

# Cognitive Processes

## Lecture 6

Rev. Dr Sahaya G. Selvam

[selvamsdb@gmail.com](mailto:selvamsdb@gmail.com)



**Institute of Youth Studies  
Tangaza University College, Nairobi**

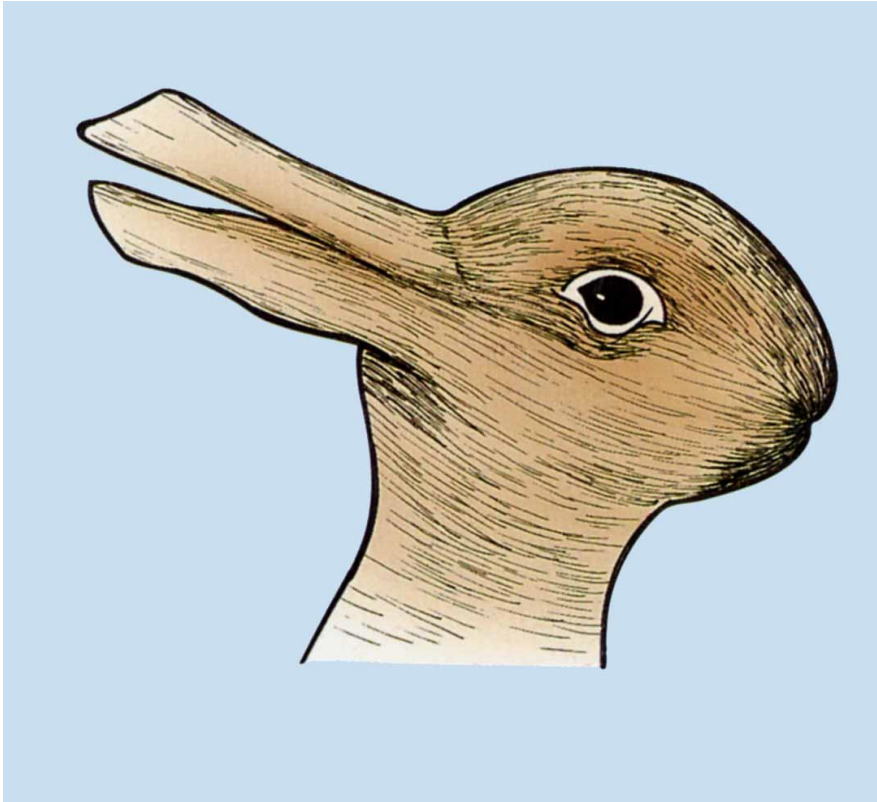


# Learning Objectives – Lecture 6

By the end of the lesson the learner should be able to:

- discuss some of the cognitive processes that are focus of psychology; and
- recognise the cognitive processes in the self.

What do you see?



Seeing is not just 'taking in' a stimulus;  
Sense experience entails interpretation  
Interpretation entails our pre-understanding

# Three mental short-cuts

A strange paradox of the human mind is that the processes that make acquiring new information faster and efficient are the very processes that delimit learning and even land the mind into errors. There are three general mechanisms by which the mind does this:

- Generalization
- Deletion
- Distortion

(See Richard P. McHugh, *Mind with a Heart*, p.69)

# Generalisation

- “Generalization is a process by which elements or pieces of a person’s model of the world become detached from their original experience and come to represent the entire category of which the experience is an example” (Camron-Bandler, 1985: 224).

