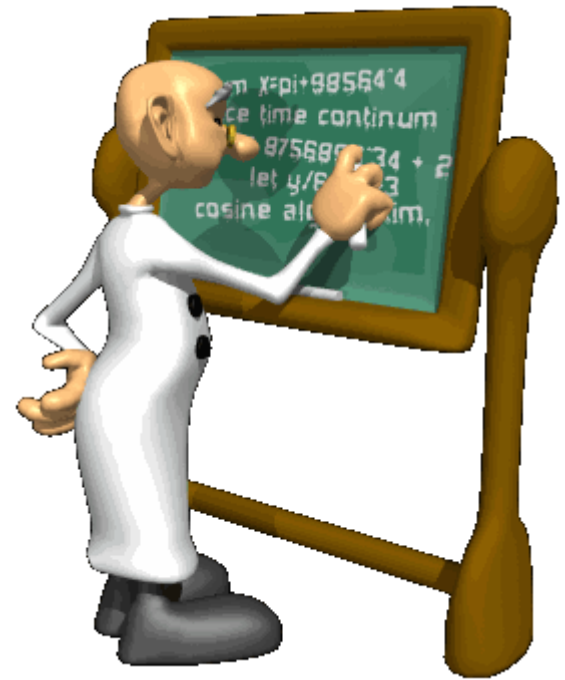


Pavlov spent the rest of his life outlining his ideas. He came up with 5 critical terms that together make up classical conditioning.

- Acquisition
- Extinction
- Spontaneous Recovery
- Generalization
- Discrimination



# Acquisition

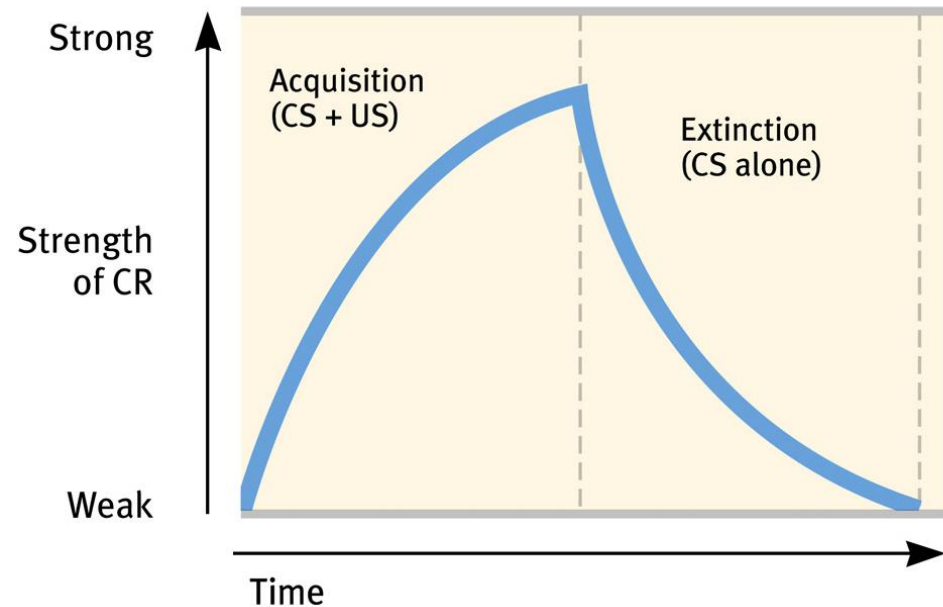
- The initial stage of learning.
- The phase where the neutral stimulus is associated with the UCS so that the neutral stimulus comes to elicit the CR (thus becoming the CS).

Does timing matter?

- The CS should come before the UCS
- They should be very close together in timing.

