The Behaviourist Approach

AQA specification for Topic 4: Approaches in Psychology

- Learning approaches: the behaviourist approach, including classical conditioning and Pavlov's research, operant conditioning, types of reinforcement and Skinner's research.

Basic assumption of the behavioural approach

- **Critical of introspection.** Behaviourism arose because there was dissatisfaction with other approaches in psychology that involved 'unscientific', techniques such as *introspection,* which dealt with vague concepts that were unmeasurable aspects of behaviour, such as the role of the unconscious mind (e.g. psychodynamic theory of Sigmund Freud.).
- **"Behaviourists have a basic view of behaviour"** In contrast to the above, early behaviourist researchers like Ivan Pavlov and John B. Watson began to develop a framework that emphasised observable processes (environmental 'stimuli' and behavioural 'responses'). By this, we mean that they were interested primarily by experiences within the environment and how these influenced behaviour. They refer to this as the stimulus-response link – the association between an *observed stimulus* and *observed response*.
- **Scientific approach.** Behaviourists try to explain the causes of behaviour by studying only those behaviours that can be *observed* and *measured* from our environment. As a result, they prefer using a *scientific approach* to studying human behaviour, because external events (environmental) which influence our behaviour can be observed and measured in an objective way (unbiased way), using laboratory experiments that allow more control and objectivity. Behaviourists suggest that the basic processes that govern learning are the same in all species, so they use animals as experimental subjects and generalise their findings to human beings. Subsequently, behaviourists believe you can make general laws about how humans behave (prediction, patterns, etc.).
- **Learning processes:** The behaviourist approach describes two types of learning processes from our experiences within the environment that shape our behaviour. They are *classical conditioning* and *operant conditioning*. Therefore, according to strict radical behaviourism, mental thought processes have no place in psychology, nor do the principles of inheitance fully explain our behaviour.

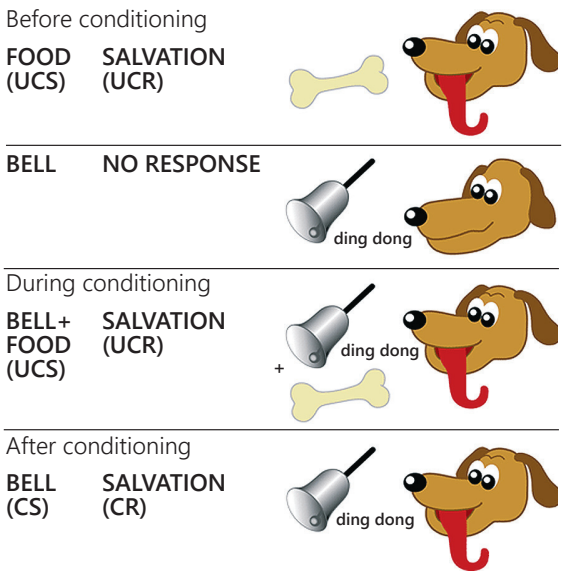
Classical conditioning

- **Classical conditioning** is the view that learning is done by **association**. This was the first type of learning to be discovered and studied within the behaviourist tradition (hence the name 'classical').
- A Russian physiologist called Ivan Pavlov studied salivation in dogs as part of his research programme. Normally, dogs will salivate simply when food is presented, but Pavlov was interested in why the dogs had started to salivate simply when they saw the people that usually fed them (they also responded to the sound of the dishes being used for their meals).
- Pavlov set up an experiment to find out if the dogs could be trained to salivate at other stimuli such as the sound of a bell or a light. At feeding times, Pavlov would ring a bell and the amount of saliva produced by the dog was measured. After several 'trials', Pavlov rang the bell without presenting the food and found that the dogs salivated in the same way as if the food was being presented.
  - So, Pavlov was able to show how a *neutral stimulus* (e.g. the bell) can come to elicit a new response (*conditioned response*) through association.

How did the classical conditioning procedure work?

