
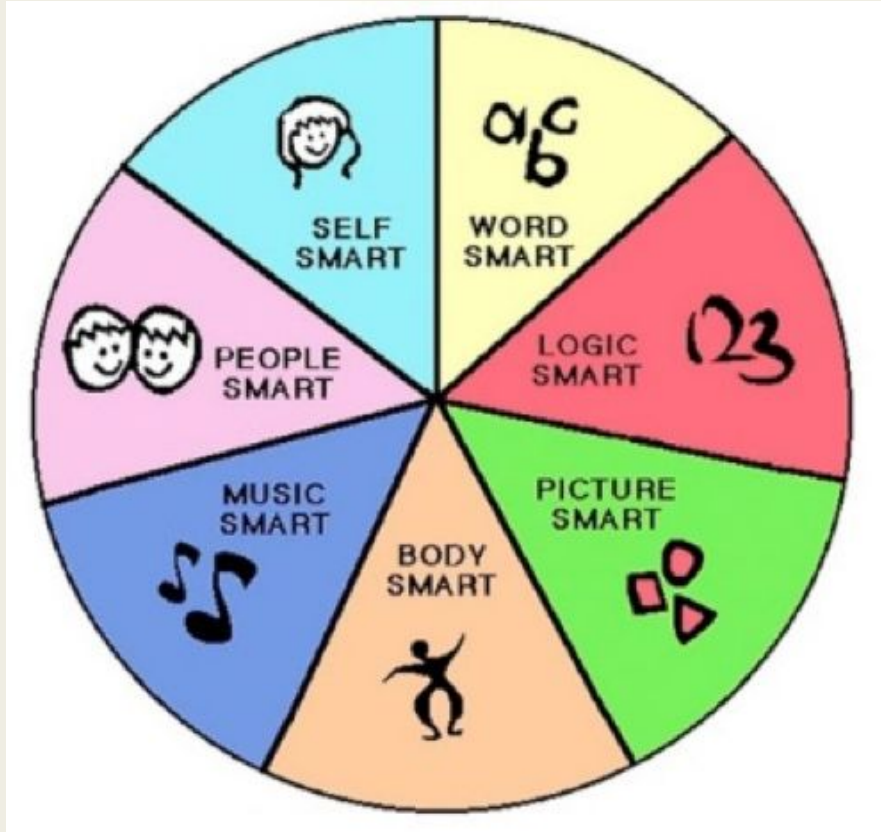


GENERAL PSYCHOLOGY 20

Principles of Learning

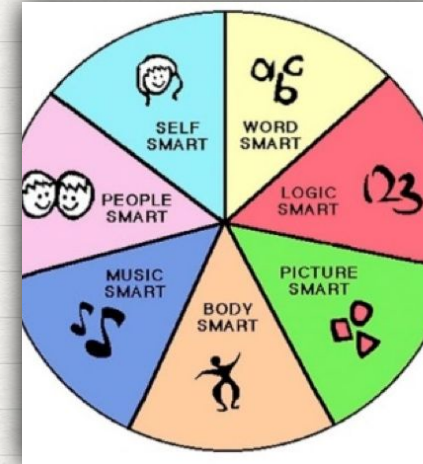


WHAT TYPE OF LEARNER ARE YOU?



Howard Gardner's 8 types of intelligence

1. Verbal/Linguistic intelligence: ability to use words & language
2. Logical/Mathematical intelligence: ability to use logic & work with #s
3. Visual/Spatial intelligence: ability to perceive the visual world accurately & create mental images
4. Kinesthetics intelligence: ability to control body movements & handle objects skillfully



5. Musical/Rhythmic intelligence: ability to appreciate & create music
6. Interpersonal intelligence: ability to relate to & understand others
7. Intrapersonal intelligence: ability to reflect on & understand yourself
8. Naturalistic intelligence: ability to sense patterns in & make connections to elements in nature

