

IV. Technology & Gadgets

The Greeks were alive with ideas and inventiveness at the time of Socrates and Plato. They had self-moving automata- a form of rudimentary robot. They had astronomical models. They had lottery machines and other devices for balloting. There were balances, lens, plumbing, toys all indicating a remarkable degree of thought and achievement. In Athens there were standardized measures, needed for trade. There was a town clock and an observatory, with a device known as the “celestial machine”. In all the Greeks combined curiosity and ingenuity to produce a wide variety of devices and public institutions. The voting machines they devised were a means for mechanical honesty.

V. Paideia (Culture)

Greek culture rested upon a system of education that was both formal and informal. Central to the culture were the epic tales that contained in them all that was important for any Greek. They contained answers to many of the most basic questions. The educational system, had at its core the mastery of those mythopoetic tales. The tales were sacred histories and paradigms for guidance for contemporary events. Greek culture and education was through mastery of the Greek poetry and in those poems was the basis for Greek morality. The Greeks used mimesis to memorize the tales. In so doing they were establishing the model for life itself. To imitate the gods and heroes, to submit to the spell of the poem, the power of the tale, the model for behavior set within the tale became the basis for pursuit of the good life, a life of virtue as exemplified by those in the tales. In an oral culture to preserve the tales, memorization was important. To preserve the transmission of the tales and the moral order it was necessary to memorize and repeat exactly. The memorizing of the preserved word and the repetition of the actions in the tale became the core of the educational system and the virtuous life. In this way the medium became the message. The medium for the transmission of the culture was to memorize and repeat. The message for how to live a good life was to learn how the gods and heroes behaved and then remember that and repeat those behaviors in one's own life. The tale was the thing. It was art, it was didactic instruction and it was encyclopedic source of information about history, warfare, medicine, family relations, laws.... everything important.

The key works each have their own accent.

Homer

✚ *Iliad*- a dispassionate series of recommendations

✚ *Odyssey* –a description and prescription on how society normally does and should behave

Hesiod

✚ *Theogony*- a listing of customs, laws, and folkways of the immortals

✚ *Work and Days*- nomos- Greek laws, derived from the folkways of the immortals

The tales were a political and social necessity. They helped the Greeks move from a *diaspora* to a *polis*, from *chaos* to *cosmos* and it was through the *paideia* of oral recitation of the poetic tales that these were achieved.

The task for Socrates and Plato were:

1. To get at the subject who thinks and knows and not what was known
2. To get at the object of knowledge, the body of knowledge, that which is thought about and known and not that which was memorized.

Critical thinking was set against the habit of self-identity with and through the oral tradition of memorization and repetition. The polemics against the poets found in the works of Plato are a critique of memorization and repetition as a means for gaining knowledge. Plato disliked the poets and the artists for they presented in word and in pictures an impression of something that was not quite real and would actually lead those who heard and saw their works further away from truth and reality.

Philosophy as developed by Socrates and Plato attempts to foster critical, dialectical thinking in the subject and that process would lead the thinker to knowledge, truth, beauty and goodness. Memorizing and repeating was not the method to arrive at those values, virtue and the good life. Plato would move the foundation of the culture from myths to reasoning.

Prior to Plato

After Plato

Poetry	dialectic
<i>Mythos</i>	<i>logos</i>
<i>Doxa</i>	<i>episteme</i>
Opinion	knowledge
Concrete images	abstract principles
Particular	general

VI. Speculative Thought

The Greeks were moving from MYTH to PHILOSOPHY. They were to move from using Poetry as a guide for life to using Philosophy. They would be moving away from a religious mode of thought to a philosophical mode of thought. In the religious mode, the mythopoetic mode, causality was thought of in anthropomorphic modes. If one would ask “Why” did something occur, the answer would be in the form of “Who” was responsible for the event, i.e., a god or goddess. The pre-Socratic thinkers, Socrates and Plato would move away from the “who” to describing “how” an event occurs. This becomes a characteristic feature of Science. The next progression is to arrive at a theory of causality to explain why things are as they are without employing or referring to the gods or goddesses.

VII. Science

Greek science consisted in the process of thinking about, speculating about the nature of the universe itself. The focus was on answering questions that could not be answered by the epic tales. If the gods created the universe, WHAT did they make it with? What is the universe made up of and what controls or governs the actions of that basic “stuff”. The Greeks were moving away from thinking of the world in mythopoetic terms to doing so using what we might term “scientific” language. They were not using the language of persons any more.

