

L8

Proposition in traditional logic

Universe has thing/objects

things have attributes

A thing may have more than one attribute

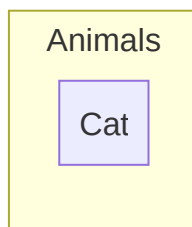
it is easy for us if we classify objects into categories

What is a class

- A collection of things that have some attribute in common
- Some defns may call them the 'set of things' or 'category of things'/'
- Some defns may use 'attribute' and 'property' interchangeably
 - depends on the school of thought
 - Physics is factual so not many schools of thought, but philosophy has many

Define a class

- extension
- intention
- The richer the intensional definition, lesser (or similar) the membership of extension
 - Men - 50% of people
 - Men with blue hair and yellow eyes - 0% population
 - Sometimes the numbers stay, and may not decrease when you add attribute
 - NaMo and Rahul Gandhi are both men and political figures
- Knowing the extensional members does not guarantee knowing the intensional definition
- Classes have relationships with each other



some classes may be partially within others

some classes may be completely different

Categorical propositions

- Deductive arguments are made up of proposition, what are they?

- Propositions in a deductive argument are of the type Subject-Predicate

- Thus, propositions are statements about two categories or classes, one in subject and one in predicate.

Propositions state how two categories are related to each other.

- This means that propositions with which deductive arguments are built, are categorical propositions.

I.e., deductive arguments are built on propositions that describe relationship between classes/categories.

Example: All men are mortal. Socrates is a man. Therefore, Socrates is mortal.

We need to take the precise categorical propositions from general statements

- Validity:
 - checking if the statement about the class membership are valid or not
 - Checking if the membership established in the conclusion (TF Socrates is a mortal) really follows from the membership established in the premises (All men are mortal. Socrates is a man.)
- theory of deductio: on basis of categorical proposition; on the membership of classes