VISUAL

AUDITORY

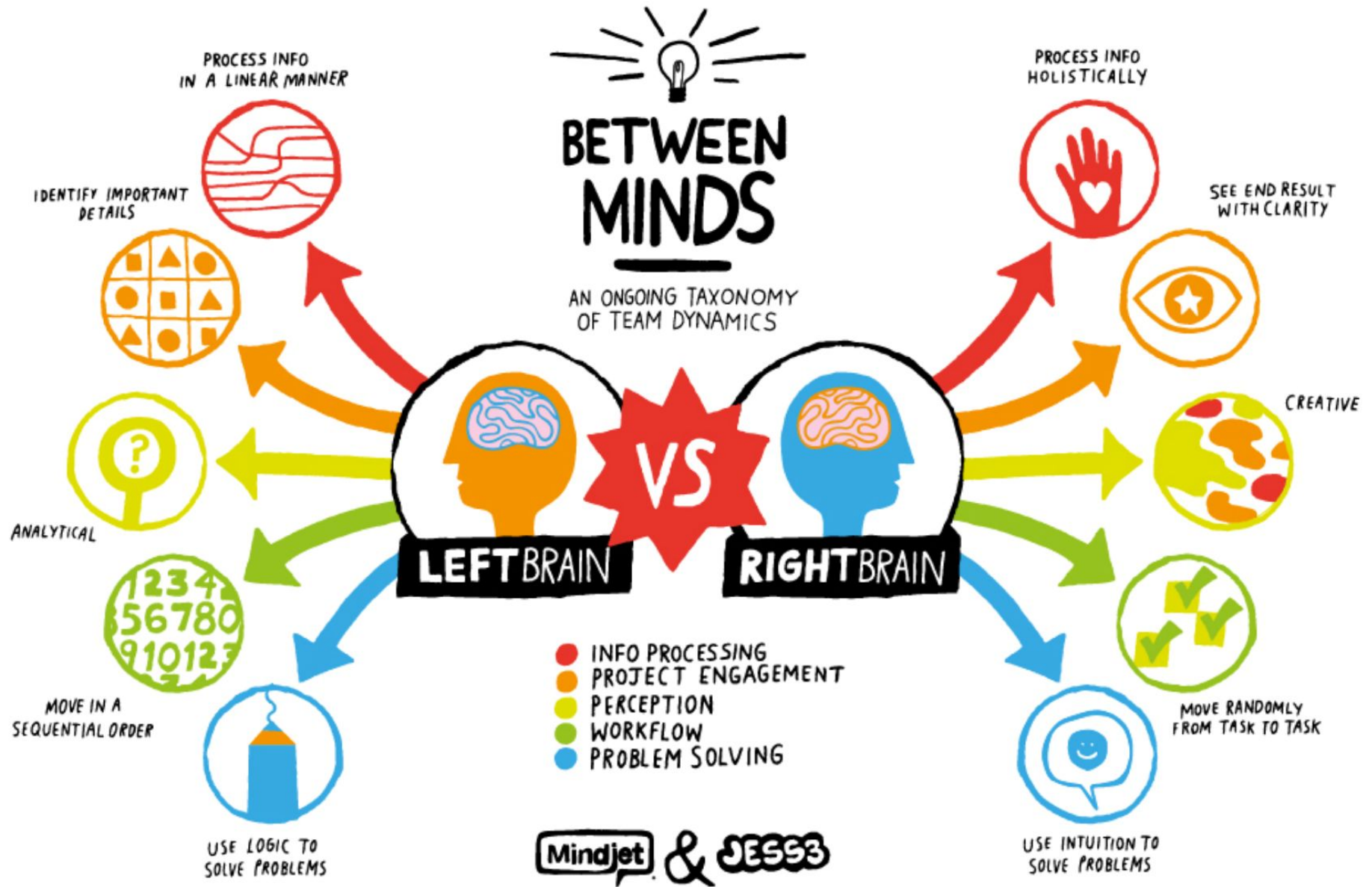
LEARNING STYLES

KINESTHETIC

WHAT IS YOUR PREFERRED LEARNING STYLE?

