PSYC20007

Cognitive Psychology

Summary Pages: Lectures 1-12

The University of Melbourne

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Summary — Lecture 1 (Intro to Cognition)

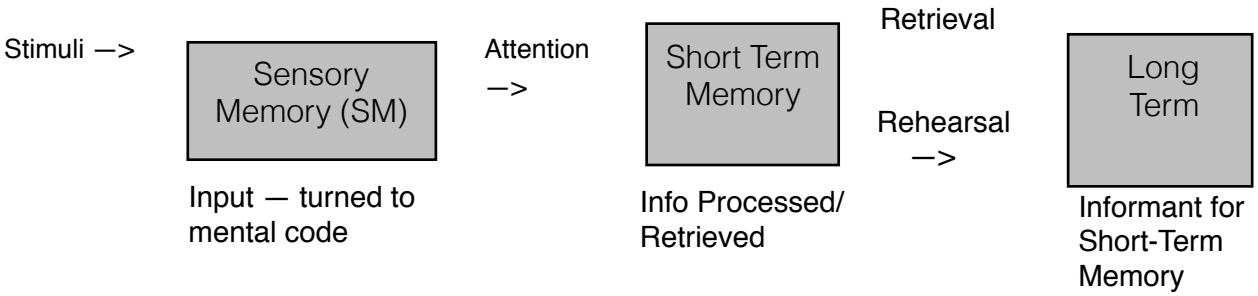
Cognition: To know; activity of acquiring, organising and using information for adaptive/goal-directed behaviour

- Information processing (learning, memory, attention, language, reasoning)
- Encoding, storing and retrieving knowledge
- Cognitive Agents: Sense and act on environment, detect and effect changes, construct mental models to present environment, guide future behaviour

The Computational Model of Cognition: Mind operating on symbols — flow of information through processing devices that encode/store/retrieve symbolic representations of knowledge

- Cognition operates like a computer (uses own language, gets translated into spoken language)
  - Brain as hardware
  - Mind as software (program)

Atkinson & Shiffrin Model of Memory (see lecture 6):



1. Classical Cognition:

- Mental manipulation of symbols using syntactic rules
- Symbols represent our knowledge of things and events (concepts) and how they can relate to each other — e.g. words; translate into language (publicly expressible format)
  - Problem-solving, reasoning
    - Steps used to solve a problem are represented by a symbolic code (good for logical reasoning)

Propositional Representation (see lecture 7): A Symbolic code used to express the meaning underlying particular relationships among concepts (e.g. "the cat is under the table" — relationship between elements)

- Independent of specific details of utterance/sentence/image (it is abstract)
- Composed of a predicate (relationship between elements; e.g. "is blue") and number of arguments (subject-object elements; meaning — e.g. "the sky")
  - E.g. "Gave" (agent, object, recipient)
    - John Gave Mary the Book — Gave is the predicate; The arguments are John, Book, Mary
    - Kevin Gave Julia a Kiss —> Gave is the predicate; The arguments are Kevin, kiss, Julia
- The predicate and number of arguments combine to represent complex relationships