writings, as records of his thought, but his teachings were preserved for later generations in the dialogues of his famous pupil, Plato. Socrates taught that every person has full knowledge of ultimate truth contained within the soul and needs only to be spurred to conscious reflection in order to become aware of it. In Plato’s dialogue, *Meno*, for example, Socrates guides an untutored slave to the formulation of the Pythagorean theorem, thus demonstrating that such knowledge is innate in the soul, rather than learned from experience. The philosopher’s task, Socrates believed, was to provoke people into thinking for themselves, rather than to teach them anything they did not already know. His contribution to the history of thought was not a systematic doctrine, but a method of thinking and a way of life. He stressed the need for analytical examination of the grounds of one’s beliefs, for clear definitions of basic concepts, and a rational and critical approach to ethical problems.

Platonic Philosophy

Plato was a more systematic and positive thinker than Socrates, but his writings, particularly the earlier dialogues, can be regarded, as a continuation and elaboration of Socratic insights. Like Socrates, Plato regarded ethics, as the highest branch of knowledge; he stressed the intellectual basis of virtue, identifying virtue with wisdom. This view led to the so-called, *Socratic paradox* that, as Socrates asserts in the *Protagoras*, “no man does evil voluntarily.” Aristotle later noticed that such a conclusion allows no place for moral responsibility. Plato also explored the fundamental problems of natural science, political theory, metaphysics, theology, and theory of knowledge, and developed ideas that became permanent elements in Western thought.

The basis of Plato’s philosophy is his theory of *Ideas*, or doctrine of *Forms*. The theory of Ideas, which is expressed in many of his dialogues, particularly the *Republic*, and the *Parmenides*, divides existence into two realms, an “intelligible realm” of perfect, eternal, and invisible Ideas, or Forms, and a “sensible realm” of concrete, familiar objects. Trees, stones, human bodies, and other objects that can be known through the senses are for Plato unreal, shadowy, and imperfect copies of the Ideas. He was led to this, apparently bizarre conclusion, by his high standard of knowledge, which, required that all genuine objects of knowledge be described without contradiction. Because all objects, perceived by the senses undergo change, an assertion made about such objects, at one time, will not be true at a later time. According to Plato, these objects are not completely real. Beliefs derived from experience of such objects, are therefore, vague and unreliable, whereas, the principles of mathematics and philosophy, discovered by inner meditation on the Ideas, constitute the only knowledge worthy of the name. In the *Republic*, Plato described humanity, as imprisoned in a cave and mistaking shadows on the wall for reality; he regarded the philosopher, as the person who penetrates the world outside the cave of ignorance and achieves a vision of the true reality, the realm of Ideas. Plato’s concept of the Absolute Idea of the Good, which is the highest Form and includes all others, has been a main source of pantheistic and mystical religious doctrines in Western culture.

Plato's theory of Ideas and his rationalistic view of knowledge formed the foundation for his ethical and social idealism. The realm of eternal Ideas provides the standards or ideals, according to which, all objects and actions should be judged. The philosophical person, who refrains from sensual pleasures and searches instead, for knowledge of abstract principles, finds in these ideals, the modes for personal behavior and social institutions. Personal virtue, consists in a harmonious relation, among the faculties of the soul. Social justice, consists in harmony, among the classes of society. The ideal state of a sound mind, in a sound body, requires that the intellect control the desires and passions, as the ideal state of society requires that the wisest individuals rule the pleasure-seeking masses. Truth, beauty, and justice coincide in the Idea of the Good, according to Plato; therefore, art that expresses moral values, is the best art. In his rather conservative social program, Plato supported the censorship of art, regarding art, as an instrument for the moral education of youth.

Aristotelian Philosophy

Aristotle, who began study at Plato's academy at age 17, in 367 B.C., was the most illustrious pupil of Plato, and ranks with his teacher, among the most profound and influential thinkers of the Western world. After studying for many years at Plato's Academy, Aristotle became the tutor of Alexander the Great. He later returned to Athens to found the Lyceum, a school that, like Plato's Academy, remained for centuries as one of the great centers of learning in Greece. In his lectures at the Lyceum, Aristotle defined the basic concepts and principles of many of the theoretical sciences, such as logic, biology, physics, and psychology. In founding the science of logic, he developed the theory of deductive inference, represented by the syllogism (a deductive argument, having two premises and a conclusion), and a set of rules for scientific method.

In his metaphysical theory, Aristotle criticized Plato's separation of form, from matter, and maintained, that the Forms, or essences, are contained within the concrete objects

that exemplify them. Everything real, for Aristotle, is a combination of potentiality and actuality; in other words, everything is a combination of that which a thing may be, but is not yet, and that which it already is (also distinguished, as matter and form), because all things change and become other than they were, except the human and divine active intellects, which are pure forms.

Nature, for Aristotle, is an organic system of things, whose common forms make it possible to arrange them into classes, comprising species and genera, each species having a form, purpose, and mode of development in terms of which, it can be defined. The aim of theoretical science is to define the essential forms, purposes, and modes of development of all species and to arrange them in their natural order, in accordance with their complexities of form, the main levels being the inanimate, the vegetative, the animal, and the rational. The soul, for Aristotle, is the form, or actuality, of the body, and humans, whose rational soul is a higher form than the souls of other terrestrial species, are the highest species of perishable things. The heavenly bodies, composed of an imperishable substance, or ether, and moved eternally in perfect circular motion by God, are still higher in the order of nature. This hierarchical classification of nature was adopted by many Christian, Jewish, and Muslim theologians, in the Middle Ages, as a view of nature consistent with their religious beliefs.