[HTTP://WWW.EDUCATI
ONPLANNER.ORG/STUD
ENTS/SELF-ASSESSME
NTS/LEARNING-STYLES
-QUIZ.SHTML](http://www.educationplanner.org/students/self-assessments/learning-styles-quiz.shtml)

	Visual	Auditory	Kinesthetic
What do you do when you are spelling?	I imagine what the word looks like when written.	I sound out the word or use a phonetic approach.	I write the word down to find if it feels right.
How do you learn something new?	I like to see demonstrations, diagrams, or videos.	I prefer verbal instructions or talking about it with someone else.	I ignore the directions and figure it out as I go along.
What do you like to do when relaxing?	I prefer to watch TV, see a play, or go to a movie.	I prefer to listen to the radio, play music, or talk with a friend.	I prefer to play sports or make something with my hands.



Which side is more dominant? Take a test: <http://similarminds.com/brain.html>



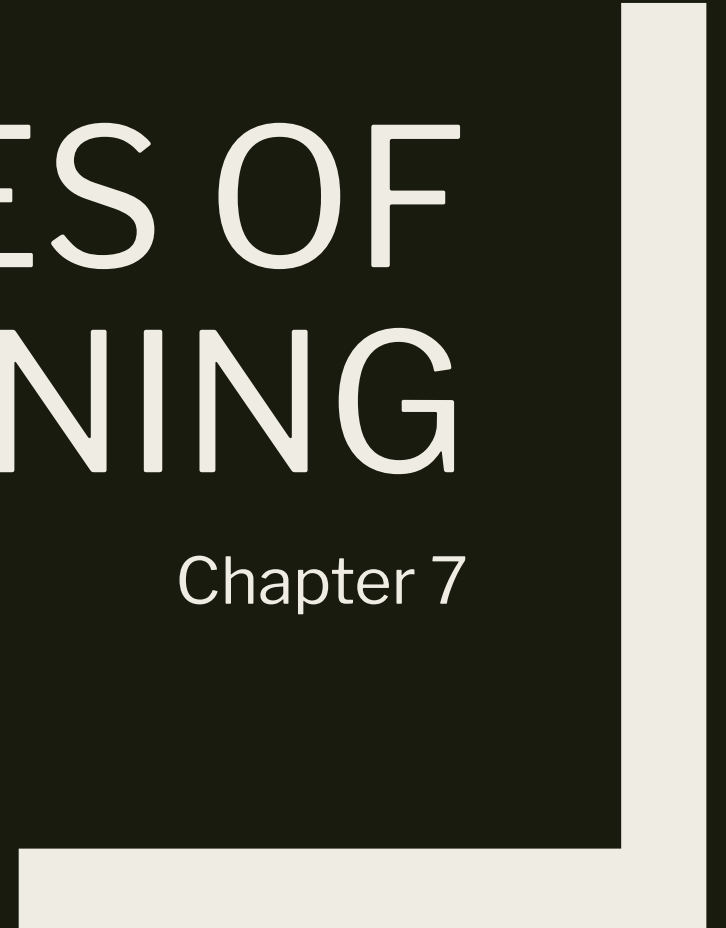
WHAT IS LEARNING?

What are some aspects involved in learning?

How do people learn?

