1. Classical Conditioning
   1. In humans
      1. Taste aversion
         1. One trial learning of taste aversion is biologically adaptive
         2. It only takes one time getting sick before you never want to eat that food again
         3. You can get sick up to twelve hours later and you’ll still develop an aversion to that food
         4. So strong that even if you know it’s OK you’ll still develop an aversion to it
         5. You can get a taste aversion to alcohol
            1. The problem with alcohol is the immediate benefit overrides the nausea
         6. Chemotherapy causes people to be nausea. They would eat their favorite foods, then get chemo, be nausea, and have a taste aversion to their favorite foods.
         7. Scape goat flavor
            1. Very distinctive flavor. They eat it before every treatment. The aversion is built upon the scape goat instead of the real food. They become forced to eat this even after the aversion is created. Examples: Pistachio ice cream
      2. Aversion therapy
         1. Used when you’re trying to stop or eliminate some destructive habit or behavior.
         2. You pair whatever you’re trying to eliminate with something negative.
         3. Antabuse
            1. Taken by individuals who are trying to stop drinking.
            2. If you take it without alcohol you’re fine
            3. If you take it with alcohol you’ll get very sick
            4. The point is to create a taste aversion to alcohol
            5. Works very well in the short term, not necessarily in the long term.
      3. Rat example
         1. Rats were given sweet water but with a drug that caused them to get nauseous. They developed an aversion to the sweet water
         2. US (drug) -> UR (nausea)
         3. CS (sweet water) -> CR (nausea)
         4. Suppressed immune system, even without the drug present and given the sweet water their immune system was lowered.
      4. Chemo example
         1. US (Chemo) -> UR (Suppressed immune system)
         2. CS (hospital room) -> CS (Suppressed immune system)
         3. Even though they aren’t getting chemo, due to the aversion, the hospital room causes their immune system to become suppressed.
      5. Advertisers
         1. Couple the product with an attractive person
         2. Study
            1. A group of men watch a car commercial, with an attractive woman
            2. They rated the car with higher safety features, mpg, etc than those who watched the commercial without the attractive woman.
2. Operant Conditioning
   1. A type of learning in which an animal learns an association between an action you produce and its consequences that follow it.
   2. Voluntary
   3. Animals behave in ways that produce desirable outcomes
   4. Skinner box
      1. Put a rat in a cage
      2. The rat would have to press a lever in order to get food
      3. At first the rat, by chance, the rat hit the levers. He gets food
      4. The next time he’s placed in the cage, by chance, he’ll find the lever and get food.
      5. In enough times he will learn the connection between the lever and food
      6. The first factor is the response itself (lever)
      7. The second factor is the consequence that follows (being fed)
      8. When your dog choses to sit on command, the consequence is that he gets a treat.
   5. Shaping by successive approximations
      1. Guide the animal by a certain behavior
      2. You may reward the rat for turning towards the lever.
      3. You then may want to reward it for walking towards the lever
      4. You then may only want to reward it for turning, walking, then hitting the lever
   6. Types of reinforcement
      1. Reinforcement
         1. Any stimulus that increases the likelihood of a prior response
            1. Positive reinforce strengthen prior responses through presentation of stimulus

Example: Getting money for getting A’s in HS. Doing your chores in order to get your allowance. Airline reward programs

* + - * 1. Negative reinforce strengthens response through removal of aversive stimulus

Example:

Cleaning up your room to avoid getting punished. Doing your reading ahead of time so you’re not embarrassed the next day when you are called on. Still increasing the behavior, by taking something out of the situation.

Working much harder to avoid something negative

* + - 1. Punishment
         1. Any stimulus that decreases the likelihood of a prior response

Positive punisher weakens response through presentation of aversive stimulus

Introducing something into the environment

Example

Spanking the kid when they do something wrong

Getting a speeding ticket for speeding

Shocking a lab rat every time it did something wrong

Negative punisher weakens response by removal of pleasurable stimulus

Example

Sending the kid to bed without dessert for breaking the rules

Taking the car away from a teenager who broke curfew

* + 1. The easiest way to figure out which four it is
       1. It is a behavior you want to increase? Reinforcement
       2. Is it a behavior you want to decrease? Punishment
       3. Now look at the positive or negatives
       4. Are you bringing something into the situation? Positive
       5. Are you taking something away into the situation? Negative
  1. Practical Applications
     1. Behavior Modification
        1. Used with those with severe emotional problems
        2. Structures the reinforcement that somebody receives so that it will modify or shape more productive behavior.
        3. Used to teach social, self care, educational skills.
        4. Controversial application
           1. Used on children who are autistic
           2. Some autistic children are prone to banging their head. There’s a device that has a light weight head band with an arm band, any time they bang their heir head they get shocked. Positive punishment
     2. Superstitious behavior
        1. Randomly associated behavior with reward
     3. Learned helplessness