Aristotle's political and ethical philosophy similarly developed out of a critical examination of Platonic principles. The standards of personal and social behavior, according to Aristotle, must be found in the scientific study of the natural tendencies of individuals and societies, rather than in a heavenly realm of pure forms. Less insistent, therefore, than Plato on a rigorous conformity to absolute principles, Aristotle regarded ethical rules, as practical guides to a happy and well-rounded life. His emphasis on happiness, as the active fulfillment of natural capacities, expressed the attitude toward life, held by cultivated Greeks of his time. In political theory, Aristotle took a more realistic position than Plato. He agreed, that a monarchy ruled by a wise king, would be the ideal political structure, but recognized that societies differ in their needs and traditions and believed that a limited democracy is usually the best compromise. In his

theory of knowledge, Aristotle rejected the Platonic doctrine, that knowledge is innate and insisted that it can be acquired, only by generalization from experience. He interpreted art, as a means of pleasure and intellectual enlightenment, rather than an instrument of moral education. His analysis of Greek tragedy has served as a model of literary criticism.

Hellenistic and Roman Philosophy

From the 4th century B.C., to the rise of Christian philosophy in the 4th century A.D., Epicureanism, Stoicism, Skepticism, and Neoplatonism were the main philosophical schools in the Western world. Interest in natural science declined steadily, during this period, and these schools were concerned mainly, with ethics and religion.

Epicureanism

In 306 B.C., Epicurus founded a philosophical school in Athens. Because his followers met in the garden of his home, they became known as, “philosophers of the garden.” Epicurus adopted the atomistic physics of Democritus, but made several important changes. In place of the random motion of the atoms, in all directions, he assumed, for simplicity of explanation, that a uniform motion downward occurred. He also allowed an element of chance, in the physical world, by assuming that the atoms sometimes swerve in unpredictable ways, thus providing a physical basis for a belief in free will. He maintained, that natural science is important, only if it can be applied, in making practical decisions and in allaying fear of the gods or of death. The aim of human life, he claimed, is to achieve the maximum amount of pleasure, which he identified with gentle motion and the absence of pain. The teachings of Epicurus are preserved mainly, in the philosophical poem, *On the Nature of Things*, by the Roman poet, Lucretius, who contributed greatly to the popularity of Epicureanism in Rome.

Stoicism

The Stoic school, founded in Athens about 310 B.C., by Zeno of Citium, developed out of the earlier movement of the Cynics, who rejected social institutions and material values. Stoicism became the most influential school of the Greco-Roman world, producing such remarkable writers and personalities as the Greek slave and later Roman philosopher, Epictetus and the Roman emperor, Marcus Aurelius, who was noted for his wisdom and his nobility of character. The Stoics taught, that one can achieve freedom and tranquility, only by becoming insensitive to material comforts and external fortune and by dedicating oneself to a life of reason and virtue. Holding a somewhat materialistic conception of nature, they followed Heraclitus, in believing the primary substance to be fire and in worshiping the Logos, which they identified with the energy, law, reason, and providence, found throughout nature. Human reason was also considered part of the divine Logos, and therefore, immortal. The Stoic doctrine, that each person is part of God and that all people form a universal family, helped to break down national, social, and racial barriers and to prepare the way for the spread of a universal religion. The Stoic doctrine of natural law, which makes human nature the standard for evaluating laws and social institutions, had an important influence on Roman, and later, Western law.

Skepticism

The school of Skepticism, which continued the Sophist criticisms of objective knowledge, dominated the Platonic Academy in the 3rd century B.C. The Sceptics discovered, as had Zeno of Elea, that logic is a powerful critical device, capable of destroying any positive philosophical view, and they used it skillfully. Their fundamental assumption was that, humanity cannot attain knowledge or wisdom concerning reality, and that the way to happiness, therefore, lies in a complete suspension of judgment. As an extreme example of this attitude, it is said, that Pyrrho, one of the most noted skeptics, refused to change direction, when approaching a cliff and had to be diverted

by his students. Carneades maintained, that beliefs acquired inductively from experience, can be probable, but never certain.

Neoplatonism

The Jewish-Hellenistic philosopher, Philo Judaeus combined Greek philosophy, particularly Platonic and Pythagorean ideas, with Judaic religion, in a comprehensive system, that anticipated Neoplatonism and Jewish, Christian, and Muslim Mysticism. Philo insisted on the transcendent nature of God, as surpassing human understanding, and therefore, indescribable; he described the natural world, as a series of stages of descent from God, terminating in matter, as the source of evil. He advocated a religious state, or theocracy, and was one of the first to interpret the Old Testament for the Gentiles. Judaeus died around A.D. 50.

Neoplatonism, one of the most influential philosophical and religious schools and an important rival of Christianity, was founded in the 3rd century A.D., by Ammonius Saccus and his more famous disciple, Plotinus. Plotinus based his ideas on the mystical and poetic writings of Plato, the Pythagoreans, and Philo. The main function of philosophy, for him, is to prepare individuals for the experience of ecstasy, in which they become one, with God. God, or the One, is beyond rational understanding and is the source of all reality. The universe emanates from the One by a mysterious process of overflowing of divine energy, in successive levels. The highest levels form a Trinity of the One; the Logos, which contains the Platonic Forms; and the World Soul, which gives rise to human souls and natural forces. The farther things emanate from the One, according to Plotinus, the more imperfect and evil they are and the closer they approach the limit of pure matter. The highest goal of life is to purify oneself of dependence on bodily comforts and, through philosophical meditation, to prepare oneself for an ecstatic reunion with the One. Neoplatonism exerted a strong influence on medieval thought.