RELIGION	SCIENCE
BELIEF	REASON
Speculative thought	Critical thought
Mythopoetic language	scientific language
Revelation	reason
Concrete	abstract
I-Thou	I-it
Theriomorphic Anthropomorphic	impersonal causality
Immanent deities	transcendent deities
Hierophanies	isolated physical entities
Causality	Causality
“why”= who	“why” = how
all things in place	discontinuity
moral order	amoral

In this process of change there is a growth of abstraction in thought. There is a growing independence of thought from the tales of the divinities and away from actual experience as well for such experience is always of the concrete and particular.

VIII. Pre-Socratic Philosophers



The underlying assumptions of the early philosophers, the early scientists of Greek culture were:

- **There is an intelligible coherence in the phenomenal world**
- **The universe is an intelligible whole**
- **There is an order, a cosmos, that underlies the chaos of our perceptions and that**
- **The Order of the universe is comprehensible to reason**

In the works of the pre-socratics there is obviously the progression from mythopoetic thought to a primitive scientific thinking in the form of speculative inquiry and from that form of thought to philosophy and rational inquiry. These thinkers were searching for the ARCHE or the very first or most fundamental principles or causes. They wondered about the immanent and lasting ground for existence. They were critical of the cosmogony they had in the mythopoetic tales. They were looking for a cosmology (an explanation for the order of the universe) that did not rely on the gods.

They did not base their thinking on belief but on reason.

These thinkers were naturalists and materialists as they sought answers to physical questions that were rooted in the physical itself. They were looking for the stuff out of which the universe was composed and they wanted an answer that was itself made of the same stuff. The matter of the universe would have its explanation in matter. They were, for the most part, materialists, rejecting spiritual or religious explanations for the causes and stuff of the universe.

Thales (625-545 BC) was looking for the basic stuff (physis) out of which all else is made. He expressed his idea concerning the basic stuff in his claim that “All things are made of WATER”! Now at first you might think that his idea is pretty silly and definitely wrong, however, that would be the wrong approach. What do you suppose was meant by that claim? Thales was attempting to express an idea at a time when his language was not developed to the point where he could express an abstraction. We are accustomed to thinking in abstraction and we are that way in part because we have a language with many words that are linked with abstractions. The Greeks at this time did not have that to work with. For example, if someone wanted to call for justice, they would call upon the goddess who in their

tales represented what today we consider in the abstract as justice. So instead of saying” I want justice” or “Give me justice” they might say something of this sort ”May the goddess Themis settle this by sending us a sign”

Thales claim is most likely the claim that there is “Unity in Difference”! In other words, Thales was attempting to claim that there was some basic stuff out of which all things are made. He selects water perhaps because it has properties which enable all the people of his time and our time to experience water in three different states: Liquid, solid and gas. Now if one thing such as water can exist in three very different forms then there must be something , like water, that is the basic stuff, physis, of the universe. Today, scientists make a similar claim. All reality, all that exists in the universe is made of or composed of or manifests as: energy. So from Thales comes the idea that no matter how things may appear, all things are made up of the same stuff: Everything is one thing!

Anaximander (ca. 612-545 BC) rejected Thales basic stuff, water, and speculated that the ultimate reality could not be identified with any one particular element. He came up with the basic stuff being the BOUNDLESS or the INFINITE or the UNLIMITED. This basic stuff was infinite and without a beginning. He also conceived of the theory of species evolving from one another through time in response to the need to adapt. He thought of the earth as revolving. He speculated that all life originated in the sea and moved onto the land. With this thinker abstraction and materialism developed further.

Anaximenes (585-528 BC) hypothesized that it was not water but AIR that was the fundamental stuff of the universe and that air can be condensed or rarefied to take on the properties of what appear to be other elements. He sought to simplify and clarify the model of the universe.

Anaxagoras (500-428 BC) appears to have taught that all that is can be explained with a combination of NOUS and MATTER. For him the universe of matter was set into its form and motions by Nous or MIND. This mind is immortal, homogeneous, omnipotent, omniscient and orders all phenomena. He did not believe in gods and goddesses. He did not think that the sun was a god and the moon a goddess. He thought the sun was a ball of fire and the moon a rock which reflected light from the sun. He was to be executed for blasphemy by the Athenians but escaped to another land. Socrates was interested in his

theories until Socrates learned that for Anaxagoras the NOUS acted at the beginning of the universe, setting all in motion, and was not invoked by Anaxagoras to explain motions including those of humans. Socrates was to focus on the actions of humans and believed that their minds had a great deal to do with their actions.

Empedocles (450BC) conjectured that there are four basic elements: EARTH, AIR, FIRE and WATER. They were moved about by the two basic forces: LOVE and STRIFE. Together these ideas explained everything that was physical.

