

## PARMENIDES

Born about 515 B.C. in a region of Italian peninsula: Elea. Taught by a Pythagorean (Amenias).

Later became opposed to Pythagorean and all Ionian and Pluralist philosophies.

Argued that they were fundamentally mistaken not only about what does exist but about the characteristics of what can actually exist and the methods for discovering the truth about reality.

Wrote down views in Prose Poem with 3 parts:

- 1) Prologue,
- 2) Way of Truth
- 3) On Belief.

Way of Truth presents rigorous logical arguments for radical ideas, specifically:

Being (Reality) is ungenerated, beginningless, imperishable, unending, one, continuous, indivisible, motionless, complete, and the same as Thought

Main principle: That which does not exist is nothing . It is impossible to think of that which does not exist.

What exists is that which can be thought of. Reality is one, unchanging, indivisible, eternal Being.

Ordinary mortals are constantly stumbling into illogical thinking because they are strongly influenced by sense-perception, rather than reason. In this sort of illogical thinking, we take that which is nonexistent as “something”:

Commonsense beliefs about the nature of reality are full of this sort of illogical thinking but we don't ordinarily notice it.

However, the most fundamental concepts of common sense: the concepts of

Many distinct, divisible things.  
Change.  
Space.  
Time.

are full of illogical thinking. They cannot contain the truth about reality.

Sense-perception only conveys appearances of Being, not Being itself. So, sense perception can only lead to opinion or belief, not knowledge.

Only logical reasoning can directly grasp the absolute, unchangeable truth about reality. So, only reasoning can lead to knowledge.

Knowledge is absolutely reliable, never more or less reasonable, unrevisable, beyond improvement, or criticism.

Opinions are mere representations of reality. Commonsense mistakes representations for reality. But these representations cannot be the truth because they are illogical. They refer to that which is not as if it were something.

Opinions can be opposed to one another. What one person knows cannot be opposed to what another knows.

Opinions can be more or less reasonable and reliable. They can be revised, improved, rejected and replaced.

All Pythagorean and Milesian cosmologies take for granted the existence of opposite principles and try to show how they can exist together. All consider Being to be changeable and divisible. All are radically wrong.

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## ZENO

Lived about 490 B.C. Student of Parmenides.

Admitted difficulty of understanding Parmenides' Philosophy. Tried to defend it as the only possible alternative to all other views on the grounds that all other views are absolutely impossible and nonsensical.

Invented new method of reasoning ("Dialectic") for this purpose. Here is how dialectic works:

Argue against an opponent's view, not by trying to directly prove that it is false. Instead, provisionally assume that the opponent's view is true and then show that some absolutely impossible result must logically follow from this assumption.

From this result it must follow that the opponent's view is false.

Zeno illustrated his reasoning in his "paradoxes" This term is derived from the Greek roots 'para' (impossible) and 'doxa' (saying or statement).

\* The paradox of bisection

Assume both of the following statements are true:

- 1) many things exist
- 2) all things are divisible

It must follow from this assumption that

- 3) Each thing is either infinitely large or has no size whatever. (Paradox)

Reasons why (3) follows from (1) and (2):

Either the parts composing a thing are of a finite size or they have no size. If the first alternative is true, then the infinitely many parts of which a thing is composed add up to an infinite size for the whole thing. If the second alternative is true then the sum of the parts of which a thing is composed has no size. So, the whole has no size

But statement (3) cannot possibly be true.  
So, it is not true that many divisible things exist.  
So, as Parmenides maintained, only one indivisible being exists.

\* The Paradox of Achilles and the Tortoise

Assume: Motion occurs and all units of space and time are divisible.

Then it must follow that Achilles (the fastest human) cannot catch a slower opponent, a tortoise, in a race. This result is absurd. (A paradox)

So, if all units of space and time are divisible, then motion does not occur.

$$\begin{array}{cccc} T_1 & \dots & T_2 & \dots & T_3 \\ t_0 & \dots & t_1 & \dots & t_3 \\ A_1 & \dots & A_2 & \dots & A_3 \\ t_0 & \dots & t_1 & \dots & t_2 \end{array}$$

\* The Paradox of the Flying Arrow

Assume: motion occurs and neither points nor moments are divisible

Then, it must follow that motion consists of rest.

This result is absurd. (A paradox)

So, if neither points nor moments are divisible, motion does not occur.

