

**“ All the Greek speculative thinkers about Nature as a whole before Socrates: Birthplace was the seaport town of Miletus, located on the western shores of Ionia in Asia Minor. Thus, the first philosophers are called either Milesians or Ionians. Philosophy began by asking the questions: “What are things really like?” and “How can we explain the process of change in things?” What prompted these questions was the gradual recognition that things are not exactly what they seem to be, that “appearance” often differs from “reality.” Interestingly, science and philosophy were the same thing in the beginning of Greek philosophy. Also, “Greek philosophy was an intellectual activity, for it was not a matter of only of seeing or believing, but of thinking, and philosophy meant thinking about basis question in a mood of genuine and free inquiry.” Samuel Stumpf, Philosophy: History & Problems, 5th ed., 4.**

**Thales: Water**

Up until Thales, natural disasters, victories in war, & explanations of origins relied on the gods. But, on May 23, 585 B.C. philosophy began when Thales predicted a solar eclipse. This prediction was the beginning of philosophy because Thales explained it naturalistic terms.

Major question: “What is stuff?” What is the basic substance of reality?

Thales concluded that there must be unity behind the apparent plurality of things, a Oneness disguised by the apparent plurality of the world. It is because he thought there is a Oneness that his is designated as a Monist: the problem of the one & many begins.

It was almost universally accepted that the world was made up of earth, air, fire, & water.

He assumed that all things must be reducible to water (water as substance). Evidence: (1) water is the only thing that can exist as a solid, liquid, & a gas; (1b) The other three elements did not have this range of transformative power and so Thales thought it must be water; (2) water brings life: give a plant water and it grows, take it away, & it withers; (3) sperm was moist and brought life whereas corpses dry up.

Since loadstones had magnetic properties & in combination with water/life situation he believed that even inanimate objects had souls.

Commentator Aetius: “Thales said that the mind of the world is god, and the the sum of things is besouled and full of daemons; right through the elemental moisture there penetrates a divine power that moves it.”

In sum: Thales is important because he abandoned mythic explanations & tried to understand world naturalistically using a reductive & scientific method.

**Anaxagoras: 500-428 B.C.**

Replaced 4 elements with “infinite seeds.” Every object in world contained seeds of all of the elements, & in each object, the seeds of one element predominate. “In all things there is a portion of everything...For how could hair come from what is not hair? Or flesh from what is not flesh?” It is an interesting solution to Thales problem of transformation of substances. Instead of saying that there is one thing that can change into anything (water), Anaxagoras says that everything possible is inherent in everything else depending on the situation one of those elements dominate.

He replaced love & strife [Empedocles] with Nous or mind that organized universe in an intelligent & rational way. This Nous or mind is kind of like god mind that organizes objects into specific patterns & thereby creates things. He called Universal Mind (Nous) that which has control over all. This Nous gave rise to separation of the mass being. It does this through some sort of rotation of which Anaxagoras is not specific.

**Anaximander (c.585-c.528 BC): Denied Monism/Affirmed Indeterminate Boundless**

*The primary substance out of which specific things come is an indefinite boundless. Whereas actual things are specific, their source is indeterminate, & whereas things are finite, the original study is infinite or boundless.*

Anaximander disagreed with Thales and is the first to explain why he is wrong. He argued that if all things were water, then long ago everything would have returned to water-an early version of entropy. If only one of the elements was unlimited & dominant then the others would cease to exist. Anaximander asked how water could become its deadly enemy, fire? How could a substance with a specific quality give rise to opposite qualities. Nobody can turn water into fire so why should we say they are the same thing. “Aristotle paraphrases:

“If ultimate reality were something like water, the other elements would be annihilated by it. For the different elements have contrariety with one another... If one of them were unlimited the others would have ceased to exist by now.”

**His solution:** Ultimate stuff behind 4 elements could not itself be one of the elements: It would have to be an unobservable, unspecified, & indeterminate something-or-other, which he called “Boundless” or “Unlimited.”

The “Boundless” is this thing, that at one time contained everything-and then some disaster occurred and since then it was broken up into its opposites. Eventually, everything will cancel itself out & its boundless will return-& it must return because it is somehow “just” to do so. Time destroys & unites all.

Only one passage remains from his book:

*“And from what source things arise, to that they return of necessity when they are destroyed, for they suffer punishment and make reparation to one another for this injustice according to the order of time [The Big Crunch].”*

**Anaximenes(c.585-c.528 BC.) Denied Boundless & Affirmed Air (Return to Monism):**

Dissatisfied with Boundless as being source of all things since it was too vague & intangible. Rather than boundless, Anaximenes focused on definite substance like Thales, but tried to incorporate the advance achieved by Anaximander.