Medieval Philosophy

During the decline of Greco-Roman civilization, Western philosophers turned their attention from the scientific investigation of nature and the search for worldly happiness, to the problem of salvation in another and better world. By the 3rd century A.D., Christianity had spread to the more educated classes of the Roman Empire. The religious teachings of the Gospels were combined by the Fathers of the Church with many of the philosophical concepts of the Greek and Roman schools.

Augustinian Philosophy

The process of reconciling the Greek emphasis on reason with the emphasis on religious emotion, in the teachings of Christ and the Apostles, found eloquent expression in the writings of Saint Augustine. He developed a system of thought that, through subsequent amendments and elaborations, eventually became the authoritative doctrine of Christianity. Largely, as a result of his influence, Christian thought was Platonic in spirit until the 13th century, when Aristotelian philosophy became dominant. Augustine argued, that religious faith and philosophical understanding are complementary, rather than opposed and that one must “believe in order to understand and understand in order to believe.” Like the Neoplatonists, he considered the soul, a higher form of existence than the body and taught, that knowledge consists in the contemplation of Platonic ideas that have been purified of both, sensation and imagery.

The Platonic philosophy was combined with the Christian concept of a personal God, who Created the world and predestined its course, and with the doctrine of the fall of humanity, requiring the divine incarnation in Christ. Augustine attempted to provide rational solutions to the problems of free-will and predestination, the existence of evil in a world Created by a perfect and all-powerful God, and the three persons in one nature attributed to God in the doctrine of the Trinity.

Saint Augustine conceived of history, as a dramatic struggle between the good in humanity, as expressed in loyalty to the “city of God,” or community of saints, and the evil in humanity, as embodied in the earthly city, with its material values. His view of human life was profoundly pessimistic, asserting that happiness is impossible in the world of the living, where even with good fortune, which is rare, awareness of approaching death would mar any tendency toward satisfaction. He believed further, that without the religious virtues of faith, hope, and charity, which require divine grace to be attained, a person cannot develop the natural virtues of courage, justice, temperance, and wisdom. His analyses of time, memory, and inner religious experience have been a source of inspiration for metaphysical and mystical thought.

The only major contribution to Western philosophy, in three centuries following the death of Augustine, was made by the 6th-century Roman statesman, Boethius, who revived interest in Greek and Roman philosophy, particularly Aristotle’s logic and metaphysics. In the 9th century, the Irish monk, John Erigena developed a pantheistic interpretation of Christianity, identifying the divine Trinity with the One, Logos, and World Soul of Neoplatonism and maintaining, that both, faith and reason, are necessary to achieve the ecstatic union with God.

Scholasticism

In the 11th century, a revival of philosophical thought began as a result of the increasing contact between different parts of the Western world and the general reawakening of cultural interests that culminated in the Renaissance. The works of Plato, Aristotle, and other Greek thinkers were translated by Arab scholars and brought to the attention of philosophers in Western Europe. Muslim, Jewish, and Christian philosophers interpreted and clarified these writings in an effort to reconcile philosophy with religious faith and to provide rational grounds for their religious beliefs. Their labors established the foundations of Scholasticism.

Scholastic thought was less interested in discovering new facts and principles than in demonstrating the truth of existing beliefs. Its method, was therefore, *dialectical*, or argumentative. Intense concern with the logic of argument led to important developments in logic, as well as theology. The 11th-century Arab physician, Avicenna united Neoplatonic and Aristotelian ideas with Muslim religious doctrine, and the Jewish poet, Solomon ben Yehuda Ibn Gabirol made a similar synthesis of Greek thought and Judaism. The ecclesiastic and Scholastic philosopher, Anselm of Canterbury adopted Augustine's view of the relation between faith and reason and combined Platonism with Christian theology. Supporting the Platonic theory of Ideas, Anselm argued in favor of the separate existence of universals, or common properties of things. He thus, established the position of logical realism on one of the most vigorously disputed issues of medieval philosophy.

The contrary view, known as Nominalism, was formulated by the Scholastic philosopher, Roscelin, who maintained, that only individual, concrete objects exist and that the universals, forms, and ideas, under which particular things are classified, constitute mere sounds or marks, rather than intangible substances. When he argued, that the Trinity must consist of three separate beings, his views were deemed heretical and he was forced to recant, in 1092. The French Scholastic theologian, Peter Abelard, whose tragic love affair with Heloise, in the 12th century, is one of the most memorable romantic stories in medieval history, proposed a compromise between Realism and Nominalism, known as Conceptualism, according to which universals exist in particular things, as properties and outside of things, as concepts in the mind. Abelard maintained, that revealed religion must be justified, by reason. He developed an ethics, based on personal conscience, that anticipated Protestant thought.

The Spanish-Arab jurist and physician, Averroes, the most noted Muslim philosopher of the Middle Ages, made Aristotelian science and philosophy, a powerful influence on medieval thought, with his lucid and scholarly commentaries on the works of Aristotle. He earned himself the title, "the Commentator" among the many Scholastics, who came

to regard Aristotle as, “the Philosopher.” Averroes attempted to overcome the contradictions between Aristotelian philosophy and revealed religion, by distinguishing between two separate systems of truth, a scientific body of truths based on reason and a religious body of truths based on revelation. His view that reason takes precedence over religion, led to his exile in 1195. Averroes’s so-called double-truth doctrine influenced many Muslim, Jewish, and Christian philosophers; it was rejected, however, by many others, and became an important issue in medieval philosophy.