PRINCIPLES OF LEARNING

Chapter 7



4 Types of Learning

Classical conditioning

- Making unavoidable physical association
- Example: food, salivation, feeder

Operant conditioning

- Learning caused by the consequences of actions we perform
- Example: pressing your finger on the edge of a knife is not a good idea

Social learning

- Learning by example
- Example: watching someone dive into a dark lagoon and not resurfacing tells you not to do that

Cognitive approach

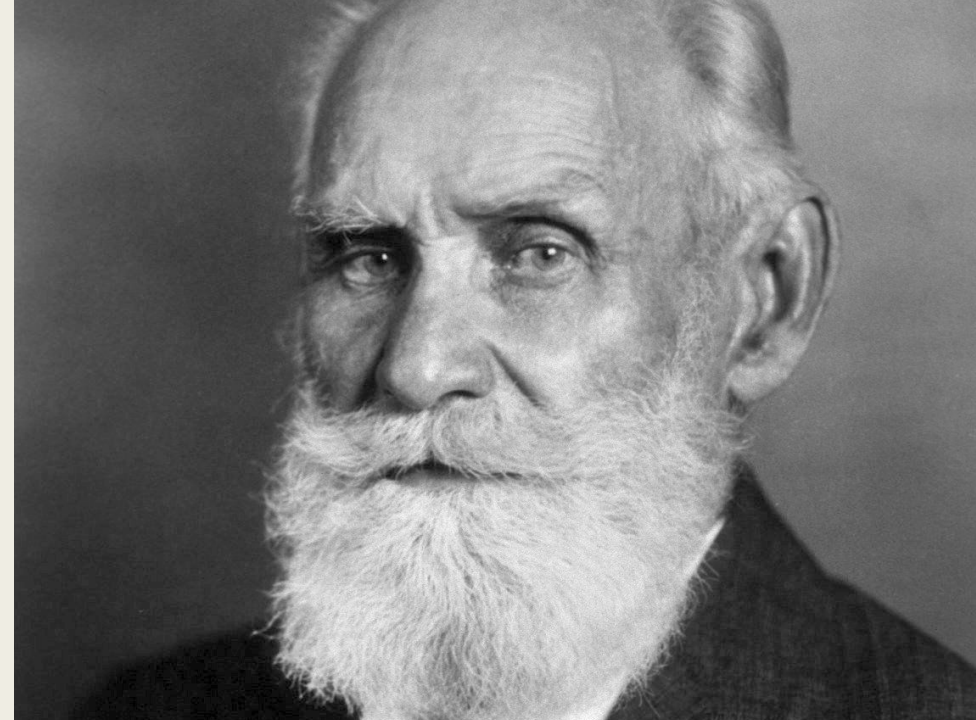
- Thought process in learning
- Example: step by step

CLASSICAL CONDITIONING



CLASSICAL CONDITIONING

- Ivan Pavlov, Psychologist
 - *What is the most important of his findings when he surgically separated a dog's esophagus from its stomach?*
- Why is it called “classical” conditioning



Classical Conditioning—terminology is key

Stimulus

- Anything that elicits a response
- Aka food

Response

- A reaction to a stimulus
- Aka salivation

Unconditional stimulus

- A stimulus that automatically/naturally elicits a response
- Meat causes salivation

Unconditioned response

- An automatic/natural response to a particular stimulus
- Aka salivating as a response to meat

Conditioned stimulus

- A previously neutral (or unconditioned) stimulus

Conditioned response

- A response to a stimulus that is brought about by learning—for example, salivating at the word pickle

3 Phases of Classical Conditioning

Before Conditioning

- UCS \square UCR
- This is automatic. No learning involved

During Conditioning

- NS + UCS \square UCR
- We pair the neutral stimulus with the unconditioned stimulus

After Conditioning

- CS \square CR
- The neutral stimulus is no longer neutral, it is conditioned
- It now produces a conditioned response, so we call the neutral stimulus a conditioned

1. Before conditioning



Food

Unconditioned stimulus



Salivation

Unconditioned response

2. Before conditioning



Tuning fork

Neutral stimulus



No salivation

No conditioned response

3. During conditioning



Tuning fork

+



Food



Salivation

Unconditioned response

4. After conditioning



Tuning fork

Conditioned stimulus



Salivation

Conditioned response

Crash Course!

- How to Train a Brain – Crash Course Psychology # 11
- Link: https://www.youtube.com/watch?v=qG2SwE_6uVM

Shall we
put an
example
together?

