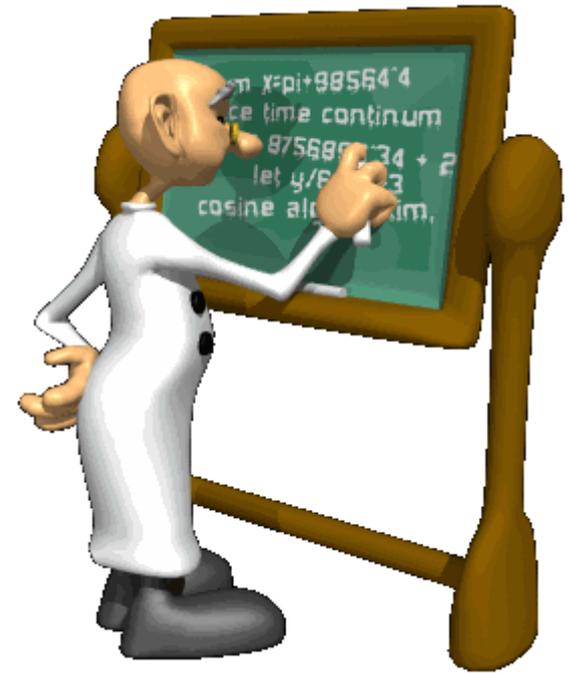


Pavlov spent the rest of his life outlining his ideas. He came up with 5 critical terms that together make up classical conditioning.

- Acquisition
- Extinction
- Spontaneous Recovery
- Generalization
- Discrimination



Acquisition

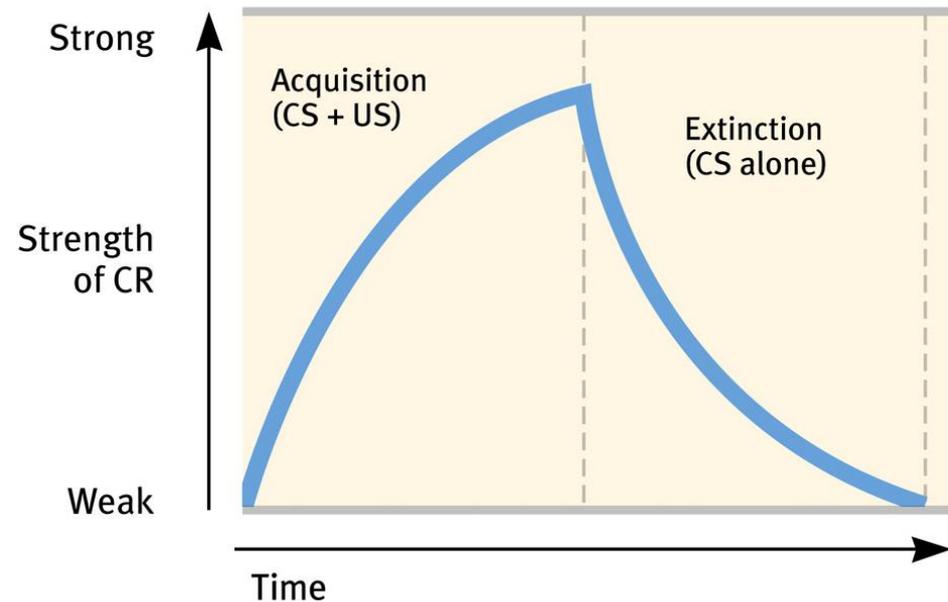
- The initial stage of learning.
- The phase where the neutral stimulus is associated with the UCS so that the neutral stimulus comes to elicit the CR (thus becoming the CS).

Does timing matter?

