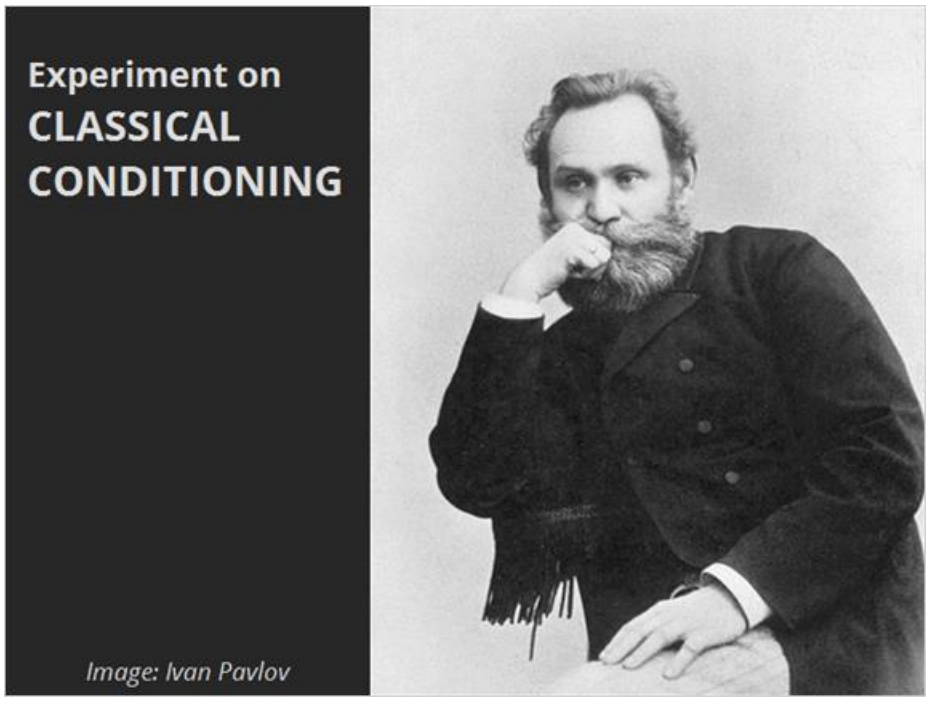
Module 6: Learning and Memory
Topic 1 Content: Experiment on Classical Conditioning

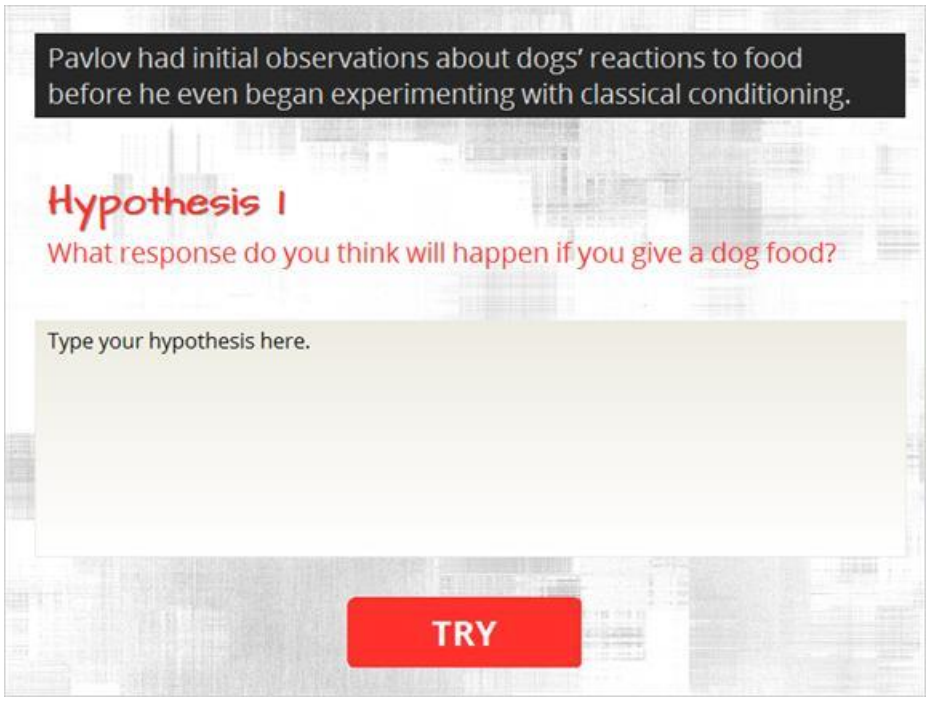
Introduction



Follow the steps in the experiment to learn how Ivan Pavlov spearheaded what we know today about classical conditioning. Click the ***NEXT*** button to begin.

Module 6: Learning and Memory
Topic 1 Content: Experiment on Classical Conditioning

Introduction to Experiment One



Pavlov had initial observations about dogs' reactions to food before he ever began experimenting with classical conditioning.