# Outcome of generalisation

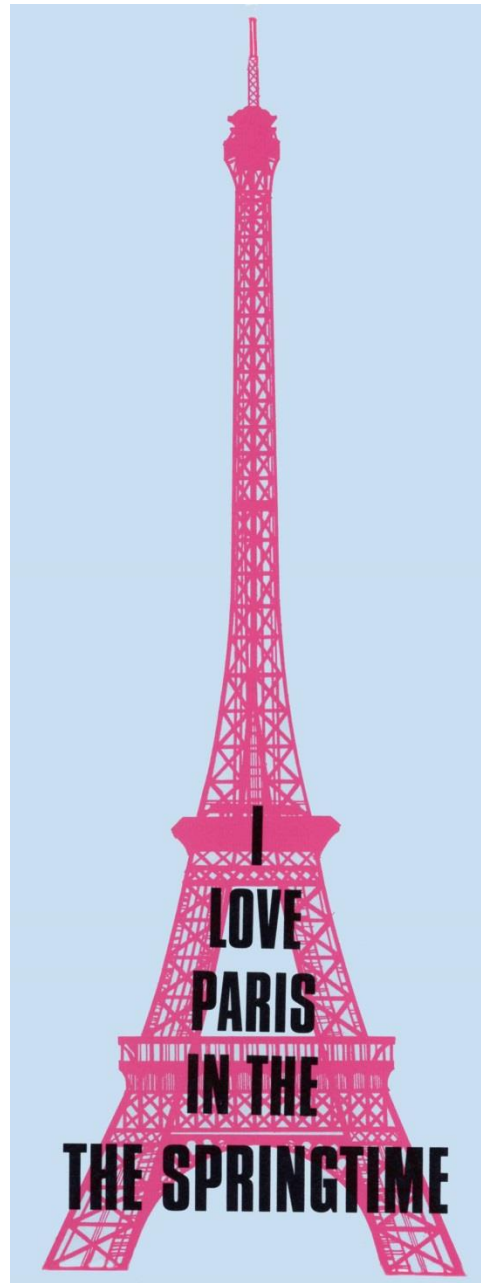
- Generalization is very useful for our survival. We don't need to learn every particular experience:
  - We know that to have more light I need to put on the switch. Sometimes we learn similar things even from a single experience. For example, to put on the seat belt in a car.
- Generalization can be very limiting and negative:
  - For example, a child once bitten by a dog assumes that all dogs are dangerous. Our tribal prejudices often are result of generalization.

# Deletion

- “Deletion is the process by which we selectively pay attention to certain aspects of our experience and exclude others. This allows us to focus our awareness and attend to one portion of our experience over others.... This process makes coping possible and protects us from being overwhelmed by external stimuli” (Cameron-Bandler, 1985:225)





