

# Aristotle

## Logic

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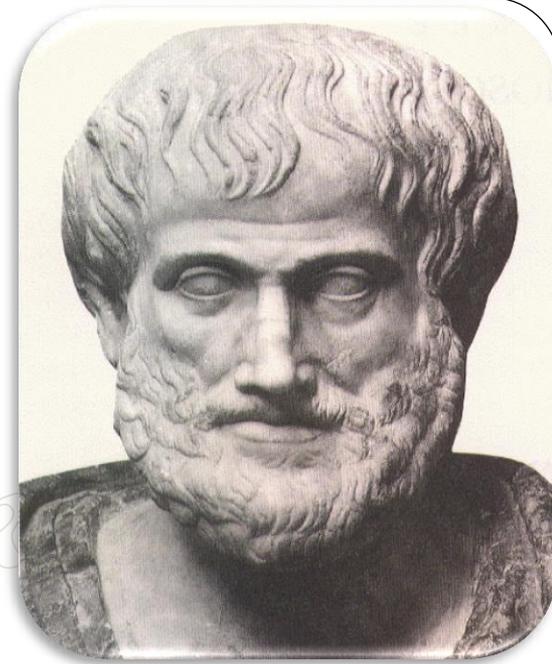
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# Aristotle

384-322 BCE

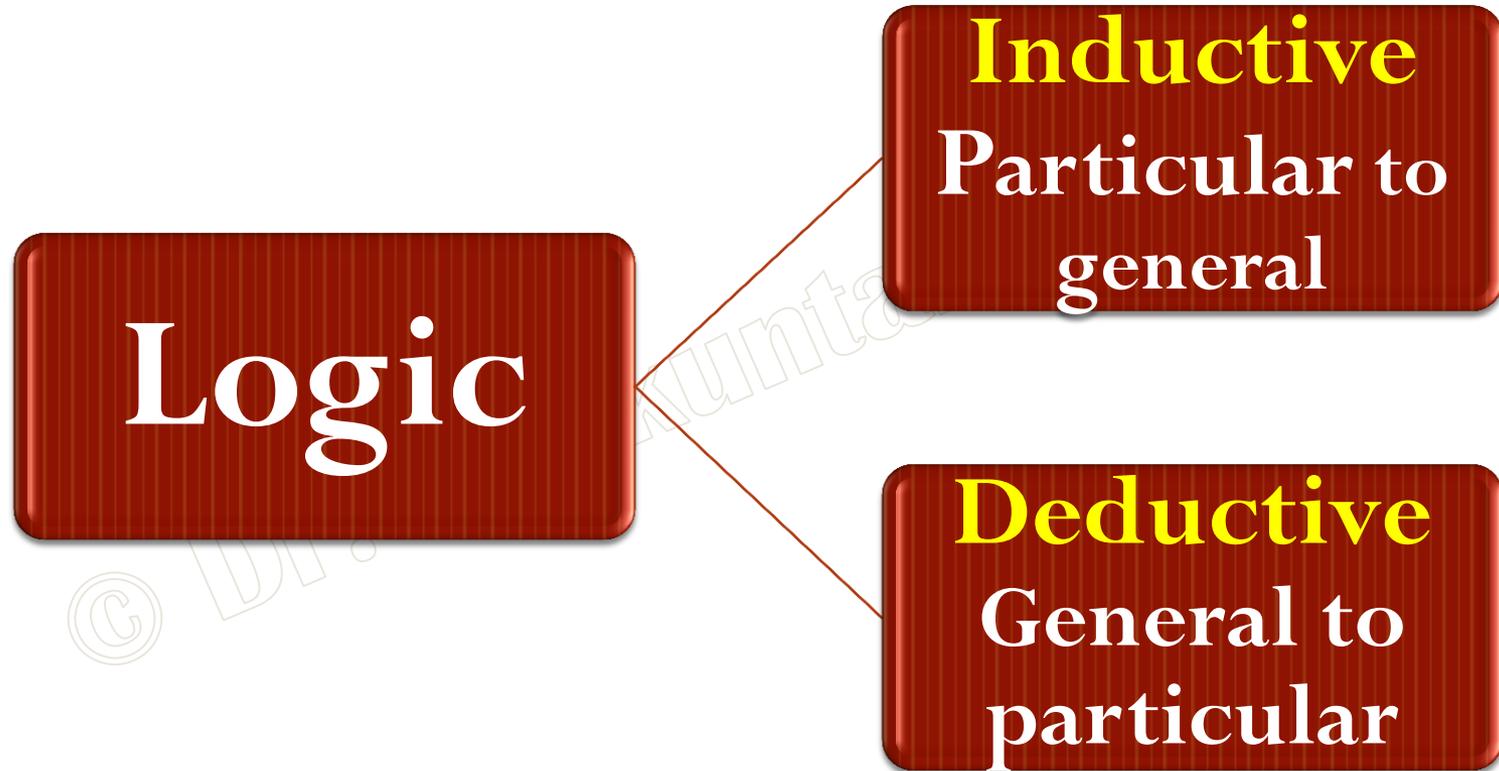
- Son of a physician
- Born in Macedonia
- Attended the Academy of Plato
- Became Plato's foremost student
- Left the Academy when Plato died
- Founded the Lyceum in Athens
- Scientific thought