1. First, Pavlov presented the food to the dog. The food is the **unconditioned stimulus** (UCS), which means that it stimulates a response that occurs involuntarily (i.e. you cannot control it).
2. Next, the dog salivated when it saw the food. This is known as the **unconditioned response**, which means that it is a response that occurs involuntarily.
3. Pavlov also tried introducing a bell sound without the food. The bell sound was a **neutral stimulus (NS)** because it did not elicit any type of response from the dog, when it was presented on its own.
4. Next, Pavlov began the *conditioning procedure*, where he introduced the bell sound just before giving food to the dog. The bell became a **conditioned stimulus** (CS) because it produced salivation, on the condition that it was presented with the food.
5. Finally, Pavlov presented the bell sound and the dog salivated, even without the presence of the food.
6. The dog had learned an association (link) between the bell and the food and also learned a new behaviour. The bell sound (originally a neutral stimulus) was now the **conditioned stimulus (CS)**, which elicited a learned response from the dog (i.e. to salivate), otherwise known as a **conditioned response (CR).**

Figure 7: Pavlov's experiment



Principles of classical conditioning

Here are some of the important principles of classical conditioning which can help shape behaviour:

- *Forward conditioning.* Classical conditioning becomes more effective when the NS appears about 30 or so seconds before the UCS is presented and remains during the UCS, this is called forward conditioning
- *Extinction.* This is when a conditioned stimulus is repeatedly presented without the unconditioned stimulus, which means that the conditioned response will disappear. This is known as extinction. If a dog learns to associate the sound of a bell with food and then the bell is rung repeatedly, but no food is presented, the dog will soon stop salivating at the sound of the bell.
- *Stimulus generalisation.* This is the extension of the conditioned response (CR) from the original stimulus to similar stimuli. For example, a dog that has been conditioned to salivate to the sound of a bell of one tone may well salivate to a similar-sounding bell or a general buzzer.
- *Discrimination.* An animal or person can be taught to discriminate between different stimuli. For example,

if a dog is shown a red circle every time he is fed, then he will salivate at the sight of the red circle alone. But initially, the dog may generalise and salivate at circles of any colour. If the dog is only fed when the red circle is presented and not when other colours are shown, he will learn to discriminate between red and the other colours.

- *One trial learning.* Learning usually takes place over many repeated trials, but in some cases or instances (as being stung by a bee) one incident is enough to create a lasting CR. This is known as one trial learning.

◆ Operant conditioning

- Operant behaviour is mainly based on the work of Skinner (1904-1990) and is another principle of the behaviourist approach to learning. **Operant conditioning** works on the principle that how we behave is based on the *consequences* after our action has been performed. Whether such behaviour is rewarded or punished will determine if we repeat that behaviour.

The Skinner Box

- B.F. Skinner proposed his theory on operant conditioning by conducting various experiments on animals. He used a special box known as the "Skinner Box" for his experiment on rats. As the first step to his experiment, he placed a hungry rat inside the **Skinner Box**. When the rat pressed the lever in the box, it was rewarded by a food pellet. After eating enough, the rat would explore the box, pressing the lever again as it grew hungry. From then on, the rat would press the lever whenever they were hungry. The experiment showed how we can get an animal to perform the desired behaviour (teaching it to press a lever), by rewarding such behaviour. Skinner carried out further experiments and found that there are three main ways in which this operant conditioning can occur:

  - ***Positive reinforcement.*** If the consequences of the actions are **rewarded**, the action of the behaviour is more likely to be reinforced and thus repeated again. For example, giving a child sweets for good behaviour after completing house chores means they are more likely to repeat that behaviour. The child starts linking chores with sweets, and as a result, they complete their chores more reliably and enthusiastically in the hopes of earning more sweets.

  - ***Negative reinforcement.*** The term negative reinforcement is misunderstood and does not mean punishment. The word 'negative' does not refer to something bad but rather the *removal/ending* of an unpleasant stimulus to bring about the desired behaviour and increase the likelihood of behaviour occurring again. An example of negative reinforcement is an overprotective parent who gives less strict attention when the child receives good grades. The teenager begins to associate academic success with the parent's reduced strictness and continues to study hard so as to enjoy their freedom. Another example is cleaning your room to avoid moaning parents, the behaviour is reinforced - you are more likely to repeat it to avoid your parents being frustrated.

  - ***Punishment.*** This is when a consequence for a certain behaviour is punished e.g. being shouted at by a teacher for talking in a lesson. Therefore, if the action of the behaviour is punished, it is less likely to be repeated. This makes NOT talking in class more likely.

- Positive and negative reinforcement increase the likelihood that behaviour will be repeated. Punishment decreases the likelihood that behaviour will be repeated. Operant conditioning is used widely in society in schools, prisons, and homes.