# Extinction

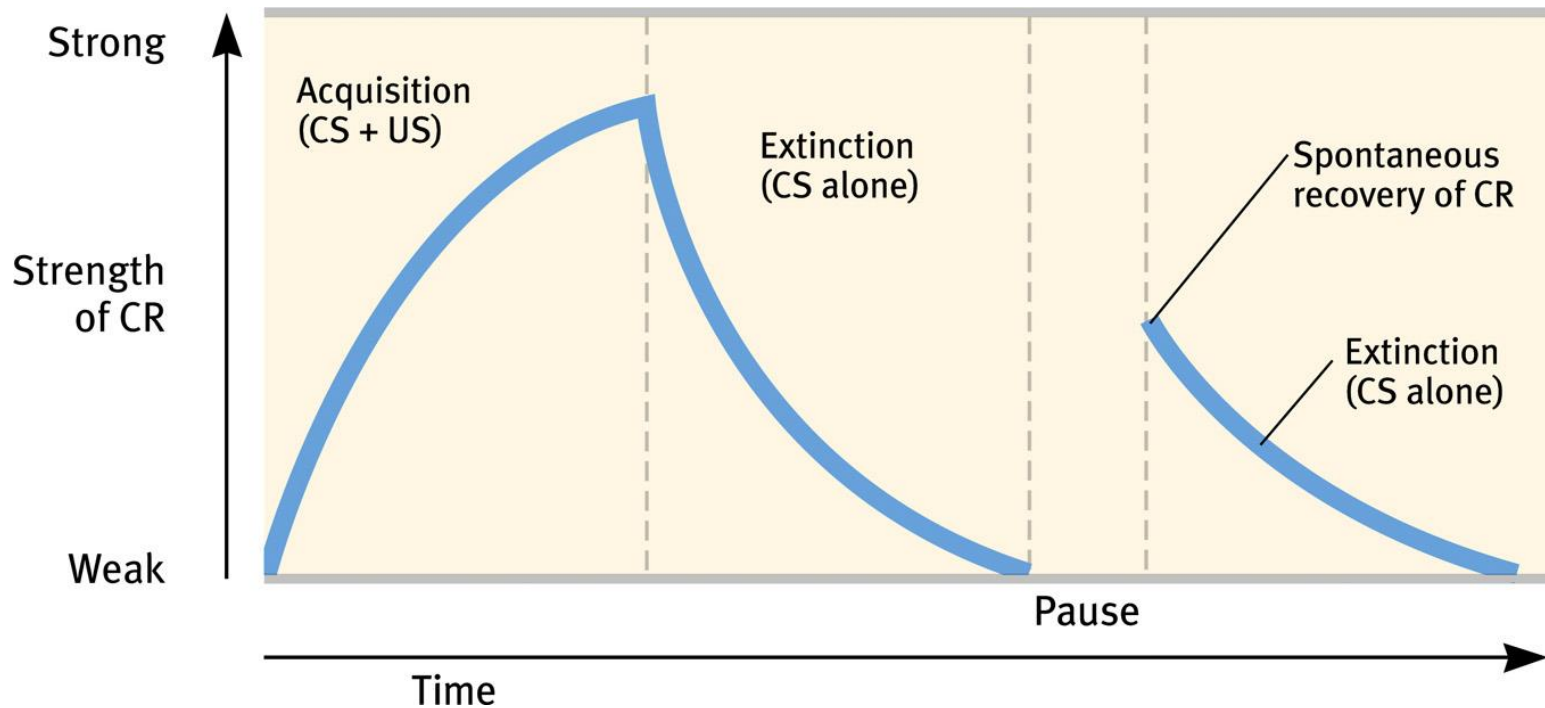
- The diminishing of a conditioned response.
- Will eventually happen when the UCS does not follow the CS.



Is extinction permanent?

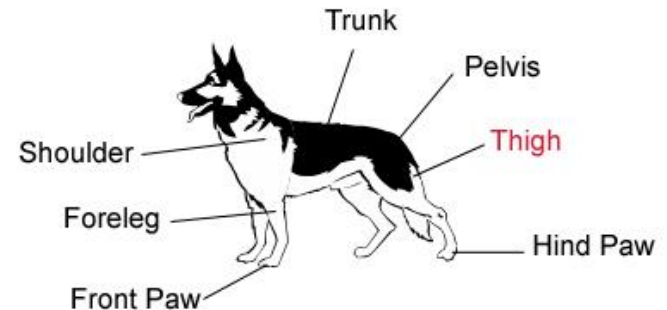
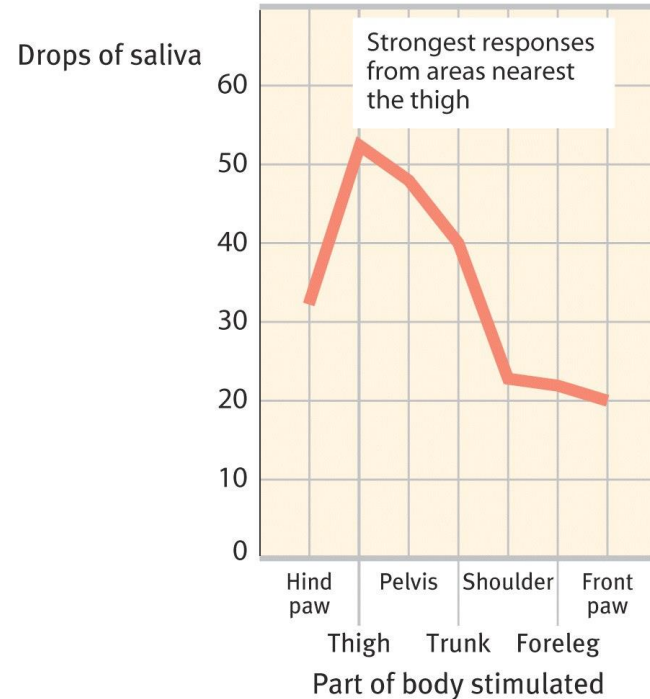
# Spontaneous Recovery