The Jewish rabbi and physician, Moses Maimonides, one of the greatest figures in Judaic thought, followed Averroes in uniting Aristotelian science with religion, but rejected the view, that both of two conflicting systems of ideas can be true. In his, *Guide to the Perplexed* (1180), Maimonides attempted to provide a rational explanation of Judaic doctrine and defended religious beliefs (such as the belief in the creation of the world), that conflicted with Aristotelian science, only when he was convinced that decisive evidence was lacking on either side.

The English Scholastic theologian, Alexander of Hales and the Italian Scholastic philosopher, Saint Bonaventure, both philosophers of the 13th century, combined Platonic and Aristotelian principles and introduced the concept of substantial form, or non-material substance, to account for the immortality of the soul. Bonaventure’s view tended toward pantheistic mysticism in making the end of philosophy, the ecstatic union with God.

The German Scholastic philosopher, Saint Albertus Magnus was the first Christian philosopher to endorse and interpret the entire system of Aristotelian thought. He studied and admired the writings of the Muslim and Jewish Aristotelians and wrote encyclopedic commentaries on Aristotle and the natural science of his day. Albertus Magnus died in 1280. The English monk, Roger Bacon, one of the first Scholastics to take an interest in experimental science, realized that a great deal remained to be

learned about nature. He criticized the deductive method of his contemporaries and their reliance on past authority, and called for a new method of inquiry, based on controlled observation.

The greatest intellectual figure of the medieval era was Saint Thomas Aquinas, a Dominican monk, who studied under Albertus Magnus, following him to Cologne in 1248. Aquinas combined Aristotelian science and Augustinian theology into a comprehensive system of thought that later became the authoritative philosophy of the Roman Catholic Church. He wrote on every known subject in philosophy and science, and his major works, *Summa Theologica* and *Summa Contra Gentiles*, in which he presents a persuasive and systematic structure of ideas, still constitute a powerful influence on Western thought. His writings reflect the renewed interest of his time in reason, nature, and worldly happiness, together with its religious faith and concern for salvation.

Aquinas argued against the Averroists that the truths of faith and the truths of reason cannot conflict, but rather apply to different realms. The truths of natural science and philosophy are discovered by reasoning from facts of experience, whereas the tenets of revealed religion, the doctrine of the Trinity, the creation of the world, and other articles of Christian dogma are beyond rational comprehension, although not inconsistent with reason, and must be accepted on faith. The metaphysics, theory of knowledge, ethics, and politics of Aquinas were derived mainly from Aristotle, but he added the Augustinian virtues of faith, hope, and charity, and the goal of eternal salvation through grace to Aristotle's naturalistic ethics with its goal of worldly happiness.

Medieval Philosophy After Aquinas

The most important critics of Thomistic philosophy (adherence to the theories of Aquinas) were John Duns Scotus and William of Ockham. Duns Scotus developed a

subtle and highly technical system of logic and metaphysics, but because of the fanaticism of his followers, the name Duns, later ironically became a symbol of stupidity in the English word, *dunce*. Scotus rejected the attempt of Aquinas to reconcile rational philosophy with revealed religion. He maintained, in a modified version of the so-called double-truth doctrine of Averroes, that all religious beliefs are matters of faith, except for the belief in the existence of God, which he regarded, as logically provable. Against the view of Aquinas, that God acts in accordance with his rational nature, Scotus argued, that the divine will is prior to the divine intellect and creates, rather than follows, the laws of nature and morality, thus implying a stronger notion of free-will, than that of Aquinas. On this issue of universals, Duns Scotus developed a new compromise between Realism and Nominalism, accounting for the difference between individual objects and the forms that these objects exemplify, as a logical, rather than a real distinction. Duns Scotus died in 1308.

The English Scholastic, William of Ockham, formulated the most radically nominalistic criticism of the Scholastic belief in intangible, invisible things such as forms, essences, and universals. He maintained, that such abstract entities are merely references of words to other words, rather than to actual things. His famous rule, known as Ockham's razor - which said, that one should not assume the existence of more things than are logically necessary - became a fundamental principle of modern science and philosophy.

In the 15th and 16th centuries, a revival of scientific interest in nature was accompanied by a tendency toward Pantheistic Mysticism. The Roman Catholic prelate, Nicholas of Cusa, anticipated the work of the Polish astronomer, Nicolaus Copernicus, in his suggestion, that the earth moved around the sun, thus displacing humanity from the center of the universe; he also conceived of the universe, as infinite and identical with God. The Italian philosopher, Giordano Bruno, who similarly identified the universe with God, developed the philosophical implications of the Copernican theory. Bruno's

philosophy influenced subsequent intellectual forces, that led to the rise of modern science and to the Reformation.

Modern Philosophy

Since the 15th century, modern philosophy has been marked by a continuing interaction between systems of thought, based on a mechanistic, materialistic, interpretation of the universe and those founded on a belief in human thought, as the only ultimate reality. This interaction has reflected the increasing effect of scientific discovery and political change on philosophical speculation.