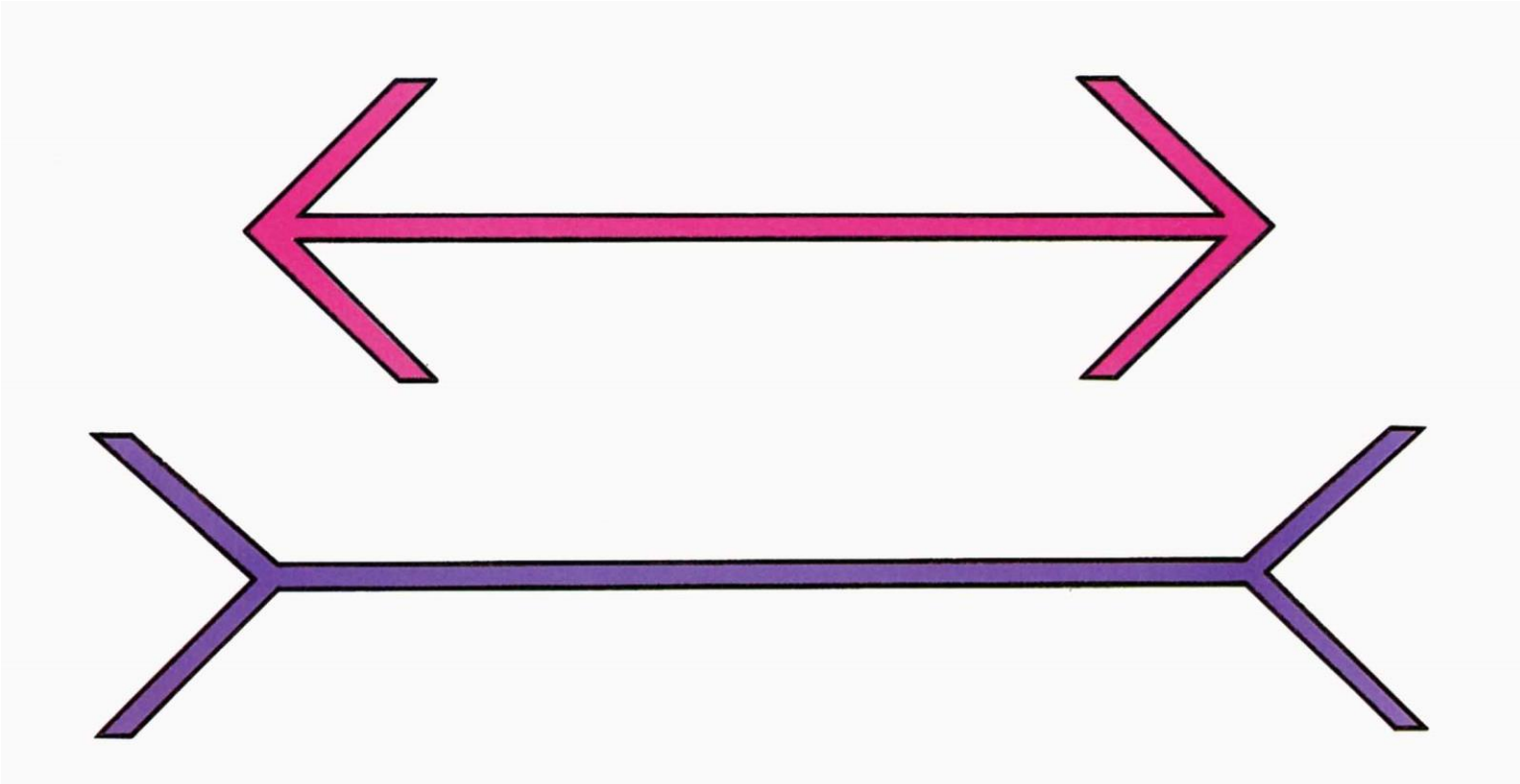


# Outcome of Deletion

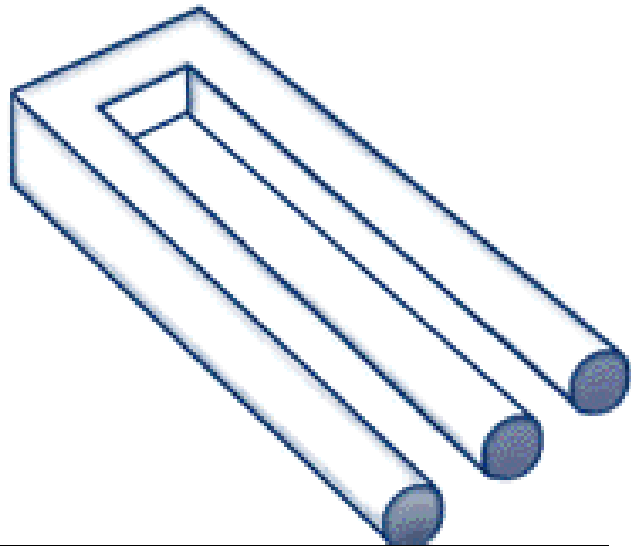
- If we are not capable of deletion we would go mad, trying to put away distractions.... (like a tape recorder that picks up every little noise.)
- For example, when you are engrossed in reading an interesting novel, even as you travel by bus, you can “delete” the noise of the bus, the conversation of people.
- **Dangers of Deletion:** You may leave out the essential matter in a process of knowing. You may see only what you want to see, and hear.

# Distortion

- Distortion is the process which allows us to make shifts in how we experience sensory data. Without this process we could not plan for the future or turn dreams into reality.” (Cameron-Bandler, 1985: 225)
- The different forms of art are distortions of reality, so too is microscope; a map, etc. Imagination, fantasy...
- The error of distortion occurs when map is mistaken for the territory.



**Impossible Trident**



© Microsoft Corporation. All Rights Reserved.

