

Course website:
<http://www2.sfu.ca/psychology/groups/faculty/spalek/Teaching/221/index.htm>

Really Excellent Ideas!

- keep up with text readings
- attend lectures/tutorials
- be on time at start and after break
- turn *off* cell phones before entering the room
- take part in demonstrations
- ask questions in class
- don't talk in class
- visit me in office hours

The SQ3R Study Method

- Survey
 - Skim the chapter by reading the:
 - title
 - introductory paragraph
 - each heading and subheading
 - all figures
 - italicized or bolded text
 - concluding paragraph
- Question
 - One section at a time, turn each heading into as many questions as you think will be answered in that section (you can add more as you go)
- Read
 - Read each section one at a time, looking for the answers to your questions, and generating new questions as needed

The SQ3R Study Method

- **Recite/Rehearse**
 - Stop after each section, recall each question and see if you can answer it from memory
 - If not, look back at the answer, and try again, do not go on to the next section until you can recite all of the answers from memory
- **Review**
 - Once you've finished a chapter, go back over all of the questions and see if you can still answer them (if not look them over again)
 - Review again after 24 hours, 1 week, and each month until exam

Don't Cram!

Definition of Cognition

- dictionary definition: knowledge from personal view or experience; perception; a thing known
- **gnosco** (Greek) = "to know"
- **cogito** (Latin) = "I think"
- Greek emphasizes structure; Latin emphasizes process
- **Cognitive psychology**: refers to all processes by which the sensory input is transformed, reduced, elaborated, stored, recovered, and used (Neisser, 1967)

Structure and Process

- **Structure/Representation**: the knowledge you possess; the information in your memory
- static vs dynamic = constant vs changing
- **Process**: an operation on an external stimulus or on an internal representation
- executing a process can use an existing memory representation, update or reinterpret an existing representation, or create a new representation

Cognition vs Performance

- **cognition** = what is actually going on in the mind
- **performance** = the observable behaviour that we must use as evidence of cognition
 - performance is an imperfect window on cognition—but it's all we have
 - Kant's "transcendental method" from observing effects to inferring their causes
 - First date/making dinner

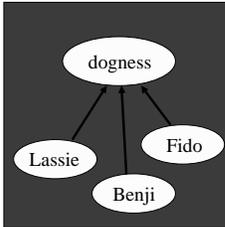
Diogenes of Apollonia

- around 500 B.C.?
- shifts emphasis from sensation/perception to the *integration* of sensory information
- "common sense"
- theory of air as the vehicle for cognition

Plato

- around 380 B.C.
- the object of mind
- universals as separate from particulars

Particulars & Universals



Plato

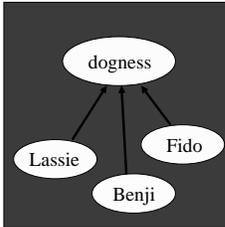
Plato's Wax Tablet Metaphor

- “Whenever we wish to remember something we see or hear or conceive in our own minds, we hold this wax under the perceptions or ideas and imprint them on it as we might stamp the impression of a seal ring. Whatever is so imprinted we remember and know so long as the image remains; whatever is rubbed out or has not succeeded in leaving an impression we have forgotten and do not know.”

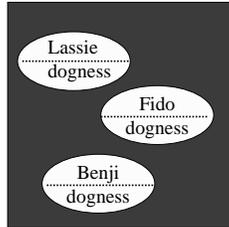
Aristotle

- around 350 B.C.
- “Tabula Rasa”
- universals as components of particulars
- doctrine of association:
 - contiguity
 - similarity
 - contrast

Particulars & Universals



Plato



Aristotle

St. Augustine

- around 500 A.D.
- memory in the stomach...
 - digest
 - ruminant
 - store
 - forget?

Germany – mid 1800's

- Helmholtz, Fechner, Weber, Donders
- developing ways to study how perception worked = the unobservable world of the mind
- **Psychophysics**: the systematic study of the relation between the physical characteristics of stimuli and the sensations that they produce

First Psychological Laboratory

- Leipzig, Germany –1879
- interested in simple (sensation, perception & attention) psychical processes
- not higher (e.g., memory) psychical processes
- introspection

Wilhelm Wundt

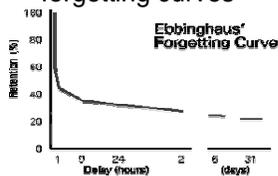
Structuralism

- Cornell (USA) – 1892
- introspection
- goal to find the structural elements of the mind
- final authority on what was correct

Edward Titchener

Hermann von Ebbinghaus

- Germany – 1885
- association formation
- nonsense syllables – CVCs
- savings
- forgetting curves



Functionalism

- Harvard - 1890
- functions of consciousness rather than its structure
- memory – 2 parts
- James-Lange – afraid because run

William James

Behaviourism

John B.
Watson

- U.S.A., 1915-1955
- very objective - reaction to Wundt and James
- only stimuli and responses matter
- goal is to catalogue connections between stimuli and responses
- avoid “mentalism”

B. F. (Fred)
Skinner

Birth of Cognitive Psychology

- Fall of Behaviourism; mediation
- Information/communication theory – Shannon & Weaver (1948)
- Linguistics and Psycholinguistics – Chomsky (1958)
- Computers and Computer Models – Newell, Shaw, & Simon (1958)