Mechanism and Materialism

The 15th and 16th centuries constituted a period of radical, social, political, and intellectual developments. The explorations of the world; the Reformation, with its emphasis on individual faith; the rise of commercial urban society; and the dramatic appearance of new ideas in all areas of culture, stimulated the development of a new philosophical world view. The medieval view of the world, as a hierarchical order of beings, Created and governed by God, was supplanted by the mechanistic picture of the world as a vast machine, the parts of which, move in accordance with strict physical laws, without purpose or will. The aim of human life was no longer conceived as preparation for salvation in the next world, but rather, as the satisfaction of people's natural desires. Political institutions and ethical principles ceased to be regarded as reflections of divine command, and came to be seen as practical devices, created by humans. In this new philosophical view, experience and reason became the sole standards of truth.

The first great spokesman for the new philosophy was the English philosopher and statesman, Francis Bacon, who denounced reliance on authority and verbal argument

and criticized Aristotelian logic, as useless, for the discovery of new laws. Bacon called for a new scientific method, based on inductive generalization from careful observation and experiment. He was the first to formulate rules of inductive inference.

The work of Italian physicist and astronomer, Galileo was of even greater importance in the development of a new world view. Galileo brought attention to the importance of applying mathematics to the formulation of scientific laws. This, he accomplished, by creating the science of mechanics, which applied the principles of geometry to the motions of bodies. The success of mechanics in discovering reliable and useful laws of nature, suggested to Galileo, and to later scientists, that all nature is designed in accordance with mechanical laws. Galileo died near Florence, in 1642.

Descartes

The French mathematician, physicist, and philosopher, Rene Descartes followed Bacon and Galileo, in criticizing existing methods and beliefs, but unlike Bacon, who argued for an inductive method based on observed facts, Descartes made mathematics the model for all science, applying its deductive and analytical methods to all fields. Descartes published his first major work, *Essais philosophiques*, in 1637. He resolved to reconstruct all human knowledge on an absolutely certain foundation, by refusing to accept any belief, even the belief in his own existence, until he could prove it to be necessarily true. He found the logical proof of his own existence in the very act of doubting it, and his famous argument, "*Cogito, ergo sum*" ("I think, therefore, I am"), provided him with the one certain fact or axiom, from which, he could deduce the existence of God and the basic laws of nature. Despite his mechanistic outlook, Descartes accepted the traditional religious doctrine of the immortality of the soul, and maintained, that mind and body are two distinct substances, thus exempting mind from the mechanistic laws of nature and providing for freedom of the will. His fundamental separation of mind and body, known as Dualism, raised the problem of explaining the way in which, two such different substances, as mind and body, can affect each other, a

problem that he was unable to solve and that has been a concern of philosophy ever since.

Hobbes

The English philosopher, Thomas Hobbes, constructed a comprehensive system of materialistic metaphysics, that provided a solution to the mind-body problem, by reducing mind to the internal motions of the body. Applying the principles of mechanics to all areas of knowledge, he defined the concepts basic to each area, such as life, sensation, reason, value, and justice, in terms of matter and motion, thus reducing all phenomena to physical relations and all science to mechanics. In his ethical theory, Hobbes derived the rules of human behavior from the law of self-preservation and justified egoistic action, as the natural human tendency. In his political theory, he maintained that government and social justice are artificial creations, based on social contract and maintained by force. He supported absolute monarchy, as the most effective means of preserving peace. He finished *De Cive*, a statement of his theory of government, in 1642, and continued working as a scholar and philosopher, until his death in 1679.

Spinoza

The Dutch philosopher, Baruch Spinoza, constructed a remarkably precise and rigorous system of philosophy, that offered new solutions to the mind-body problem, the conflict between religion and science, and the mechanistic elimination of ethical values from the natural world. Like Descartes, he maintained that the entire structure of nature can be deduced from a few basic definitions and axioms, on the model of Euclidean geometry. Spinoza saw that Descartes's theory of two substances created an insoluble problem of the way in which mind and body interact; he concluded, that the only ultimate subject of knowledge, must be substance itself. Attempting to demonstrate that God, substance, and nature are identical, he arrived at the pantheistic conclusion, that all things are

aspects or modes of God. Born and raised a Jew, Spinoza was excommunicated for his unorthodox views and banished from the city by the Amsterdam rabbis, in 1656.

His solution to the mind-body problem, known as the theory of psychophysical parallelism, explained the apparent interaction of mind and body, by regarding them as two forms of the same substance, which exactly parallel each other, thus seeming to affect each other, but not really doing so. Spinoza's ethics, like the ethics of Hobbes, was based on a materialistic psychology, according to which, individuals are motivated only by self-interest, but in contrast to Hobbes, Spinoza concluded, that rational self-interest coincides with the interest of others, and that the most satisfactory life, is one devoted to scientific study and culminating in the intellectual love of God.

Locke

John Locke, one of the most influential figures in British thought, continued the empiricist tradition begun by Bacon. He gave Empiricism a systematic framework with the publication of his, *Essay Concerning Human Understanding*, in 1690. Locke attacked the prevalent rationalistic belief, in knowledge, independent of experience. Although he accepted the Cartesian (relating to Descartes) division, between mind and body and the mechanistic description of nature, he redirected philosophy from study of the physical world, to study of the mind. In so doing, he made Epistemology (the study of the nature of knowledge), the principle concern of modern philosophy. Locke attempted to reduce all ideas, to simple elements of experience, but he distinguished sensation and reflection, as sources of experience, sensation providing the material for knowledge of the external world, and reflection, the material for knowledge of the mind.

