The Behaviourist Perspective 3: Operant Conditioning

You need to be able to:

- ❑ *Describe the process of operant conditioning*
- ❑ *Outline the theories of B.F.Skinner*
- ❑ *Assess the contribution of the behaviourists to Psychology*

Burrhus F. Skinner and Behaviourist Psychology

B.F.Skinner was very much influenced by Watson's behaviourist ideas. However, he also realised that the psychology proposed by Watson had some serious shortcomings. In particular, a psychology based wholly on classical conditioning assumes that organisms are essentially passive – they just hang around waiting for stimuli to respond to. To Skinner it seemed obvious that people and animals actively engage with their environments. Skinner's important insight was that an animal's – or a person's – behaviour was determined by the consequences of its past behaviour.

Skinner's Main Ideas

Main Idea	What's This?
Operant conditioning	A type of learning in which future behaviour is determined by the consequences of past behaviour. In general, if a behaviour results in something that the organism finds pleasant, it is likely to be repeated. Conversely, if behaviour is followed by unpleasant consequences, then it is unlikely to be repeated.
Reinforcement	A reinforcement is a consequence that strengthens a behaviour or makes it likely to be repeated. Note that reinforcement is not always the same as a reward. A reward is an example of positive reinforcement (the presentation of a pleasant stimulus). However, behaviour can also be strengthened if it leads to the removal of something unpleasant (negative reinforcement).
Punishment	A punishment is a consequence that weakens a behaviour or makes it less likely to be repeated. It can involve the presentation of an unpleasant stimulus or the removal or a pleasant one (sometimes these are referred to as positive and negative punishment).
Shaping	A process used to teach complex behaviours. A complex behaviour is broken down into a series of simple behaviours. These are taught one by one using reinforcement and punishment and gradually combined to create the desired complex behaviour. Shaping is frequently used to teach tricks to animals.
Stimulus control	The process by which a person or animal learns that a particular behaviour only brings reinforcement under particular conditions. For example, a cat may learn that meowing results in the presentation of food (positive reinforcement) but only when there is a person in the kitchen. It therefore only meows when a person is there – the behaviour (meowing) is under stimulus control (a person is in the kitchen).

Operant Conditioning

Skinner called learning from consequences 'operant conditioning' because it is based on how organisms operate on their environment. Essentially, Skinners theory is that the likelihood of future behaviour is determined by the consequences of past behaviour. In common with Watson, Skinner did not think it necessary to speculate on what went on in people's minds. He believed that the environment and behaviour were all that was necessary to an understanding of psychology.

Positive Reinforcement

So how do the consequences of behaviour affect future behaviour? In Skinner's terms, three things can happen. If a behaviour has no consequence, then the likelihood of that behaviour being repeated in future does not change. However, if a behaviour brings about a consequence that the organism finds pleasant, then they behaviour is likely to be repeated in future. For example, suppose we take a rat and in its cage we put a lever it can press. The lever is rigged up to a mechanism that dispenses food, so when the rat presses the lever it gets a bit of rat-food.

Sooner or later, the rat will press the lever by accident. When this happens, some food will appear. The rat may or may not connect the appearance of the food with the pressing of the lever, but after a few similar occurrences it will. It will then start pressing the lever in order to obtain food. So the presentation of food has acted as a **positive reinforcement** for the behaviour of lever pressing.

Punishment

Suppose we now play a dirty trick on the rat. We change the mechanism so that when it presses the lever, instead of receiving a food pellet it is given an electric shock to its paw. Very quickly, the rat will stop pressing the lever. The electric shock has acted as a **punishment** which had the effect of weakening then extinguishing the lever pressing behaviour.

Negative Reinforcement

Now we get really cruel. We set up the cage so that the floor can be electrified and alter the mechanism so that the lever now switches off the current. Once we electrify the floor of the cage the rat will start bouncing about and will probably accidentally hit the lever. This will turn off the electric current. We then repeat the experiment. Eventually, the rat will learn to press the lever immediately the current is turned on. We have re-established and strengthened the lever pressing behaviour, so we must have been reinforcing it. However, this was not a positive reinforcement, as we were not rewarding the rat with something it liked. Rather, we were reinforcing it by taking away something it didn't like. This is an example of **negative reinforcement**.

Consequence	**What it involves**	**Effect on behaviour**
Positive reinforcement	Presenting something the organism likes	Strengthened
Negative reinforcement	Removing something the organism doesn't like	Strengthened
Punishment	Presenting something the organism doesn't like	Weakened