Make a hypothesis. What response do you think will happen if you give a dog food?

Click the ***TRY*** button to test your hypothesis against Pavlov's.

Module 6: Learning and Memory
Topic 1 Content: Experiment on Classical Conditioning

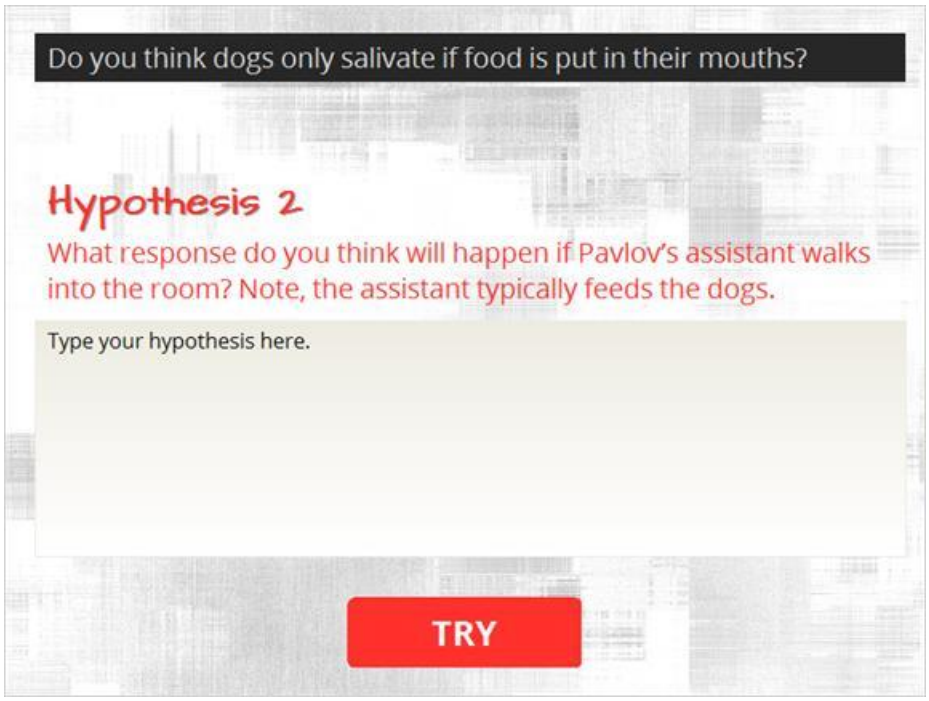
Experiment One

Drag the dog food over the dog to see if your hypothesis was correct. Then, click ***SUBMIT*** to view an explanation.

Feedback: Pavlov knew dogs would salivate if given meat because saliva helps with digestion. This means that meat on the tongue is a stimulus for salivation. Specifically, food is an unconditioned stimulus (UCS), meaning it naturally and automatically triggers a response; and salivation is an unconditioned response (UCR), meaning it is an unlearned, natural response to the unconditioned stimulus.

Module 6: Learning and Memory
Topic 1 Content: Experiment on Classical Conditioning

Introduction to Experiment Two



Do you think dogs only salivate if food is put in their mouths?

Make a hypothesis. What response do you think will happen if Pavlov's assistant walks into the room? Note that the assistant typically feeds the dogs.

Click the ***TRY*** button to test your hypothesis against Pavlov's.

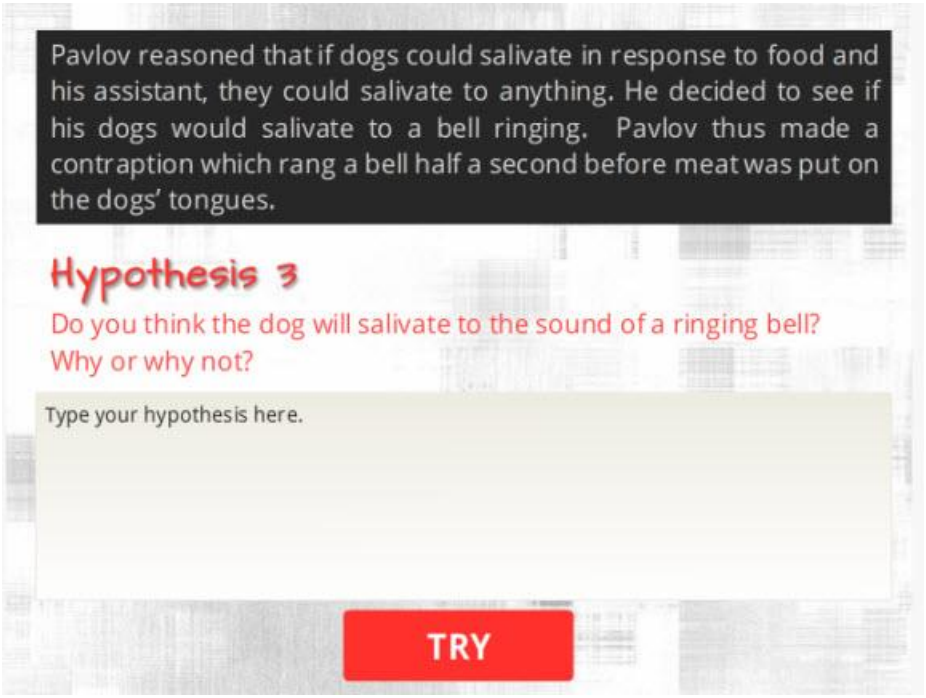
Experiment Two

Click the ***ENTER*** button to see if your hypothesis about the assistant entering the room is correct. Then, click ***SUBMIT*** to view an explanation.