Although not a skeptic, Locke greatly influenced the skepticism of later British thought, by recognizing the vagueness of the concepts of metaphysics, and by pointing out, that inferences about the world outside the mind, cannot be proved with certainty. His

ethical and political writings had an equally great influence on subsequent thought; the founders of the modern school of Utilitarianism, which makes happiness for the largest possible number of people, the standard of right and wrong, drew heavily on the writings of Locke. His defense of constitutional government, religious tolerance, and natural human rights, influenced the development of liberal thought in France and the United States, as well as in Great Britain.

Idealism and Skepticism

The German philosopher, mathematician, and statesman, Gottfried Wilhelm Leibniz, was born in Leipzig, in 1646, and during his life, developed a remarkably subtle and original system of philosophy. It combined the mathematical and physical discoveries of his time, with the organic and religious conceptions of nature, found in ancient and medieval thought. Leibniz viewed the world, as an infinite number of infinitely small units of force, called *monads*, each of which, is a closed world, but mirrors all the other monads in its own system of perceptions. All the monads are Spiritual entities, but those with the most confused perceptions form inanimate objects and those with the clearest perceptions, including self-consciousness and reason, constitute the souls and minds of humanity. God is conceived of, as the Monad of Monads, who creates all other monads and predestines their development, in accordance with a pre-established harmony that results in the appearance of interaction between the monads. Leibniz's view, that all things are organic and Spiritual, initiated the philosophical tradition of Idealism.

Berkeley

The Irish philosopher and Anglican Churchman, George Berkeley, made Idealism a powerful school in Anglo-American thought, by combining it with the Skepticism and Empiricism that had become influential in British philosophy. Extending Locke's doubts about knowledge of the world outside the mind, Berkeley argued, that no evidence

exists for the existence of such a world, because the only things that one can observe, are one's own sensations, and these are in the mind. To exist, he claimed, means to be perceived (*esse est percipi*), and in order to exist when one is not observing them, things must continue to be perceived by God. His statements of philosophy, *Principles of Human Knowledge* (1710) and *The Three Dialogues Between Hylas and Philonous* (1713), were dismissed by his contemporaries. However, by claiming that sensory phenomena are the only objects of knowledge, Berkeley established the epistemological view of Phenomenalism (a theory of perception, that suggests that matter can be analyzed in terms of sensations) and prepared the way for the positivist movement in modern thought.

Hume

The Scottish philosopher and historian, David Hume turned Berkeley's criticism of material substance against Berkeley's own belief in Spiritual substance, arguing that no observable evidence is available for the existence of a mind substance, Spirit, or God. His most important philosophical work, *A Treatise of Human Nature*, was published in three volumes, in 1739 and 1740. All metaphysical assertions about things that cannot be directly perceived are equally meaningless, he claimed, and should be "committed to the flames." In his analyses of causality and induction, Hume revealed, that no logical justification exists for believing that any two events are causally connected or for making any inference from past to future, thus raising problems that have never been solved. Hume's work has had a profound effect on modern science, in stimulating the use of statistical procedures in place of deductive systems and in encouraging the redefinition of basic concepts.

Kant

In answer to the skepticism of Hume, the German philosopher, Immanuel Kant, constructed a comprehensive system of philosophy that ranks among the greatest

intellectual achievements in Western culture. Kant combined the empiricist principle, that all knowledge has its source in experience with the rationalist belief in knowledge obtained by deduction. He suggested that although the content of experience must be discovered through experience itself, the mind imposes form and order on all its experiences, and this form and order can be discovered, *a priori*, - that is, by reflection alone. His claim that causality, substance, space, and time are forms imposed by the mind on its experience, gave support to the idealism of Leibniz and Berkeley, but he made his view a more critical form of idealism by granting the empiricist claim, that things-in-themselves- that is, things as they exist outside human experience - are unknowable. Kant, therefore, limited knowledge to the “phenomenal world” of experience, maintaining that metaphysical beliefs about the soul, the cosmos, and God (the “noumenal world” transcending human experience) are matters of faith, rather than of scientific knowledge. In his ethical writings, Kant held that moral principles are *categorical imperatives*, absolute commands of reason that permit no exceptions and are not related to pleasure or practical benefit. In his religious views, which had a lasting effect on Protestant theology, he emphasized individual conscience and represented God, primarily, as a moral ideal. In political and social thought, Kant was a leading figure of the movement, for reason and liberty, against tradition and authority.

In France, intellectual activity culminated in the period known as the Enlightenment, which helped stimulate the social changes that produced the French Revolution (1789-1799). Among the leading thinkers of this period were, Voltaire, who, developing the tradition of Deism, begun by Locke and other liberal thinkers, reduced religious beliefs to those that can be justified by rational inference from the study of nature; Jean Jacques Rousseau, who criticized civilization, as a corruption of humanity’s nature and developed Hobbes’s doctrine, that the state is based on a social contract with its citizens and represents the popular will; and Denis Diderot, who founded the famous, *Encyclopedie*, to which many scientists and philosophers contributed.

Absolute Idealism

In Germany, through the influence of Kant, Idealism and Voluntarism (that is, emphasis on the will) became the dominant tendencies. Johann Gottlieb Fichte transformed Kant's critical idealism into absolute idealism by eliminating Kant's "things-in-themselves" and making the will, the ultimate reality. Fichte maintained, that the world is created by an absolute ego, of which, the human will is a partial manifestation and which tends toward God, as an unrealized ideal. His views were construed, as atheistic, and he was forced to give up the chair of philosophy at the University of Jena, in 1799. Friedrich Wilhelm Joseph von Schelling went still further, in reducing all things to the self-realizing activity of an absolute Spirit, which he identified with the creative impulse in nature. The emphasis of romanticism on feeling and on the divinity of nature, found philosophical expression in the thought of Schelling, who influenced the American transcendentalist movement, led by the poet and essayist, Ralph Waldo Emerson.