The reappearance, after a pause, of an extinguished conditioned response



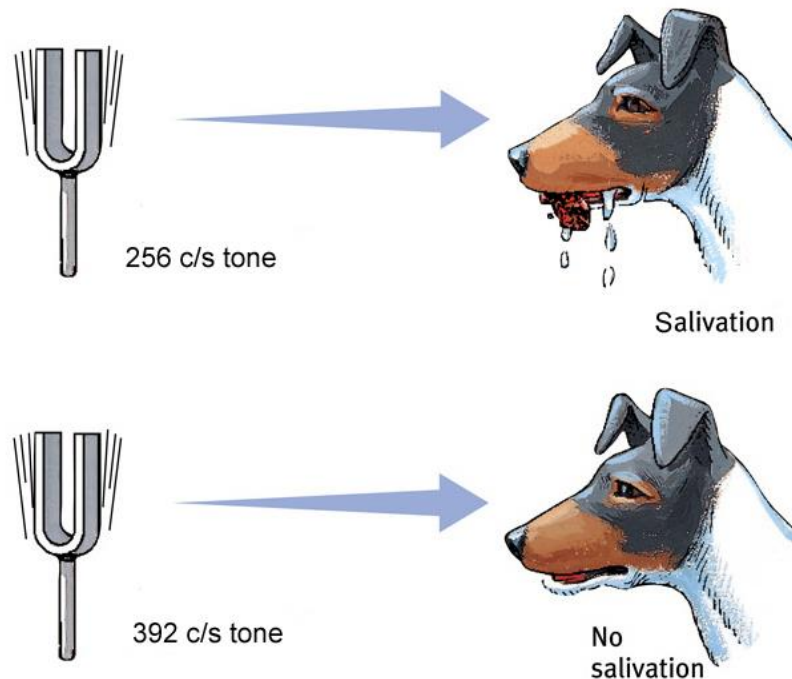
# Stimulus Generalization

The tendency, once a response has been conditioned, for stimuli similar to the conditioned stimulus to elicit similar response



# Stimulus Discrimination

The learned ability to distinguish between a conditioned stimulus and other stimuli that do not signal an unconditioned stimulus.



# Extending Pavlov's Understanding

Pavlov (and Watson) considered consciousness, or mind, unfit for the scientific study of psychology. However, they underestimated the importance of **cognitive processes** and **biological constraints**.

“mindless mechanisms”

# Cognitive Processes

Rescorla & Wagner

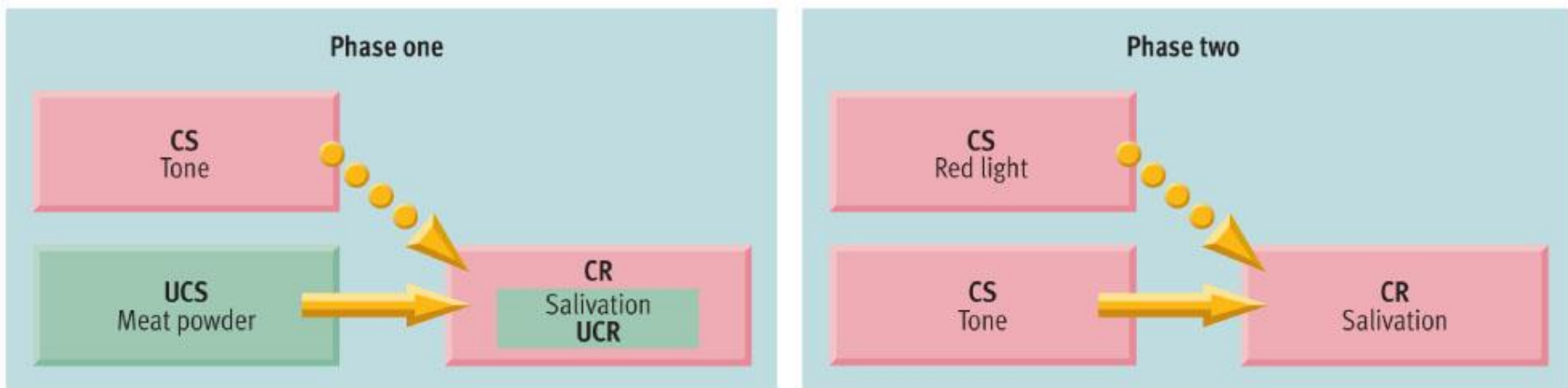
An animal can learn *predictability* of an event. For example:

- If a shock is preceded by a tone, a rat will learn to fear the tone.
- If a light is then added as a CS at the same time as the tone, the light will *not* elicit the CR on its own.
- Although the light also signals the coming shock, it provides no new information.
- The rat essentially learns predictability through expectancy and awareness, which is a function of cognition.



# Higher-order conditioning

- A well-learned CS is paired with an NS to produce a CR to the NS.
- For example: If you taught a dog to salivate (CR) to a bell (CS) then flashed a light just before you rang the bell, your dog could learn to salivate to the light without food ever being directly associated with it.



# Biological Predispositions

Early behaviorists such as Pavlov and Watson believed that laws of learning were similar for all animals. Therefore, a pigeon and a person do not differ in their learning.

However, behaviorists later suggested that *learning is constrained by an animal's biology.*

Biopreparedness - We are more likely to become conditioned to things that make biological sense. (Easier to be conditioned to fear snakes than teddy bears.)