

# I am Thinking

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## Psychology of Thinking

Taken from **Class PPT** (just before *Problem Solving*)

"I think therefore I am" - *Rene Descartes*

### Definition of Thinking:

- Cognitive Rearrangment or manipulation of external (environment) and internal (memory) information.
- *Example*: "How will I look if I wear this shirt?"

### Types of thinking:

- Unfocussed: "Aaj kya khayenge?"
- Focussed: "Maths Problem..."

### We think via?

- Information used in thinking are often called **symbols**
- Most symbols used in thinking are in the form of **language**

### Categories of Thinking

1. **Problem Solving**: "I thinking how to do this home assignment..."
2. **Reasoning (Deductive | Inductive)**: "I think there is no lecture today. No one has turned up in class..."
3. **Decision Making (and Judgement)**: "I am thinking about which phone would be best for me..."

## Primer on Thinking

Taken from Reading: [thinking\\_primer.pdf](#)

- **Thought / Idea** can be of the 2 forms:
  - **Concept**
    - image/idea without any claim
    - Occurs as words, phrases, non-informative sentences
  - **Affirmation**
    - Assent / Proposition that claims something
    - Occurs as complete sentences, where one concept is predicated to another

- Also Concepts and Affirmations (in general Thought / Idea) can be either:
  - Simple
    - understood without inferences
    - require no proof or explanation
  - Complex
    - require inferences
    - require proof or explanation utilizing simple ideas

## Thoughts / Ideas as Sentences

1. Informative
  - information is being conveyed
  - **can be verified as T/F**
  - Eg- "She is in the class"
2. Non-informative
  - No information is being conveyed
  - **cannot be verified as T/F**
  - Eg- requests, questions, call outs, hope, exclamations

## Terminologies (Language | Cognition | Logic)

LANGUAGE	COGNITION	LOGIC
Words / Phrases	Concepts	Terms
Sentences	Propositions	Premises
Paragraphs	Reasons	Arguments

## Arguments v/s Explanations

- **Argument:**
  - Given some facts, you are predicting (convincing/persuading) what can these facts imply
  - Comprises of evidences
  - Eg- "If he falls on the stairs, he will break his legs"
- **Explanation:**
  - Something has happened, you are trying to use backward inference to fit reasons which might have caused this effect. You are clarifying something.
  - Comprises of facts and consequences
  - Eg- "His leg is broken as he fell on the stairs"

Everyday (Conf)USE

**"This dog might be injured, because he got in a fight"**

- cannot determine whether it is an argument or an explanation
- Depends on the context
  1. Context-1: **The owner of the dog has just watched it fight with another dog. The dog does not seem injured.** → Argument
  2. Context-2: **The owner of the dog has not seen the dog for a few hours. It comes to the owner hurt and crying** → Explanation

## Parts of an Argument

All MEN are MORTAL

SOCRATES is a MAN

Therefore, SOCRATES is MORTAL

Argument = 2 premise + 1 conclusion

There are 3 types of Terms:

1. **Major Term:** present in the predicate (after the verb) of the conclusion ("MORTAL")
2. **Minor Term:** present in the subject of the conclusion ("SOCRATES")
3. **Middle Term:** not present in the conclusion ("MAN" / "MEN")

There are 2 types of Premise:

1. **Major Premise:** that which contains the major term ("All MEN are MORTAL")
2. **Minor Premise:** that which contains the minor term ("SOCRATES is a MAN")