Hegel

The most powerful philosophical mind of the 19th century was the German philosopher, Georg Wilhelm Friedrich Hegel, whose system of absolute idealism, although influenced greatly by Kant and Schelling, was based on a new conception of logic in which conflict and contradiction are regarded as necessary elements of truth, and truth is regarded as a process, rather than a fixed state of things. The source of all reality, for Hegel, is an absolute Spirit, or cosmic reason, which develops from abstract, un-differentiated being into more and more concrete reality by a dialectical process consisting of *triadic stages*, each triad involving (1) an initial state (or thesis), (2) its opposite state (or antithesis), and (3) a higher state, or synthesis, that unites the two opposites. According to this view, history is governed by logical laws, so that "all that's real is rational, and all that's rational is real." Later, historical forms are more concrete fulfillments of the absolute Spirit, whose highest stage of self-realization is found in the national state and in philosophy. Hegel stimulated greater interest in history, by representing it as a deeper penetration into reality, than natural science. His conception of the national state as the

highest social embodiment of the absolute Spirit, was for some time, believed to be a main source of modern totalitarian ideologies, although Hegel himself argued, for a large measure of individual freedom.

Other Influential Philosophers

The German philosopher, Arthur Schopenhauer rejected the optimistic faith of Hegel in reason and progress. In 1819, he published, *The World as Will and Idea*, in which he presented his atheistic and pessimistic philosophy. Schopenhauer maintained that both, nature and humanity, are products of an irrational will, from which people can escape only through art and through philosophical renunciation of the desire for happiness. The French mathematician and philosopher, Auguste Comte formulated the philosophy of Positivism, which rejected metaphysical speculation and located all genuine knowledge in the so-called positive, or factual, sciences. Comte placed the science of Sociology, which he founded, at the top of his classification of the sciences. The British economist, John Stuart Mill developed and refined the empiricist and utilitarian traditions, publishing *Utilitarianism* in 1836, and applying their principles to all fields of thought. Mill and other utilitarians influenced liberal social and economic reforms in Great Britain. The Danish religious philosopher, Soren Kierkegaard attacked the Hegelian emphasis on reason, and his eloquent defense of feeling and of a subjective approach to the problems of life became one of the main sources of 20th-century existential philosophy.

Evolutionary Philosophy

The mechanistic world view of the 17th century and the faith in reason and common sense of the 18th century, although still influential, were modified in the 19th century, by a variety of more complex and dynamic views, based more on biology and history, than on mathematics and physics. Particularly influential was the theory of evolution through natural selection, announced, in 1858, by Charles Darwin, whose work inspired

conceptions of nature and of humanity, that emphasized conflict and change, as against unity and substantial permanence. The German revolutionists, Karl Marx and Friedrich Engels, met in Paris, in 1844. Together, they developed the philosophy of *dialectical materialism*, based on the dialectical logic of Hegel, but they made matter, rather than mind, the ultimate reality. They derived from Hegel the belief, that history unfolds according to dialectical laws and that social institutions are more concretely real, than physical nature or individual mind. Their application of these principles, to social problems, took the form of *historical materialism*, the theory that all forms of culture are determined by economic relations and that social evolution proceeds through class conflict and periodic revolutions. This theory became the ideological basis for the Communist movement. The British philosopher, Herbert Spencer developed an evolutionary philosophy, based on the principle of “the survival of the fittest,” which explains all elements of nature and society, as adaptations in the cosmic struggle for survival. Like Comte, he based philosophy on sociology and history, which he considered the most advanced sciences.

Nietzsche

The German philosopher, Friedrich Nietzsche returned to Schopenhauer’s conception of life, as the expression of a cosmic will, but he made the so-called will to power the source of all value. One of his treatises, *Will to Power* was published in 1901, a year after Nietzsche’s death. He called for a return from religious ethics to the more primitive and natural virtues of courage and strength. Continuing the romantic revolt against reason and social organization, he stressed the values of individual self-assertion, biological instinct, and passion.

Pragmatism

Toward the end of the 19th century, Pragmatism became the most vigorous school of thought in American philosophy. It continued the empiricist tradition of grounding knowledge on experience and stressing the inductive procedures of experimental science. Charles Sanders Peirce, who gave this view its name, formulated a pragmatic theory of knowledge, which defined the meaning of a concept, as the predictions that can be made by use of the concept and that can be verified by future experience. William James, whose outstanding work in psychology provided a framework for his philosophical ideas, developed the pragmatic theory of truth. He defined truth, as the capacity of a belief to guide one to successful action, and proposed that all beliefs be evaluated in terms of their usefulness in solving problems. James justified religion, on this pragmatic basis, but, insisting on the finiteness of God, he identified God with the unconscious energy of nature.