Schedules of reinforcement

- There are various ways of giving reinforcements. The frequency and ways in which reinforcement is administered can affect the likelihood of it affecting our behaviour. For example, **schedule reinforcement** is a *continuous reward* given every time a response is made. This schedule is best used during the initial

stages of learning to create a strong association between the behaviour and response. **Partial schedule reinforcement** is when rewards are given intermittently, at different times and/or frequency. For example, a fixed interval means that a reward will occur after a fixed amount of time such as every five minutes. This means the response rate speeds up as the next reinforcement becomes available. For example, if a child knows she gets her allowance on Sunday as long as her bedroom is clean, she probably won't clean up her room until Saturday night. By controlling rewards (and punishments), you can shape the specific behaviour in animals and humans.

- Pavlov also introduced another behavioural principle known as the **law of extinction**, which states that a behavioural response that is not followed by a reinforcement stimulus (reward) is weakened and therefore less likely to occur again. This process is also called extinguished behaviour.

◆ Evaluation

Strengths

✔ **Scientific credibility.** A strength of the behaviourist approach is that it has high scientific credibility. This is because behaviourism adopts a scientific approach that can easily be tested. The use of experimental methods in the laboratory allows the independent variables (IV) and dependent variables (DV) to be operationalised and observed and measured objectively (e.g. Pavlov's dogs and Skinner's rats). This is a strength because it emphasises the importance of scientific processes such as objectivity and replication, which are key features when defining the scientific method. As a result, the credibility and status of the behaviourist approach are increased.

✔ **Real-life application.** A strength of the behaviourist approach is that it has practical applications in many areas of human life. For example, operant conditioning has been used to develop token economy systems in prisons and psychiatric wards, where patients or prisoners are rewarded with tokens when they behave in the desired way, which they can exchange for goods. Classical conditioning has been used in psychological therapy such as the treatment of phobias. For example, systematic desensitisation is a technique where patients learn to associate feeling calm when faced with their phobia. This is a strength because it shows that the behaviourist approach is accurate in its assumptions about human behaviour and that we can use these understandings to better the existence of humans, i.e. to enable better lifestyles and treatments of potentially debilitating disorders. As a result, the credibility of the behaviourist approach is increased.

Weaknesses

✘ **Mechanistic view of behaviour.** A weakness of the behaviourist approach is that it is reductionist. This means it reduces the complexity of human behaviour to a stimulus-response link. It considers animals, including humans, to be passive and machine-like responders to the environment, with little to no conscious insight into their behaviour. This is a weakness because it fails to consider the complexities of human behaviour. Other approaches such as the social learning theory or the cognitive approach have emphasised the importance of mental events during learning. These processes, which mediate between stimulus and response, indicate that people may play a much more active role in their own learning. This means that behaviourist learning theory may apply less to human than to animal behaviour. Consequently, the credibility of the behaviourist approach is reduced.

✘ **Deterministic approach.** A further weakness of the behaviourist approach to reducing human behaviours to a stimulus-response response is that it implies humans have no control over their behaviour, i.e. ignores that humans have free will. There are serious moral and legal implication if we take a deterministic position on human behaviour. If one assumes that individuals do not have free will, then they are not morally responsible for their actions. This raises the question of whether it is moral to punish human beings, as it could be argued that they did not act freely and thus should not be punished, for even the most horrific crimes, an idea which most people would find problematic.

✘ **Problems of research on non-humans.** A weakness of these findings is that most of the research carried out by the behaviourists have been on animals in laboratory experiments. This raises an ethical issue as many would see this as unjustified. Furthermore, human behaviour is far more complex than that of animals such as rats; humans have a high level of consciousness, with the ability to be reflective in thought and/or in emotions and this affects how humans think and behave. This suggests that findings from animal research may be inappropriate for explaining the complex and diverse behaviour of humans.

Practice exam questions

1. Explain what is meant by 'classical conditioning'. **[4 marks]**.
2. Outline Skinner's research into operant conditioning. **[4 marks]**
3. Explain two criticism of the behaviourist approach. **[2 marks + 2 marks]**
4. A psychology student made the following observation to his teacher.

   'The behaviourist approach has been presented to us as helpful in understanding human behaviour. However, most of the data have been obtained from research using animals.'

   Discuss the value of behaviourism in helping us to understand human behaviour. **[5 marks]**
5. Outline and evaluate the behaviourist approach in psychology. **[12 marks AS, 16 marks A-level]**
6. Outline the behaviourist approach. Compare the behaviourist approach with the biological approach. **[12 marks, 16 marks A-level]**