

# The Behaviourist Perspective 1: Classical Conditioning



**You need to be able to:**

- Describe the main ideas of behaviourism
- Describe the process of classical conditioning
- Use classical conditioning to understand phobias
- Explain behaviourist techniques for treating phobias

## John B. Watson and Behaviourist Psychology

John B. Watson was an American psychologist working in the early 20<sup>th</sup> Century. He objected to the ideas of Sigmund Freud and set out to change the whole way in which people thought about and did psychology. In the process he became one of the most influential psychologists of the 20<sup>th</sup> Century. Despite his influence, his career as a Psychologist was very short. Soon after publishing his landmark papers and studies he was caught up in a scandal involving his co-researcher, Rosalie Rayner, and resigned from academic life. He went into advertising and marketing and was very successful at this.

## Watson's Main Ideas

Main Idea	What's This?
<b>The 'blank slate'</b>	Watson took the view that we enter the world as a 'blank slate' – all we have is the capacity to learn things. We learn things from our environment and our experiences in it. So a person's unique ways of behaving are the result of their unique set of learning experiences.
<b>The behavioural focus</b>	Watson objected to Freud because Freud's ideas relied on concepts and processes that could not be observed. How can we prove the unconscious mind exists? He thought that instead, psychologists should adopt the scientific method, and study only things that could be directly observed – behaviour and the environmental conditions that produce it.
<b>Environmental determinism</b>	Like Freud, and unlike the humanistic psychologists who came later, Watson did not believe that people have free will. He thought that all of our behaviour was determined by our learning experiences and the environment we are in. <i>"Give me a dozen healthy infants, well-formed, and my own specified world to bring them up and I'll guarantee to take any one at random and train him to become any type of specialist I might select—doctor, lawyer, merchant-chief, and yes, even beggarman and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors."</i> (Watson, 1930)
<b>Conditioning</b>	Watson believed that the main – if not only – process by which people learned was conditioning. This is a type of learning whereby a human – or any animal – learns that two things are associated. This idea originated with the work of Ivan Pavlov.

## Conditioning: Stimulus Response Learning

Watson's big innovation was to apply the idea of conditioning to human behaviour. This was a concept that had originally been studied by Ivan Pavlov in the late 19<sup>th</sup> Century. Pavlov was a surgeon who was doing experiments on dogs. He noticed that the dogs he kept in his lab would start salivating every time they saw the lab assistant that fed them, without even being shown any food. Clearly, the dogs had **learned** to associate the assistant with food. Pavlov set out to investigate this learning further.

## Some Behaviourist Vocabulary

Behaviourism has its own set of specialised terms to describe the learning process. It is worthwhile getting to be familiar with these terms and, if possible, to use them in your own writing. Some key behaviourist terms are:

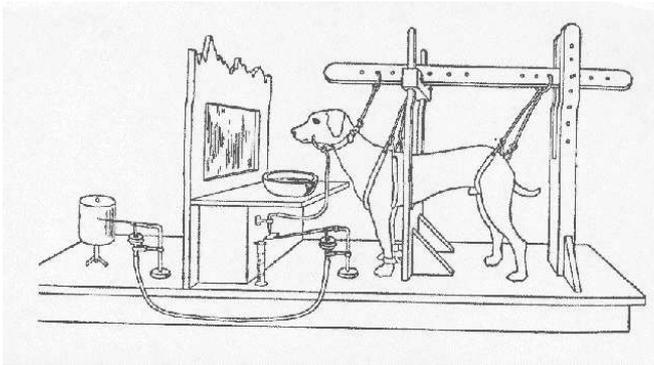
Term	What's this?
<b>Stimulus</b>	Any change in the environment that an organism registers.
<b>Response</b>	Any behaviour that the organism emits as a consequence of a stimulus.
<b>Reflex</b>	A consistent connection between a stimulus and a response.