Feedback: Pavlov found that dogs often began salivating before getting their food. For example, this happened when his assistant entered the room. The dogs had learned that food was coming when they saw the assistant. In this case, Pavlov's assistant is the ***conditioned stimulus (CS)***, and salivation is the ***conditioned response (CR)***.

Module 6: Learning and Memory
Topic 1 Content: Experiment on Classical Conditioning

Introduction to Experiment Three

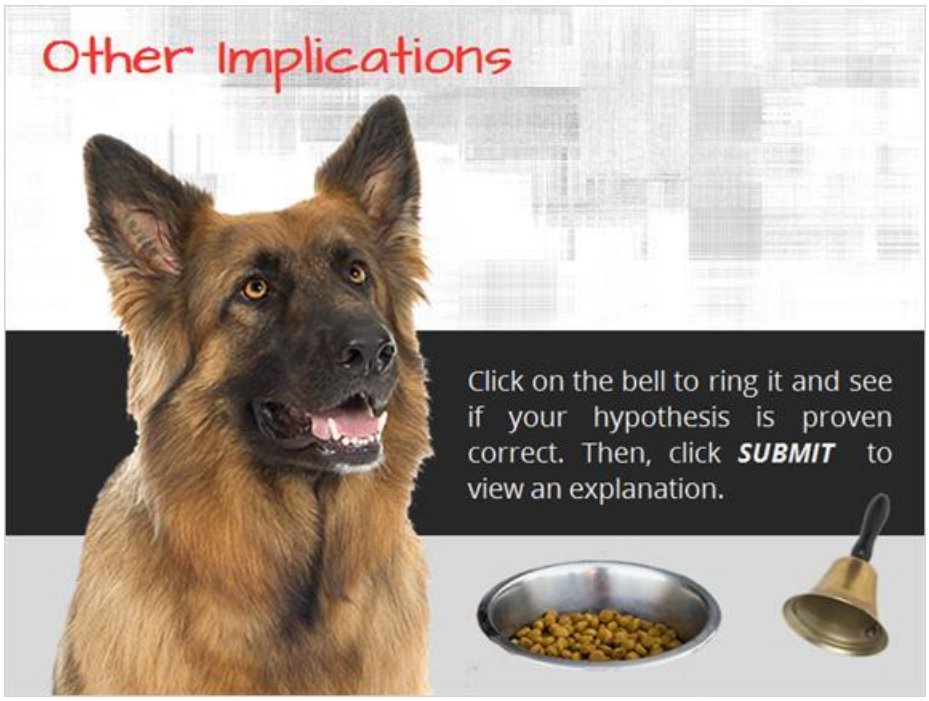


Pavlov reasoned that if dogs could salivate in response to food and his assistant, they could salivate to anything. He decided to see if his dogs would salivate to a bell ringing. Pavlov thus made a contraption which rang a bell half a second before meat was put on the dogs' tongues.

Make a hypothesis. Do you think the dogs will salivate to the sound of a ringing bell? Why or why not?

Click the ***TRY*** button to test your hypothesis against Pavlov's.

Experiment Three



Click the bell to ring it and see if your hypothesis is proven correct. Then, click ***SUBMIT*** to view an explanation.

Feedback: After discovering his dogs salivated when the bell rang, Pavlov continuously repeated this experiment so the dogs learned the bell was a stimulus for food. This phase in classical conditioning is referred to as ***acquisition***, because learning has happened due to the repeated pairing of the unconditioned stimulus (UCS) and conditioned stimulus (CS).

Discrimination

If Pavlov introduced a whistle into the experiment, the dogs would be able to tell the difference between the two stimuli of a bell and a whistle, and they would not salivate when they heard a whistle; this is called *discrimination*.

Extinction

If Pavlov began ringing the bell without pairing any food with it, the dogs would continue to salivate during the initial change in the experiment, but then would stop salivating when they realized they no longer would receive food. This phenomenon is called e*xtinction*.

Spontaneous Recovery

After extinction, if the conditioned stimulus, like the bell, is again paired with the unconditioned stimulus, like food, the conditioned response would again appear. In this case, the dogs would again salivate to the bell. This is called *spontaneous recovery*.

Because of these findings, Pavlov's experiment became the impetus for understanding classical conditioning.