Classical vs. Operant Conditioning

- Classical conditioning - learning that takes place without any choice, takes place beyond your control.
- Operant conditioning - conditioning that results from the individuals actions and consequences they cause.
- The theory of operant conditioning claims that humans and animals learn as an end product of performing certain actions.
B.F. Skinner

- Best known for his work with operant conditioning
- Believed that how we turn out in life is a result of what we learned from the operations we’ve made over years.
- If you study hard and do good on a test, then you will tend to keep studying hard until you get a bad grade.
- Once you get a bad grade on a test, you tend to lose your desire to study hard.
Operant Conditioning Process

- Reinforcement- follows a response and strengthens tendency to repeat response
  - A. primary reinforcement- something that is used as a reward that is necessary for survival (strongest incentive, food and water).
  - B. secondary reinforcement- represents or relates to the primary enforcer (attaining money to pay for essentials).
Operant Conditioning Process Continued

- C. positive reinforcement - when something an organism wants is added on after action.
- D. negative reinforcement - when something unpleasant is stopped or taken away after action.
- Both strengthen response
Types of reinforcement

- Punishment
- Generalization
- Discrimination
- Extinction
- Shaping
- Chaining
Punishment

- An attempt to weaken your response by following it with something unpleasant
- Two ways to punish
  - Take something desired away
  - Something unwanted can be added
- Goal is to weaken behavior
Generalization

- A behavior that spreads from one situation to a similar one
- Example:
  - Boy pats a dog on the head
  - Gets a wagging tale
  - Pats a different dog on the head
  - Gets same reaction
Discrimination

- Learning to tell the difference between one event and another

- Example:
  - A baby girl hugs her father and says “dada” and receives praise
  - Then begins to call everyone “dada” and does not get same positive reinforcement
  - She discriminates between who is really her dad and who isn’t
Extinction

- Associations weakened either because unconditioned stimulus or reinforcement are no longer present.
  - Example: A dog is conditioned to associate the smell of food with a whistle, producing the response of hunger.
  - If smell of food no longer paired with whistle, response of hunger goes away.
Shaping

• The process of gradually refining a response by successively reinforcing closer approximations of it.
• Example: A dog being trained to jump through a hoop.
  - A. Dog is praised for approaching the hoop
  - B. Dog is reinforced for walking through the hoop
  - C. Then is shaped to jump through the hoop that is a few inches off the ground.
Chaining

- Reinforcing the connection between the parts of a sequence
- Example: Playing a sport
  - A. Learn the skills and plays first
  - B. Then put them together like a chain
- Other example are a seeing eye dog
Reinforcement

- Continuous reinforcement: Each time desired behavior occurs, it is reinforced.
  - Not always a good method because it relies on constant reinforcement, and once reinforcement disappears response will fail.
  - Solve by using schedules of reinforcement

- Types of partial reinforcement (no constant reward for each time desired act is performed)
  - Variable ratio schedule
  - Fixed ratio schedule
  - Variable interval schedule
  - Fixed interval schedule
Variable Ratio Schedule

- Reinforcement occurs after a desired act is performed a specific but variable number of times.
- Example: Slot machines
  - Don’t know interval at which money (reinforcement) will come
  - continue to play until win as opposed to quitting right away if money was given every time
Fixed Ratio Schedule

- The reinforcement occurs after a desired act is performed a fixed number of times.
- This can be bad in a factory by:
  - Workers get paid by the number of components they produce.
  - This will cause them to work faster to make more money.
  - Leads to half of the work done end up with a worse end product.
Variable Interval Schedule

- Person or animal never knows when the reinforcement will arrive

Example Fishing

- A. Wait and wait for fish
- B. Hope a fish will come and never know on time it will happen.
**Fixed Interval Schedule**

- Gives a reward after a fixed amount of time went by
- Example: Paycheck
  - A. Work for 8 hrs
  - B. Get paid for the work done