Before Conditioning

- $UCS \square UCR$
- *This is automatic. No learning involved*

During Conditioning

- $NS + UCS = UCR$
- *We pair the neutral stimulus with the unconditioned stimulus*

After Conditioning

- $CS \square CR$
- *The neutral stimulus is no longer neutral, it is conditioned*
- *It now produces a conditioned response, so we call the neutral stimulus a conditioned stimulus*

Example: Lemon drop box (NS) \square Lemon drop (UCS) \square
Salivation (UCR)

- Lemon drop box (CS) \square Salivation (CR)

OPERANT CONDITIONING



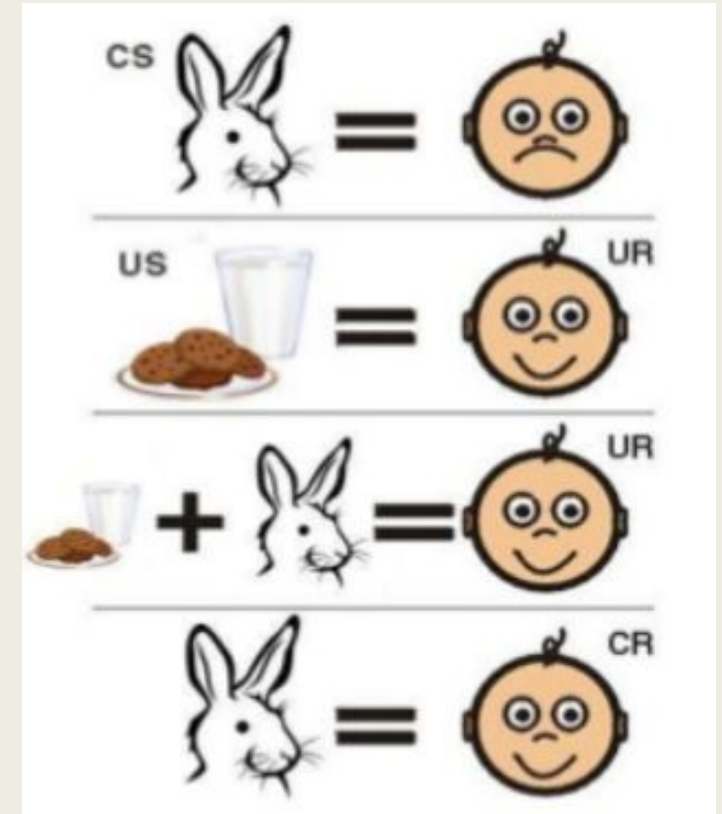
Poor Little Albert: Emotional Conditioning

- Watson furthered Pavlov's findings by demonstrating **stimulus generalization**
 - ***When a response can spread from one specific stimulus like the white rat to other stimuli resembling the original one in some way; the white rabbit that followed held the same reaction to the rat***
- Loud sound (UCS) □ Fear (UCR)
- Rat (NS) □ Loud sound (UCS) □ Fear (UCR)
- Rat (CS) □ Fear (CR)
- **Extinction:** the gradual loss of an association over time
- **Spontaneous recovery:** the sudden reappearance of an extinguished response



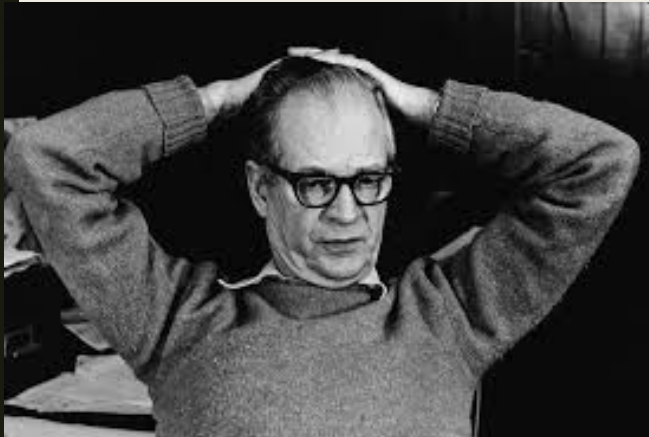
Removal of Fear – Mary Cover Jones

- A student of John B. Watson's
- Researched learned phobias
- Famous experiment: "Peter and the Rabbit"
- Peter was afraid of rabbits, but she would have Peter eat a food he found pleasurable and slowly bring the rabbit closer to him at the same time
- Eventually Peter became less afraid of the rabbit through Mary's process of **counter conditioning**