Idealism became a powerful school of thought in Great Britain through the work of Francis Bradley, who maintained, like Hegel, that all things must be understood as aspects of an absolute totality. Bradley denied that relations exist on the ground that no two things exist and that only one real subject of thought can be postulated, the real itself. He argued, that whenever a thing is said to have a certain characteristic, then this thing, as subject, must be the entire world and reality itself. Any other assumption would be self-contradictory, because anything less than reality itself, has contradictory predicates; a stove, for example, is sometimes hot, but it is also sometimes cold. The Scottish philosopher, John McTaggart also drew on Hegelian Idealism, maintaining that space and time are unreal because their conceptions are self-contradictory. The only reality, he argued, is mind. The British philosopher, Bernard Bosanquet, who, like McTaggart, revived Hegelian Idealism, emphasized the aesthetic and dramatic character of the world process.

Pragmatic Idealism

Josiah Royce, in the idealist movement in the United States, combined Idealism with elements of Pragmatism. Royce interpreted human life, as the effort of the finite self, to expand into the absolute self, through science, religion, and loyalty to wider communities. His many works were published in the late 19th and early 20th centuries.

The American philosopher, educator, and psychologist, John Dewey further developed the pragmatic principles of Peirce and James, in a comprehensive system of thought, that he called, experimental naturalism, or instrumentalism. Dewey emphasized the biological and social basis of knowledge and the instrumental character of ideas, as plans of action. He insisted on an experimental approach to ethics, - that is, on relating values to individual and social needs. Dewey's theory of education, which stressed the preparation of the individual for creative activity in a democratic society, had a profound influence on educational methods in the United States, long after his death, in 1952.

In France, the most influential view, in the early part of the 20th century, was the evolutionary vitalism of Henri Bergson, who propounded the *elan vital*, the spontaneous energy of the evolutionary process. Bergson defended feeling and intuition against the abstract, analytical approach to nature of science and science-minded philosophy. In Germany, Edmund Husserl, founder of the school of phenomenology, developed a philosophy that studied the structures of consciousness that enable the consciousness to refer to objects outside itself.

Whitehead

The British mathematician and philosopher, Alfred North Whitehead revived interest in speculative metaphysics in the United States, by developing a highly technical system of concepts that combined the Platonic theory of Ideas with the organicism of Leibniz and Bergson. Whitehead, who was also an outstanding physicist, applied the revolutionary developments in 20th-century science, to show the failure of mechanistic

science as a way of fully interpreting reality. According to Whitehead, things are not unchanging substances having definite spatial boundaries, but are living processes of experience embodying eternal objects, or universals, fused with them by God.

Santayana and Others

The American poet and philosopher, George Santayana combined pragmatism, Platonism, and materialism in a comprehensive philosophy that stressed intellectual and aesthetic values. Benedetto Croce established idealism, as a dominant tradition in Italian philosophy, reviving the Hegelian conception of reality, as a process of historical development through the conflict of opposites, but stressing feeling and intuition, rather than abstract reason, as the source of ultimate truth. Bertrand Russell continued the empiricist and utilitarian traditions in British thought. Russell's application of developments in logic, mathematics, and physics to problems of philosophy was a major influence on the school of logical empiricism. The British philosopher, G. E. Moore, the main figure in the so-called realist revolt against idealism, argued for the reality of the objects of common-sense belief. Moore's cultivated simplicity of style and highly precise use of everyday language influenced the development of the school of analytic philosophy.

Analytic Philosophy

The school of logical empiricism, or logical positivism, founded in Vienna, became a powerful movement in American thought. Logical empiricism, which combines the positivism of Hume and Comte with the Cartesian and Kantian concern for logical rigor and precision, rejects metaphysics as a meaningless game of words, insists on the definition of all concepts in terms of observable facts, and assigns to philosophy, the task of clarifying the concepts and the logical syntax of science.

A form of analytic philosophy, also called linguistic analysis, which was inspired by the work of Moore and developed explicitly by his pupil, Ludwig Wittgenstein in *Tractatus Logico-philosophicus* (1921; translated 1922), has become the dominant view in present-day British philosophy. This school of thought also rejects speculative metaphysics and limits philosophy to the task of clearing up intellectual puzzles caused by the ambiguity of language by analyzing the meanings of words in ordinary discourse. It identifies the meaning of a word with the way in which the word is generally used.

Existential philosophy, which stems from the 19th-century romantic revolt against reason and science in favor of passionate involvement in life, became influential in Germany through the work of Martin Heidegger and Karl Jaspers. Heidegger combined the phenomenological approach of Husserl with the Kierkegaardian stress on intense emotional experience and with Hegel's conception of negation, as a real force. Heidegger's philosophy substitutes Nothingness for God, as the source of human values; Jaspers finds God, which he calls Transcendence, in the intense emotional experience of human beings. Jose Ortega y Gasset, the principal figure of existential philosophy in Spain, defended intuition against logic and criticized the mass culture and mechanized society of modern times. The Austrian-born Zionist author and scholar, Martin Buber, combining Jewish mysticism with strains of existential thought, interpreted human experience, as a dialogue between the individual and God.

Various syntheses of traditional theology with the existential view that knowledge is more emotional than scientific have been developed in Switzerland by Karl Barth and in the United States by Reinhold Niebuhr and Paul Tillich. In France, Jean Paul Sartre fused ideas of Marx, Kierkegaard, Husserl, and Heidegger into a conception of humans, as beings who project themselves out of nothingness by asserting their own values, and thus, assume moral responsibility for their acts.

During the 1960's, the writings of the American clergyman, Martin Luther King, Jr., indicated that Western philosophy had been too remote from the great social and political upheavals taking place throughout the world. Following the principles of the Indian nationalist leader, Mohandas Gandhi, King advocated a program of non-violent resistance to injustice.

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