



Operant vs Pavlovian

Summary and Comparison

Operant/Instrumental Learning

- Operant or Instrumental Learning is primarily about control; the animal learning that it can **control or affect outcomes** of certain situations **by its behaviour**
- The animal learns that **it can affect what happens** to it by offering/doing different behaviours
- In Operant Learning there is a response contingency. **If I do 'A' then** B will happen and **if I don't do** a 'A' then no B
- If I sit I will get a treat → **expectation**
- There is a response (specific behaviour) required to receive a reward (stimulus)
- Initially it is response-stimulus learning (R-S learning). Learning that a certain response (behaviour) will result in a stimulus (consequence)
- If we want the behaviour on cue at a later stage, the animal learns that in order to receive a reward, a specific response is required **when I receive a specific cue**
- The reward is only available when the cue is given (window of opportunity)
- Stimulus-Response-Stimulus (S-R-S) learning: The animal learns that when I receive a specific cue (stimulus), I should offer a specific behaviour (response) if I want to receive a reward (stimulus) and/or to avoid something aversive happening
- **I can control** what happens to me → **empowerment**
- I can get rewards and things I want by behaving in certain ways, at the right time
- I can escape from or prevent the occurrence of (avoid) aversive events by behaving in certain ways, at certain times

Pavlovian/Classical Conditioning

- The animal doesn't have any control over what happens in Pavlovian Conditioning; the outcome is **not contingent** on the behavior
- Pavlovian conditioning is primarily about predictive relationships between things/events
- Learning what things are connected and when they are likely to occur (e.g. when you put the lead on I am going for a walk or doing some training)
- When 'X' happens **I can predict** that 'Y' will follow
- Stimulus-Stimulus (S-S) learning: Learning the association between 2 stimuli (e.g. click and food)

Summary

- In very simple terms, Pavlovian Conditioning is learning about associations – Operant Conditioning is learning about consequences
- There is definitely significant overlap between Operant and Pavlovian processes
- As Pavlovian deals with predictive relationships, virtually any time you are interacting with the animal, including any training sessions using operant learning, the dog is learning associations and predictive relationships
- The practical reality is that two are never completely separate (except arguably in very specific controlled laboratory experiments)

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