OPERANT CONDITIONING

■ B. F. Skinner, Psychologist



- **Operant Conditioning:** behaviour that is learned or avoided as a result of its consequences
 - *Aka, conditioning that results from the individual's actions and the consequences they cause*
- What is the difference between Classical Conditioning and Operant Conditioning?
- Voluntary Response □ Reinforcement □ Voluntary Response is repeated
- Example:
 - *Work hard □ Earn a raise □ Continue to work hard*

Operant Conditioning Processes —terminology is key

Reinforcement

- **Primary reinforcement**
- **Secondary reinforcement**
- **Positive reinforcement**
- **Negative reinforcement**

Punishment

Generalization and Discrimination Learning

Extinction

Shaping and Chaining

OCP – Terminology cont'd

■ Schedules of Reinforcement

- *A tactic used in operant conditioning that influences how an operant response is learned and maintained. Each type of schedule imposes a rule or program that attempts to determine how and when a desired behavior occurs. Behaviors are encouraged through the use of reinforcers, discouraged through the use of punishments, and rendered extinct by the complete removal of a stimulus.*

■ Schedules of Reinforcement

- *Continuous Reinforcement*
- *Partial Reinforcement Schedule*
- *Variable Ratio Schedule*
- *Fixed Ratio Schedule*
- *Variable Interval Schedule*
- *Fixed Interval Schedule*

Key Points to Remember

- A [reinforcement](#) schedule is a tool in [operant conditioning](#) that allows the trainer to control the timing and frequency of reinforcement in order to elicit a target behavior.
- Continuous schedules reward a behavior after every performance of the desired behavior; intermittent (or partial) schedules only reward the behavior after certain [ratios](#) or [intervals](#) of responses.
- Intermittent schedules can be either fixed (where reinforcement occurs after a [set](#) amount of time or responses) or variable (where reinforcement occurs after a varied and unpredictable amount of time or responses).
- Intermittent schedules are also described as either interval (based on the time between reinforcements) or ratio (based on the number of responses).

SOCIAL LEARNING

Children see, children do

<https://www.youtube.com/watch?v=KHi2dxSf9hw>

SOCIAL LEARNING

- Albert Bandura, Psychologist
- Learning from the behaviour of others
- **Observational Learning:** a form of social learning, the organism/person observes and imitates the behaviour of others
- No specific reinforcement required to learn
- The Bobo Beatdown:
<https://www.youtube.com/watch?v=128Ts5r9NRE>