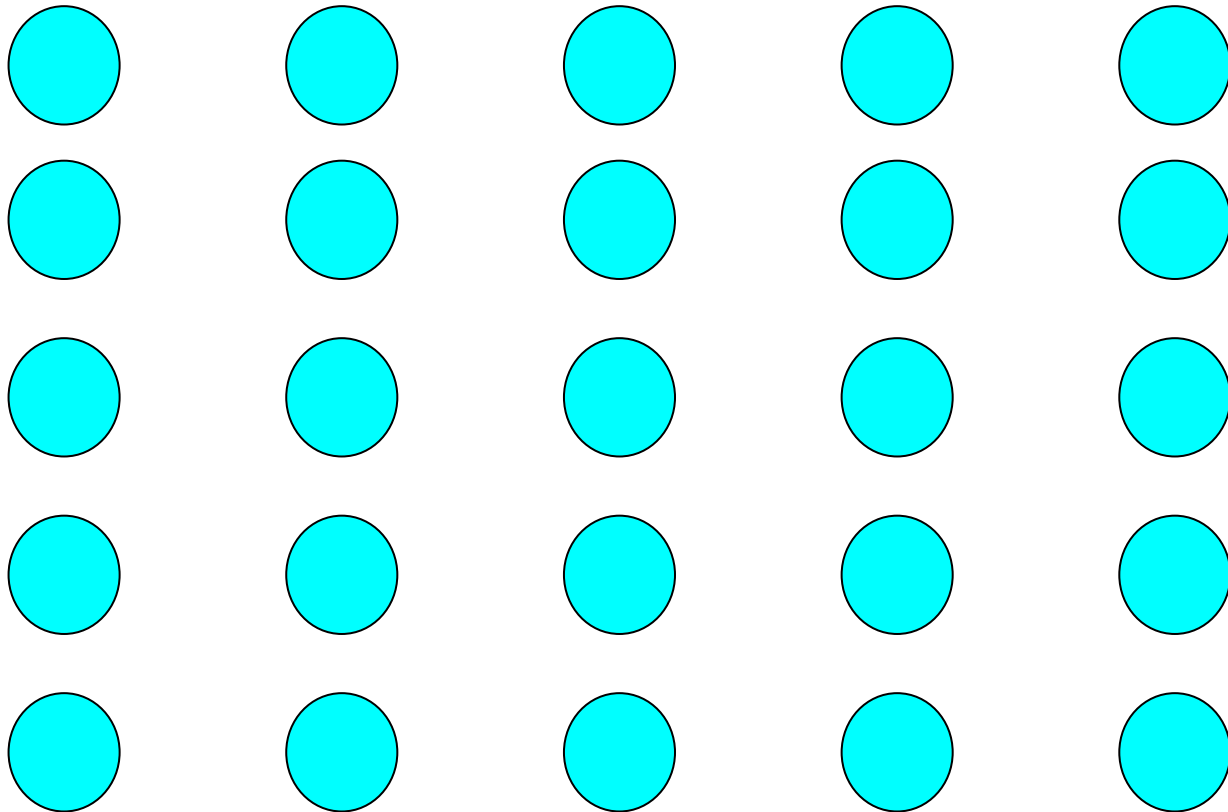
**Impossible Triangle**



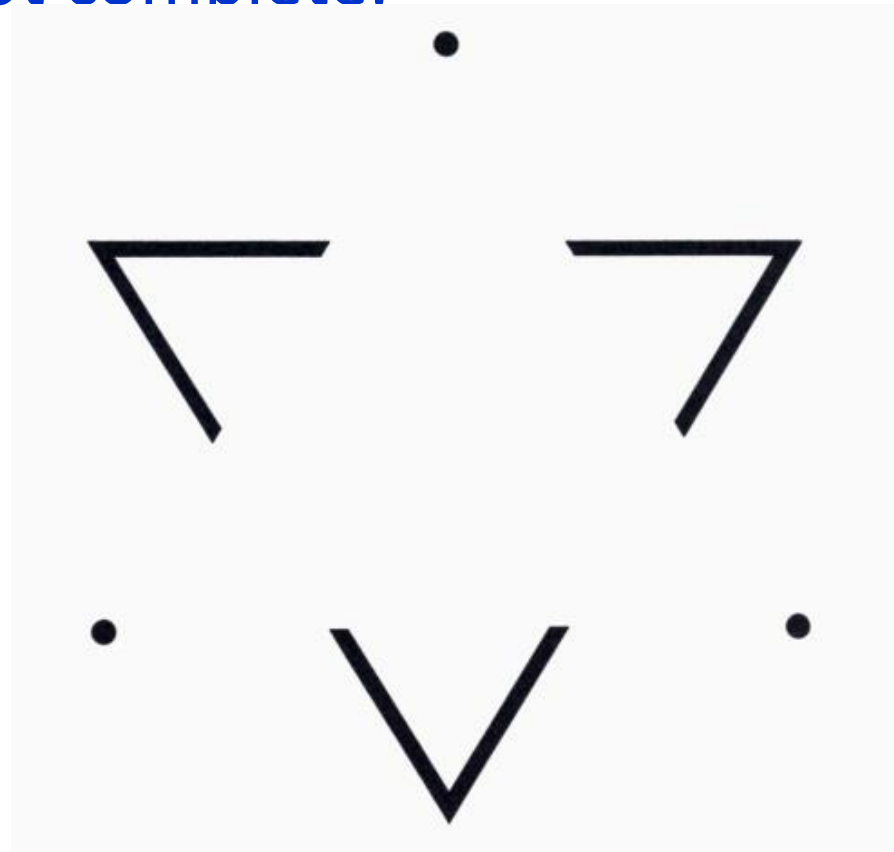
# Gestalt Principles of Perception

- The gestalt perspective holds that the whole is greater than its parts. That is, we make our perceptual experience “greater” than the sum of its sensory elements.
- Human mind is quick to patterns...
- Related to generalisation – as listed above.

**Proximity:** Things that are near each other tend to be grouped together. Thus you perceive the pattern as vertical columns of dots, not as horizontal rows.



The brain tends to fill in gaps in order to perceive complex forms. This is fortunate because we often need to perceive less than perfect images. The figure is easily perceived as a triangle even though the figure is not complete.