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

Extinction

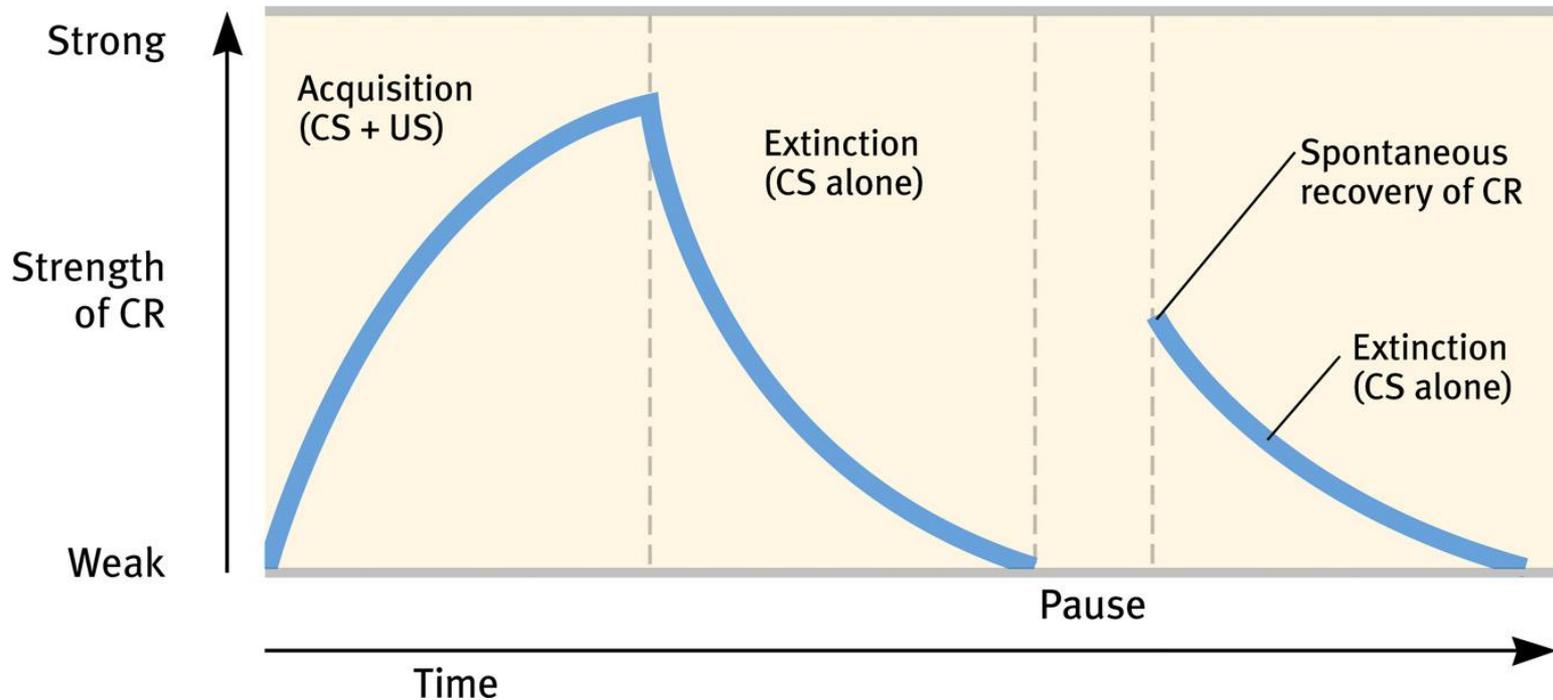
- The diminishing of a conditioned response.
- Will eventually happen when the UCS does not follow the CS.



Is extinction permanent?

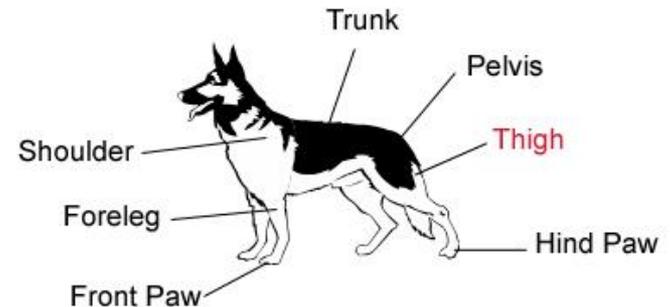
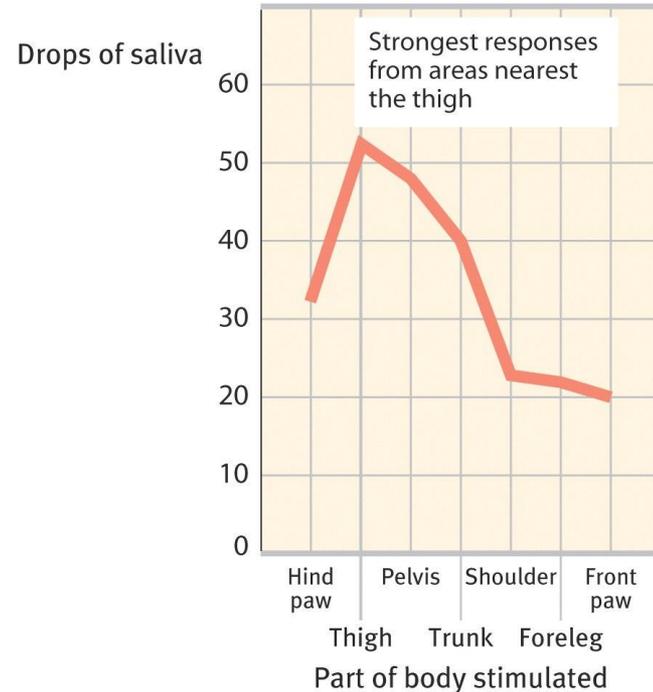
Spontaneous Recovery