Leucippus (450BC) and **Democritus (460-370BC)** believed that there were an infinite number of ever moving ATOMS (indivisible-not separable) that composed all that is. Each was imperceptible. The atoms exist in a void. They move and interact through necessity and chance.

Pythagoras (580-496BC) not only quests after the basic stuff of the universe but his works reveal that he explored truth itself and the idea of the good life; questions of ethics. He was concerned with the nature of reality and of life. He developed spiritualism in contrast to the materialist schools of his time. He was a mathematician, spiritualist, mystic, musician and leader of a cult. His fundamental contribution to the world of thought was that the world is really not material at all but made up of NUMBERS. Numbers are things and in some way constitute the essence of reality. All things are, despite appearances, made up of numbers. The original number, the ONE, being as with fire, is in motion and set all else into being. He was inspired in this mode of thought by his observations. The sound made by a string pulled tight and picked will vary with its length. So he thought the amount of a thing leads to its properties and its very being. His is a naturalistic explanation. How far off is it from contemporary science which instructs us that all things are made up of energy and take on different properties depending on the amount of energy. Consider that the difference between hydrogen and oxygen is the number of protons in the nucleus of the atoms of each.

The more important contribution made by Pythagoras was in his thinking that is to be in what is reached by REASON over and against what is given to the senses. Truth is reached through reasoning. Reasoning reveals that mathematics is in all things. Numbers relate to shapes and all that exist has or takes on shape. The individual who develops reason is on the correct path for the truth and the path to realize the proper destiny for the reasoning soul. Reason is the

source of the world itself. Pythagoras taught that people should surrender to their higher self, the soul, the reasoner. It is the reasoning part of the person that can contact reason itself, the LOGOS, or universal reason that generates the universe. The reasoning principle is in all things. For Pythagoras that principle, god, is the hidden measure in all that is real.

Heraclitus (535-475BC) believed that all things are in perpetual flux. BECOMING is the basis for all that is real. BEING is unreal. All is changing. Permanence is an illusion. All things are one and one-in-many. That which is the essence of all is FIRE. The LOGOS is the universal principle of reason through which there is a law like process in the universe that provides its existence and order.

Parmenides (540-470 BC) taught tht all that is has always been and always will be. Reality is that which never changes. Reality is BEING and not becoming. Changelessness is the nature of all reality. This is not at all obvious to our senses. Parmenides trusted in his reason over his senses. The appearance of things can be deceiving, so trust in reason. All change is illusion for Parmenides! Change can not be real. The truth is what is arrived at by thought and the truth is set over and against opinions based upon sense impressions and common beliefs. The REAL is changeless.

The REAL is ONE.

He arrives at his ideas through a process of reasoning. Consider the following:

If something exists, it must come from something.

Something can not come from nothing.

If there ever were nothing, there would need to be nothing forever.

Something can not come from nothing.

There is something now.

The something from which the present something comes must always have been.

There must always have been something, because something can not come from nothing.

So that which is has always been and will always be.

Change is an illusion. Permanence is real.

All is one, permanent and at rest.

Being never comes into existence, nor does it cease to be. Being always is. It cannot be added to or divided. It is whole and complete in itself, one. It is unmoved and unchangeable. Being is. Being does not become. Becoming is not. Becoming is unreal. Being is and is self-identical and uncaused.

ABSOLUTE IDEALISM

So with Parmenides Philosophy comes to trust in REASON over the senses. His thought liberates reason from the senses. There is in his work the recognition of the autonomy of thought and the use of independent criteria for judging thought; namely, coherency & consistency over probability.

Philosophy is born in the recognition of the importance of abstract general principles. Philosophy develops as a rigorous process of inquiry involving insights and deductive reasoning. In Philosophy the human mind comes to recognize its own creation.

SOCRATES:

We now will now turn to look at the life and thought of Socrates. It was he who developed the philosophical process of thought and who focused on matters of great concern to humans. He was concerned with the question: How do I live a Good Life? He was concerned with questions of knowledge, truth, beauty and Goodness. He was executed for his beliefs and virtues. An interesting story and a life that produced such a great impact on the world that it is true to say that what Socrates did changed the world. If Socrates had not lived as he did you and I would not be as we are today. In fact we probably would not exist at all. Socrates led to Plato who led to Aristotle who together produced an impact on how people in the West thought about life and the world and reality and ethics. The ideas for which they provided the foundation and methodology led to movements and actions and creation of institutions that shaped the history of the world.

IX. Hellenistic Philosophy