*Air is the primary substance from which all things come.*

*All differences in quality are just differences in quantity. For instance, a stone is just a whole lot of air, where as water is less concentrated air, and gas is not dense at all.*

Theophrastus states:

*“Anaximenes... like Anaximander, declares that the underlying nature is one and boundless, but not indeterminate as Anaximander held, but definite, saying that it is air. It differs in rarity and density according to the substances [it becomes]. Becoming finer it come to be fire; being condensed it comes to be wind, then cloud, and when still further condensed it becomes water, then earth, then stones, and the rest come to be out of these.”*

**Empedocles (C. 495-435 BC):** First of the pluralists, he maintained that earth, air, fire, & water are 4 elements “roots” of all material reality. Aristotle agree, & gave the idea wide currency, through he further analyzed these elements into the combinations possible among hot, cold, wet, and dry.

But in order to solve the problems raised by previous thinkers he postulated primary forces along with the primary substances: The primary forces were “Love” (which is the uniting force) & “Strife” (which is the destructive force).

He also anticipated Darwin stating that at one stage, anatomical parts stick to each other in random configurations, some of which are well adapted for survival. “And those that could survive, did survive.” Aristotle criticized it as “leaving too much to chance.”

*The clash between Heraclitus & Parmenides is often cited as birth of the battle between empiricism & rationalism.*

**Pythagoras (c.550-c.500)**

**Concept of Form:**

The Milesians, who conceived the idea of primary matter or stuff out of which everything was constituted, but had no coherent concept of how specific things are differentiated from this single matter. They all spoke of an unlimited stuff, whether it be water, indeterminate boundless, or air, by which all meant some primary matter.

**It was the Pythagoreans who came forth with the conception of form: For them, form meant “limit,” and limit is understandable in numerical terms.**

For example, “harmony” is the form that the limiting structure of numerical ratio imposes upon the unlimited possibilities for sound possessed by the strings of a musical instrument. In medicine, Pythagoreans saw the same principle at work, health being the harmony or balance or proper ration of certain opposites such as hot/cold, wet/dry, & the volumetric balance of various elements later known as biochemicals. They looked upon human body as a musical instrument, saying that “health” is achieved when body is “in tune” & that disease is a consequence of undue tensions or the loss of proper tuning of the strings.

The true number or figure, therefore, refers to the proper balance of all the elements & functions of the body. Number, then represents the application of limit (form) to the unlimited (matter). They referred to music & medicine as vivid illustrations of the larger concept, that all things are numbers.

He advocated, “metempsychosis” a doctrine of repeated incarnations of souls, with punishment & rewards for behavior in previous lives.

They were vegetations who focused on physical fitness & mental acuity.

Well known for their morality & altruism.

Pythagoras was first philosopher to allow women to be part of his school as equals.

**Heraclitus: (c. 500BC):**

**“All Things are in Flux.”**

He directed attention to the problem of change. He expressed this concept by stating that “you cannot step twice into the same river.” The river changes because “fresh waters are ever flowing in upon you.” Thus, the concept of flux applies not only to rivers but to all things, incl. the human soul.

It is wrong to say that he believed that primary substance was fire. Rather, there is a consistency & uniformity to nature “There is an exchange of all things for fire and of fire for all things”; “War is father and king of all. Conflict is Justice; Logos is always so.”

**Parmenides (c. 480BC):**

**“Whatever is, simply is”**

In Contrast to “everything is changing” Parmenides argues that nothing is moving; you can’t step in the same river twice. Rather, whatever exists “must be absolutely, or not at all.” To exist in an absolute way meant that “whatever is, is.” We can never admit, he said, that “anything should come into being... out of not-being.” It was the concept of “coming into being” or “becoming” which stuck him as absurd, for he maintained that something either “...is or is not.”

“It is”: is not empirical; it is an undeniable truth of reason & attempting to deny it is a self-contradiction. Only what can be thought can exist. Since “nothing” cannot be thought without thinking of it as something, there is nothing, there is only being. Being is uncreated, indestructible, eternal, & indivisible.

Change is the confusion of appearance with reality, & therefore, change is simply an illusion. Appearance can’t produce more than opinion, whereas reality is basis of truth. Although common sense would say things are in flux, & thus, in a cont. process of change, this opinion based on sensation must, says P., yield to the activity of reason, which is able to discern the truth about things, & reason tells us that if there is a single substance of which everything consists, then there can be no movement or change.