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



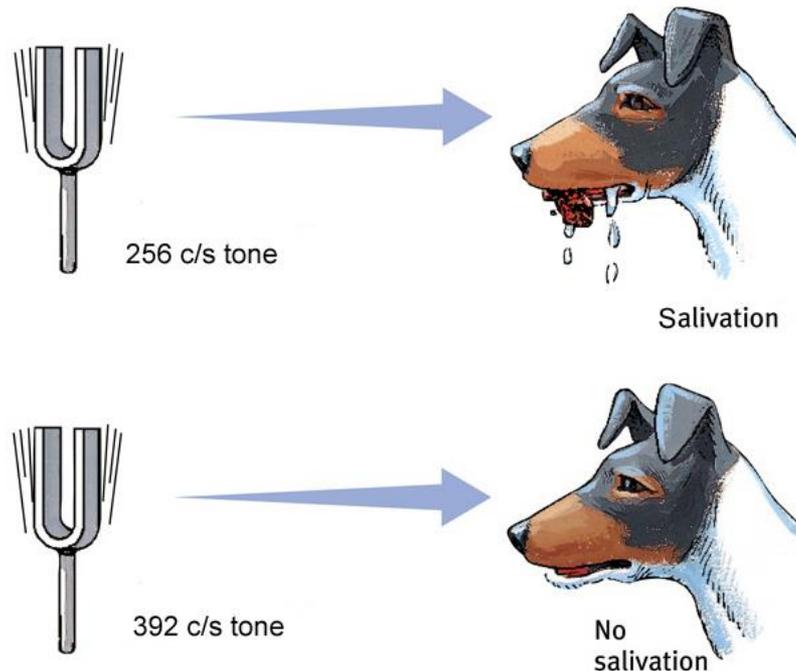
Stimulus Generalization

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

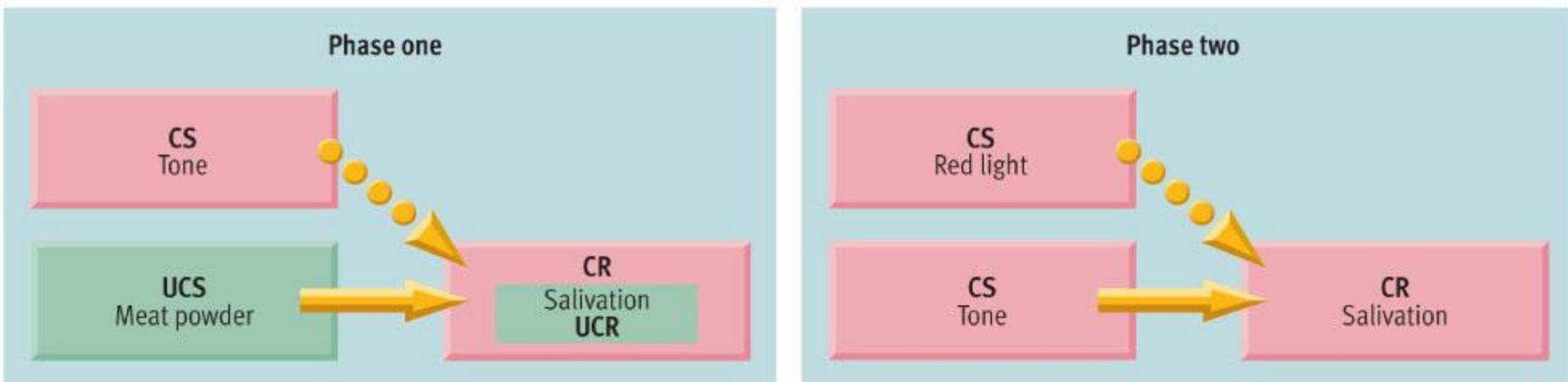
Rescorla & Wagner

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.)

One-Trial Learning & Taste Aversion



- A taste aversion is a conditioned response that results from a person or animal establishing an association between a particular food and being or feeling ill after having consumed it at some time in the past.
- The association is usually the result of a single experience, and the particular food will be avoided in the future.
- One trial learning is like classical conditioning but is not classical conditioning nor a type of classical conditioning.

Taste Aversion & One Trial Learning

- A classically conditioned response - acquired after a number of associations
- *A conditioned response (taste aversion) occurring through one-trial learning - acquired extremely quickly.*
- Importantly, in classical conditioning, the CS and the UCS occur closest together.
- *In one-trial learning however, the CR (the feeling of illness) that becomes mentally associated with food could occur as much as a day or so after the food (CS) was consumed.*
- Generalization is rare in one-trial learning, and it is more resistant to extinction.

Example of taste aversion with a positive outcome