## Pavlov's Experiments with Dogs

Pavlov started from the idea that there are some things that a dog does not need to learn. For example, dogs don't learn to salivate whenever they see food. This reflex is 'hard wired' into the dog. In behaviourist terms, it is an **unconditioned reflex** (i.e. a stimulus-response connection that required no learning). In behaviourist terms, we write:

Unconditioned Stimulus (UCS) → Unconditioned Response (UCR)

Pavlov showed the existence of the unconditioned reflex by presenting a dog with a bowl of food and the measuring its salivary secretions.



Pavlov knew that somehow, the dogs in his lab had learned to associate food with his lab assistant. This must have been learned, because at one point the dogs did not do it, and there came a point where they started, so their behaviour had changed. A change in behaviour of this type must be the result of learning. In behaviourist terms, the lab assistant was originally a **neutral stimulus**. It is called neutral because it produces no response. What had happened was that the neutral stimulus (the lab assistant) had become associated with an unconditioned stimulus (food):

Unconditioned Stimulus (UCS) + Neutral Stimulus (NS) → Unconditioned Response (UCR)

In his experiment, Pavlov used a bell as his neutral stimulus. Whenever he gave food to his dogs, he also rang a bell. After a number of repeats of this procedure, he tried the bell on its own. As you might expect, the bell on its own now caused an increase in salivation. So the dog had learned an association between the bell and the food and a new reflex had been created. Because this reflex was learned (or conditioned), it is called a **conditioned reflex**. The neutral stimulus has become a **conditioned stimulus**:

Conditioned Stimulus (CS, formerly NS) → Conditioned Response (CR)

*Note: salivation is a UCR when it occurs because of the presentation of food, because this is an unconditioned reflex. It is a CR when it occurs because of the presentation of the bell because this is a conditioned reflex.*

## Watson's Adoption of Pavlov's Ideas

Watson's big idea was to take Pavlov's insights into animal learning and apply them to humans. This was a controversial thing to do at the time because it was assumed that humans were very different to other animals in their psychological processes. However, Watson suggested that, actually, the learning of a human being could also be described according to the formula:

UCS → UCR  
UCS + NS → UCR  
CS → CR

Watson and Rayner (1920) set out to demonstrate this type of conditioning in humans. They chose as their subject a young boy known to history as 'Little Albert'. Albert was a healthy 18-month old boy. The NS in Watson and Rayner's experiment was a white rat. Trials before the experiment had shown that Albert did not mind the rat and certainly did not object to it. The aim of the experiment was to condition an anxiety response to the rat. The UCS in the experiment was the noise made by hitting an iron bar with a hammer just behind Albert. This produced a loud noise that Albert found very upsetting.

On a series of occasions, Watson and Rayner presented Albert with the rat and, when he noticed it, struck the metal bar behind his head. Predictably, this caused Albert to become quite upset. After a few trials, they presented the rat on its own. Even without the noise, Albert started crying. He had learned to associate the rat with the noise, and this had produced a conditioned reflex:

Noise (UCS) → Anxiety (UCR)  
Noise (UCS) + Rat (NS) → Anxiety (UCR)  
Rat (CS) → Anxiety (CR)

On further investigation, it became clear that it wasn't just rats that made Albert upset. His anxiety response had **generalised** to some other objects – white furry ones – that were similar to the white rat.

### Conditioning and Phobias

Behaviourists believe that phobias are an example of classical conditioning. What is required to produce a phobia is a UCS that produces a strong emotional reaction, pain, for example, and a situation where that UCS can become associated with a neutral stimulus. For example, suppose a person got bitten by a dog when they were a child:

Pain (UCS) → Anxiety (UCR)  
Pain (UCS) + Dog (NS) → Anxiety (UCR)  
Dog (CS) → Anxiety (CR)

If that anxiety response **generalises** from *that particular dog* to *all dogs* then the result would be that the person became anxious every time they saw a dog. In other words, they would have developed a phobia.