**Zeno (c. 470 BC):** Paradox Support for Parmenides; Used *reducto ad absurdum* style arguments:

1. There are an infinite amount of mathematical points between any 2 points. If you want to go some place you must first go 1/2 way. But, before you go 1/2, you have to go 1/2 of that. Eventually you can’t go 1 millimeter because you have to 1st go 1/2 of 1/2 of 1/2 of 1/2 of that. Thus, motion is impossible.
2. If Achilles & a tortoise are racing & the tortoise has a big lead then before Achilles can pass the tortoise he has to first come to where the tortoise was, but since the tortoise’s motion is perpetually moving forward, when Achilles gets to the spot that the tortoise was-the tortoise is further ahead. Then Achilles goes to the next spot, but the tortoise has moved on. Achilles can never catch the tortoise because of this. Thus, motion is impossible.

**Democritus (c. 460-370 BC):**

Co-founder with Leucippus of the theory of atomism: He saw the world composed of material bodies, which themselves are composed of groups of “atoms.” These basic components are indivisible. He took Parmenides idea of Being & broke it up into little pieces. In order to get around probs of Parmenides & Zeno, he proposed space between individual tiny pieces of Being. Each atom was uncreated, indestructible, eternal, indivisible, & contained no holes. They travel through space in a necessary & defined path accord. to natural & mechanistic laws (very much like the Newtonian worldview). *The arrangements & collections of atoms produce the world as we experience it. Experiences & perception is result of the shedding of atoms from surfaces of objects & interacting with atoms of our soul.*

Context: Ionia is birthplace of Homer. His poetic view exemplified a worldview: (1) gods pursued lives not too different from human counterparts on earth; (2) gods intruded into or interfered with people’s affairs. In particular, Homeric gods punished people for lack of moderation, and envy; for pride & insubordination, which the Greek called “hubris.” (3) It is not that the gods were moral & require goodness, but were stronger than humans, thus demanding obedience. (4) Fate is a power to which even gods were subject. This idea described a rigorous order in nature which everyone & everything must be subordinate; (5) conception of nature is that of capricious wills at work instead of the reign of physical natural laws. Then Hesiod, approx. 8th century B.C., altered concept of “gods” and “fate” by removing from the gods all capriciousness & ascribing a moral conscience. Though Hesiod reaffirmed notion that gods control nature, he balanced this personal element in the nature of things with an emphasis upon the impersonal operation of the moral law of universe. The moral order, though, is still the product of Zeus’ commands, but these commands are neither capricious or calculated...to gratify the gods, but are rather fashioned for the good of humanity. “For Hesiod the universe is a moral order, and from this idea it is a short step to say, without any reference to the gods, that there is an impersonal force controlling the structure of the universe but regulating its process of changes” [Ibid., 4]. Stumpf goes on to say: “It was this short step that the Milesians, Thales, Anaximander, and Anaximenes took. Whereas Hesiod still thought in terms of traditional mythology with a peopleled universe, philosophy among the Milesians began as an act of independent thought. To ask, as they did, “What are things really like?” and “How can we explain the process of change in things?” indicates a significant departure from the poetry of Homer and Hesiod and a movement toward what we shall call the temperament of science.” [Ibid.] “Abstract cosmology was founded by the sixth-century Milesians: Thales, Anaximander, and Anaximenes. They aimed to construct probable theories about the universe as a whole. They sought conceptual explanations in well-defined terms, and used the principle of sufficient reason as a guide to these. Lacking the means of experimental verification, they tied their theories to the observable world by the concept of physis [nature], which implied a basic uniformity of behaviour in the natural world. There was an overall teleology (guidance by a supreme intelligence identified with the fundamental component of the physical world). This style of ‘natural philosophy’ (philosophia) was continued in the fifth century by Anaxagoras and Democritus among others [Oxford Guide to Philosophy, ed. Ted Honderich, 753]. In sum, Greek conception of world before Presocratics: (1) theocentric; (2) anthropomorphic: “The world was what it was and did what it did because of the will of the gods, who differed from humans only with respect to their power...” The Presocratic philosophers were chiefly concerned with offering explanations of the world and its phenomena that did not rely on such a god-and-human based conception. They proposed a more scientific and naturalistic cosmology. [History of Philosophy, HarperCollins College Outline, 1993], 1. “You call Iris a God, I say she is a cloud.” Before Logos was Mythos-explanation of things through supernatural origins. The world is the way because the gods deemed it necessary... the pre-Socratics were first to try to explain the world in a way other than relying on Mythos. Instead of simply repeating the tales...they used observation and reason to construct general theories that would explain to the unprejudiced and curious mind the secrets behind the appearances in the world. The term pre-Socratics is a bad one as a couple of them were contemporaries of Socrates.”