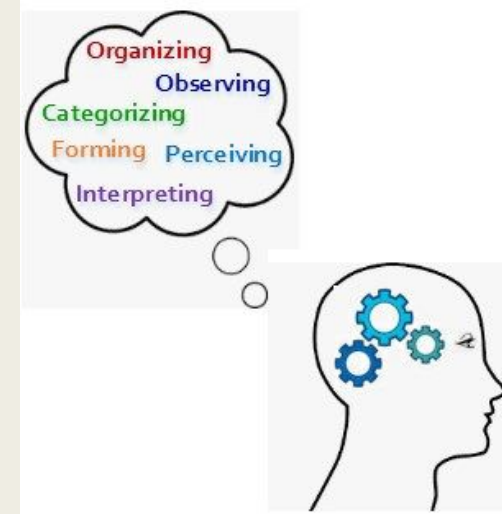
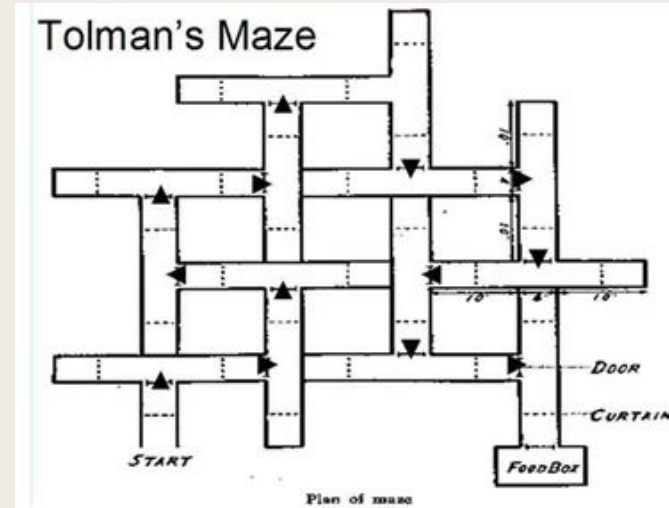


COGNITIVE LEARNING

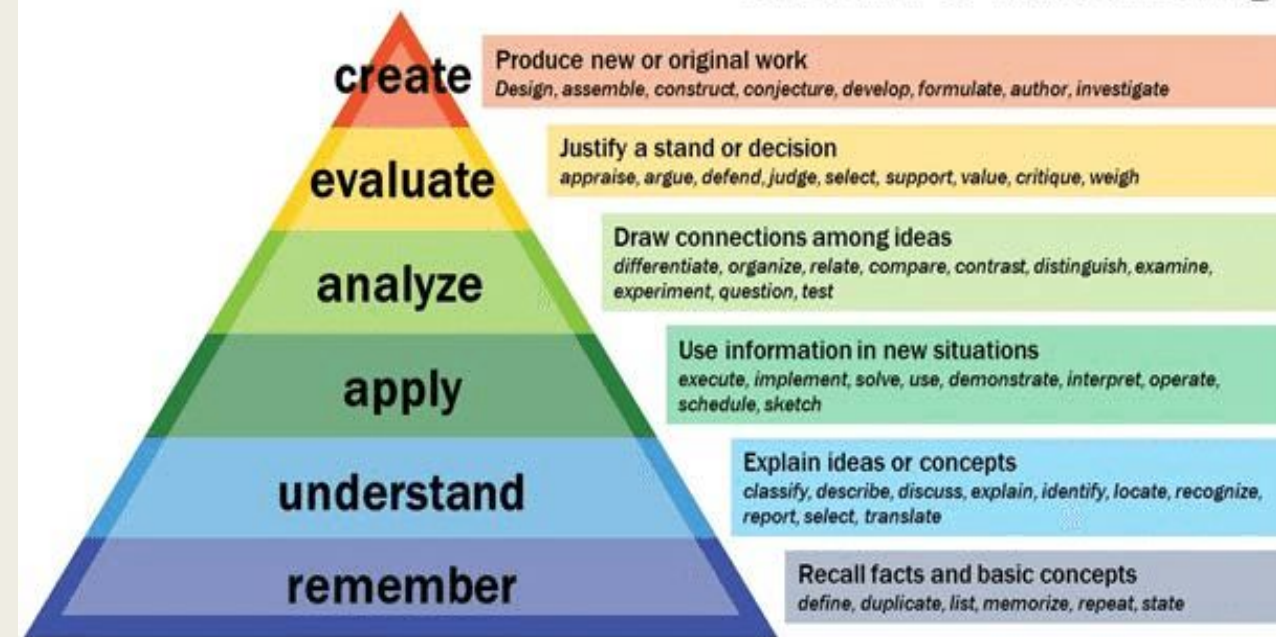


COGNITIVE APPROACH

- An approach to the study of learning that emphasizes abstract mental processes and previous knowledge
 - *Superstitions*
- Complexities of conditioning:
 - *There are other factors to take into account; ie. Surrounding environment (cage size), length of experiment, age of Little Albert, etc. they all make a difference*
 - A difference that previous theorists did not account for or may not have been aware of
 - *Latent (hidden) learning*
 - *Expectancies*
 - *Reinforcement value*
- Cognitive Maps
 - *A mental image of where one is located in space [environment]*
 - *Strategies: methods for solving problems*