# LOGIC

- One of Aristotle's major contribution to human knowledge
- His work on logic is known as **Organon** an instrument of acquiring knowledge.
- Logic is an instrument used for organizing our thoughts
- Induction and Deduction are both necessary for obtaining knowledge.
- He preferred Deduction than Induction.

# Types of Arguments



- **example. Syllogism**

**Major premise-** All human beings are mortals

**Minor premise -**Socrates is a human being

**Conclusion-** Socrates is a mortal

- Clear thinking that leads to a definitely true conclusion.

# Developed rules of logic

## Syllogism

- All trees need light.
- An oak is tree.
- Therefore, oaks need light.

## Inductive

- This dog needs lungs, therefore all dogs need lungs

## Deductive

- All dogs have lungs, therefore this dog has lungs

Nyaya Inference (*Svarthanumana*) also considers three terms :

1. *Pratijna*
2. *Hetu*
3. *Udaharana*

The hill has fire

Because it has smoke

Wherever there is smoke there is fire- as in kitchen

Nyaya Inference consists of five members

1. **Pratijna** – The hill has fire
2. **Hetu**- Because it has smoke
3. **Udaharana**- Whatever has smoke has fire  
e.g: kitchen
4. **Upanaya** - The hill has smoke which is invariably associated with fire
5. **Nigamana**- Therefore this hill has fire

Nyaya syllogism can be put into Aristotelian syllogism

**Major Premise** : All things which have smoke have fire

**Minor premise** : This hill has smoke

**Conclusion** : Therefore this hill has fire

# Aristotelian syllogism can be put into Nyaya syllogism

- ✓ **Pratijna** – Socrates is mortal
- ✓ **Hetu**- Because he is man
- ✓ **Udaharana**- Whoever is a man is a mortal  
e.g: Pythagoras
- ✓ **Upanaya** -Socrates is a man who is invariably a mortal
- ✓ **Nigamana**- Therefore Socrates is a mortal

# Difference between Nyaya and Aristotelian logic

- ✓ Difference in number of propositions
- ✓ Aristotelian syllogism - deductive whereas
- ✓ Nyaya - is both inductive and deductive
- ✓ Nyaya - deduction and induction as inseparably related, as two aspects of the same process

✓ Inference according to Nyaya is neither from particular to universal nor from universal to particular but it is from particular to particular through universal

✓ The example is the special feature of Nyaya logic

✓ The view of Nyaya is accepted as better by the modern western logicians also

- ✓ Logic is of utmost importance in philosophy
- ✓ Philosophical speculations are all dependent on valid logical arguments
- ✓ All vedantic *acharyas* maintain *shabda pramana* is most valid and authoritative *pramana*. Then comes *anumana* or inference which is the part of *tarka*