

THE LEARNING APPROACH: BEHAVIOURISM

THE SPECIFICATION SAYS...

The behaviourist approach including classical conditioning and Pavlov's research, operant conditioning, types of reinforcement and Skinner's research.

The behaviourist approach emerged at the beginning of the 20th century and became the dominant approach in psychology for half of that century.

It is also credited as being the driving force in the development of psychology as a scientific discipline.

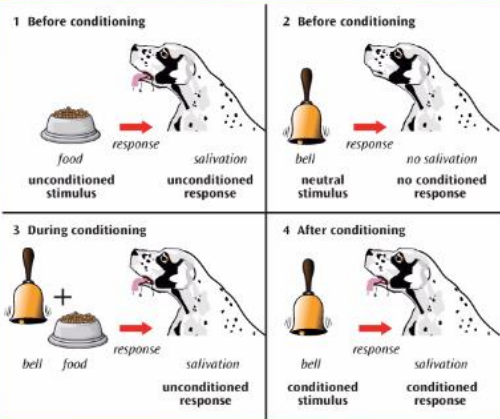
KEY TERMS

Behaviourist approach – A way of explaining behaviour in terms of what is observable and in terms of learning.

Classical conditioning – Learning by association. Occurs when two stimuli are repeatedly paired together – an unconditioned (unlearned) stimulus (UCS) and a new 'neutral' stimulus. The neutral stimulus eventually produces the same response that was first produced by the unlearned stimulus alone.

Operant conditioning – A form of learning in which behaviour is shaped and maintained by its consequences. Possible consequences of behaviour include positive reinforcement, negative reinforcement or punishment.

Reinforcement – A consequence of behaviour that increases the likelihood of that behaviour being repeated. Can be positive or negative.



• Often, students have difficulty explaining the distinction between negative reinforcement and punishment. Remember that negative reinforcement increases the likelihood of a behaviour being repeated (because it avoids an unpleasant consequence). In contrast, punishment decreases the likelihood of a behaviour being repeated (because of its unpleasant consequence).

STUDY TIPS

The behaviourist approach

Assumptions

The **behaviourist approach** is only interested in studying behaviour that can be observed and measured. It is not concerned with investigating mental processes of the mind. Early behaviourists such as John B. Watson (1913) rejected **introspection** as it involved too many concepts that were vague and difficult to measure. As a result, behaviourists tried to maintain more control and objectivity within their research and relied on **lab experiments** as the best way to achieve this.

Following Darwin, behaviourists suggested that the basic processes that govern learning are the same in all species. This meant that in behaviourist research, animals could replace humans as experimental subjects. Behaviourists identified two important forms of learning: **classical conditioning** and **operant conditioning**.

Classical conditioning – Pavlov's research

Classical conditioning is learning through **association** and was first demonstrated by Ivan Pavlov. Pavlov revealed that dogs could be conditioned to salivate to the sound of a bell if that sound was repeatedly presented at the same time as they were given food. Gradually, Pavlov's dogs learned to associate the sound of the bell (a stimulus) with the food (another stimulus) and would produce the salivation response every time they heard the sound.

Thus, Pavlov was able to show how a **neutral stimulus**, in this case a bell, can come to elicit a new learned response (**conditioned response**) through association (see diagram below left).

Operant conditioning – Skinner's research

BF Skinner (1953) suggested that learning is an active process whereby humans and animals operate on their environment. In operant conditioning there are three types of consequences of behaviour:

- **Positive reinforcement** is receiving a reward when a certain behaviour is performed; for example, praise from a teacher for answering a question correctly in class.
- **Negative reinforcement** occurs when an animal (or human) avoids something unpleasant. When a student hands in an essay so as not to be told off, the avoidance of something unpleasant is the negative reinforcement. Similarly, a rat may learn through negative reinforcement that pressing a lever leads to avoidance of an electric shock (below).
- **Punishment** is an unpleasant consequence of behaviour, for example being shouted at by the teacher for talking during a lesson. (Finding a way to avoid that would be negative reinforcement.)

Positive and negative reinforcement increase the likelihood that behaviour will be repeated. Punishment decreases the likelihood that behaviour will be repeated.