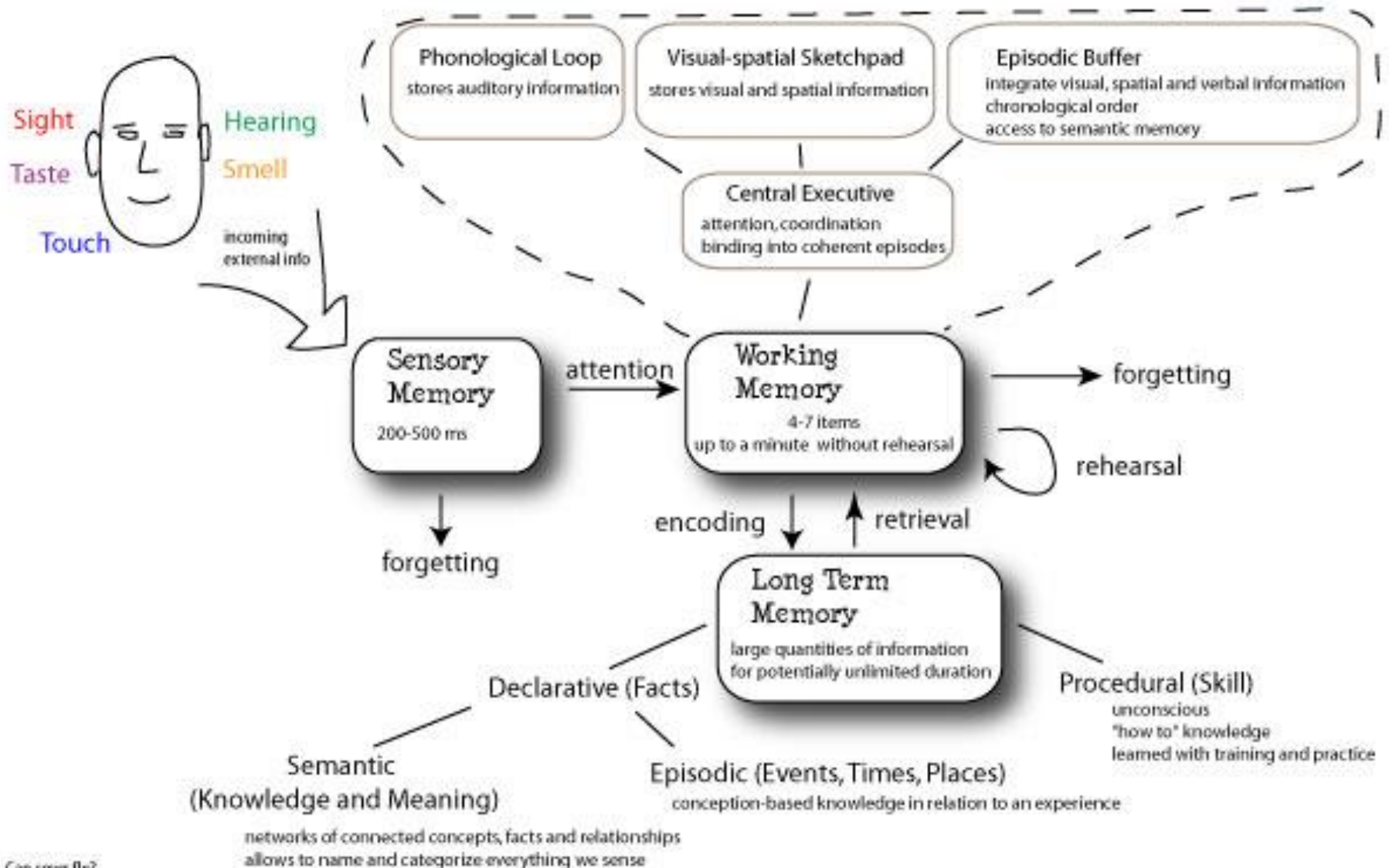




# Gestalt principles of perception

1. **Proximity:** objects that are close to each other are perceived to be belonging together.
2. **Similarity:** objects that are similar are perceived as belonging together.
3. **Continuity:** continuous forms are perceived together.
4. **Closure:** We fill in missing gaps.
5. **Simplicity:** we group things in order to have the most simplest view of the world.
6. **Common region:** objects located within the same location are perceived together.
7. **Common fate:** objects moving at the same direction and same speed are perceived together.

# Process of Memory



Can cows fly?  
What is the capital of France?

# Types of Memory

- **Implicit Memory:** Recalling of experiences without being conscious.
- **Explicit Memory:** Recalling of experiences/information through a conscious effort.
-

# Factors that facilitate memory

- **Strength of stimulus:** strong and interesting stimulus is easier to remember.
- **Repetition:** when we are repeated exposed to a stimulus it is easier to remember.
- **Association:** when a new stimulus is associated to an older one – particularly when related to the affective level, it is easier to remember.
- **Motivation:** when it is crucial for us to remember it is more likely that it is remembered.

# Dementia

- An acute condition of long-term but often gradual loss of memory and impaired thinking capacity.
- It could be caused by brain-injury;
- Or it could be degenerative condition - outcome of diseases such as Parkinson's, or Alzheimer;
- Some of these diseases could have a genetic component.

# Consciousness

- “Consciousness is the awareness of the outside world and one’s own mental processes, thoughts, feelings, and perceptions” (Bernstein et al., 2000, p.290).

# Levels of Consciousness

- ‘Waking’ Conscious Level
- Sleeping & Dreaming
- Altered consciousness as in a trance, drug induced state, and hypnosis.
- Nonconscious state: as under anaesthetics
- Preconscious level – mental events outside of awareness but can easily be brought into awareness (related to a distant memory).
- Unconscious – those that lie beyond recall.