Bloom's Taxonomy



Classical
Conditioning

*Learning by
association*

Operant
Conditioning

*Learning through
reinforcement*

Social
Learning

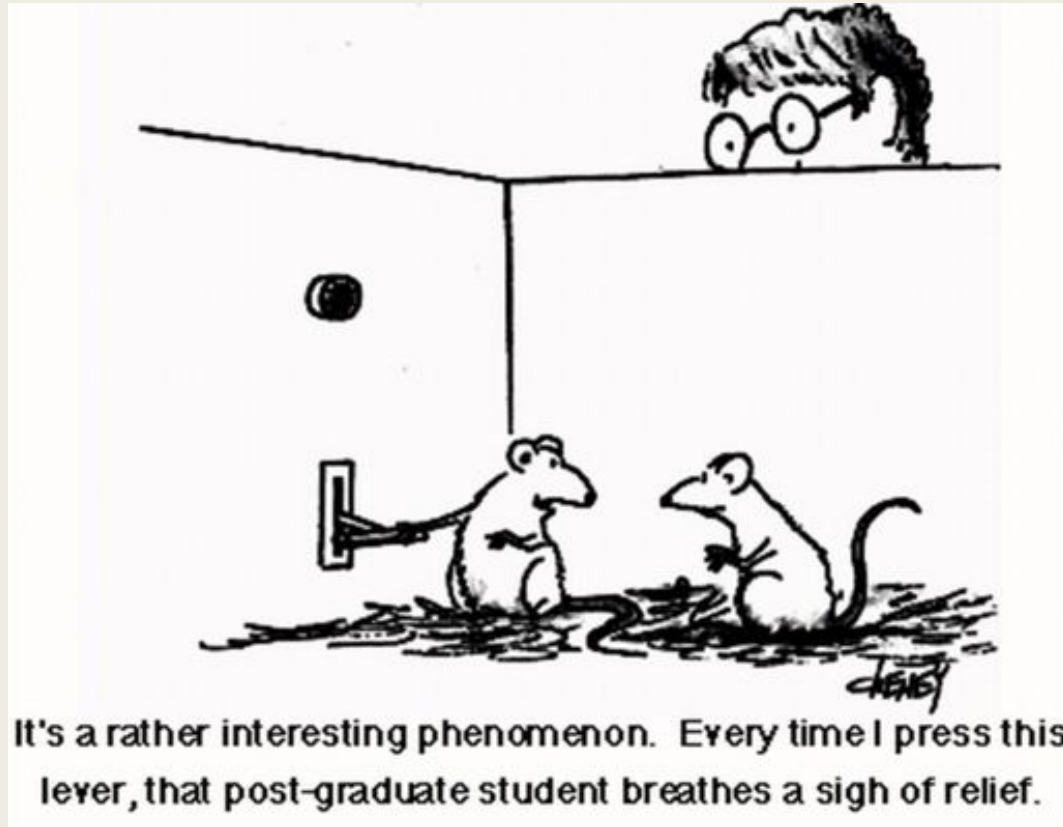
*Learning by observation
and imitating*

Cognitive
Learning

*Learning through
mental processing*

4 Types of
Learning

Now it's your turn...



**DUE: Wednesday, February 16,
2022**

- Choose **ONE** of the four types of learning
- Break down the type of learning into steps
- Create a comic strip that will demonstrate each step along with an informative caption
 - *The captions must demonstrate your knowledge of the concept and development of ideas throughout the comic*
- Be creative with your images and ensure that they are consistent with the steps