Apply it Concepts: The Skinner Box

(A) Skinner conducted experiments with rats, and sometimes pigeons, in specially designed cages called **Skinner Boxes**. Every time the rat activated a lever (or pecked a disc) in the case of the pigeon) within the box it was rewarded with a food pellet. From then on the animal would continue to perform the behaviour.

(B) Skinner also showed how rats and pigeons could be conditioned to perform the same behaviour to avoid an unpleasant stimulus, for example an electric shock.



Questions

1. Which aspect of operant conditioning does paragraph A illustrate?
2. Which aspect of operant conditioning does paragraph B illustrate?

Evaluation

Scientific credibility

Behaviourism was able to bring the language and methods of the natural sciences into psychology by focusing on the measurement of observable behaviour within highly controlled lab settings. By emphasising the importance of scientific processes such as objectivity and **replication**, behaviourism was influential in the development of psychology as a scientific discipline, giving it greater credibility and status.

Real-life application

The principles of conditioning have been applied to a broad range of real-world behaviours and problems. For instance, operant conditioning is the basis of **token economy systems** that have been used successfully in institutions, such as prisons and psychiatric wards. These work by rewarding appropriate behaviour with tokens that can then be exchanged for privileges. For an example of how classical conditioning has been applied to the treatment of **phobias**, see page 144.

Treatments such as these have the advantage of requiring less effort from a patient because the patient doesn't have to think about their problem (as they do in 'talking therapies'). Such therapies are also suitable for patients who lack insight.

Mechanistic view of behaviour

From a behaviourist perspective, animals (including humans) are seen as **passive** and machine-like responders to the environment, with little or no conscious insight into their behaviour. Other approaches in psychology, such as the **social learning theory** and the **cognitive approach**, have emphasised the importance of mental events during learning.

These processes, which mediate between stimulus and response, suggest that people may play a much more active role in their own learning. This means that learning theory may apply less to human than to animal behaviour.

Evaluation eXtra

Environmental determinism

The behaviourist approach sees all behaviour as determined by past experiences that have been conditioned. Skinner suggested that everything we do is the sum total of our reinforcement history. This ignores any possible influence that **free will** may have on behaviour. Skinner suggested that any sense of free will is simply an illusion. When something happens we impose a sense of having made the decision but, according to Skinner, our past conditioning history determined the outcome.

Consider: How much of our behaviour do you think is determined by the environment and how much is the result of our own free will?

Ethical and practical issues in animal experiments

Although experimental procedures such as the **Skinner Box** enabled behaviourists to maintain a high degree of control over their experimental 'subjects', many critics have questioned the ethics of conducting such investigations. The animals involved were exposed to stressful and aversive conditions, which may also have affected how they reacted to the experimental situation.

Consider: Does what we learn from experimental studies such as the **Skinner Box** justify the way in which the animals were treated?

Apply it

Concepts: Behaviourism and gambling

Skinner discovered that if an animal was rewarded every time it activated the lever or pecked the disc, the conditioned behaviour would quickly die out (become **extinct**) as the animal was **satiated** (full of food pellets!)

It was revealed that a **variable ratio** schedule would prolong the behaviour and was most resistant to extinction. Here, reinforcement is given after an unpredictable (variable) number of responses are produced, for example, every 10, 15, 12, etc., times the lever is pressed.

This has been applied to a number of forms of human behaviour, including gambling addiction.

Question

Explain how addiction to gambling could be explained by the principles above.



Apply it Concepts: Behaviourism and gaming

David Wong (2008) has used Skinnerian principles to explain addiction to video games in his article *5 creepy ways video games are trying to get you addicted*. His argument is that the video game environment is a form of Skinner Box providing reinforcement contingencies and rewards that are dependent upon certain behaviours (killing zombies, shooting aliens, successful completion of the level, etc).

The use of the lever or joystick in many video games, it is argued, is analogous to the behaviour exhibited by the rat in the Skinner Box, and the success and addictive nature of many early video games, such as Pac-Man, is explained by the fact that the central character navigates its way around the screen literally munching on food pellets!

Question

How could video game addiction be explained using behaviourist principles?

CHECK IT

1. Explain **one** assumption of the behaviourist approach. [3 marks]
2. Outline **two** types of reinforcement as suggested by the behaviourist approach. [4 marks]
3. Outline and evaluate the behaviourist approach in psychology. [12 marks AS, 16 marks AL]