

# Edexcel Psychology A-level

## Topic 4: Learning Theories

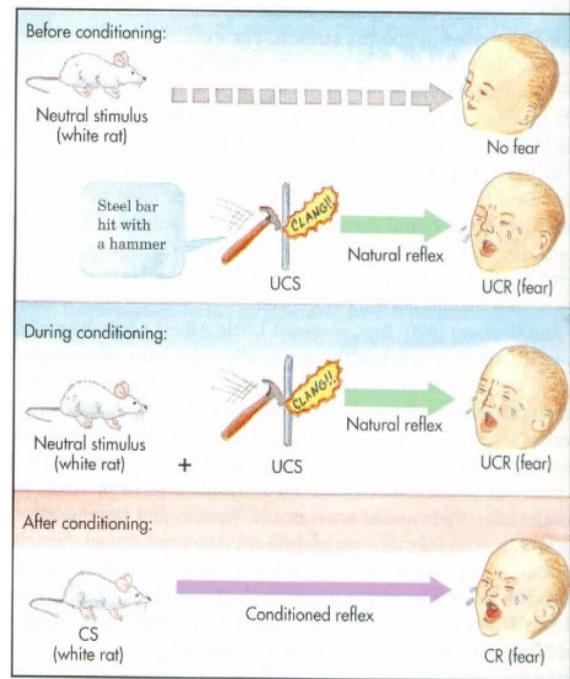
Notes



## Part 1 – The Learning Approach: Behaviourism

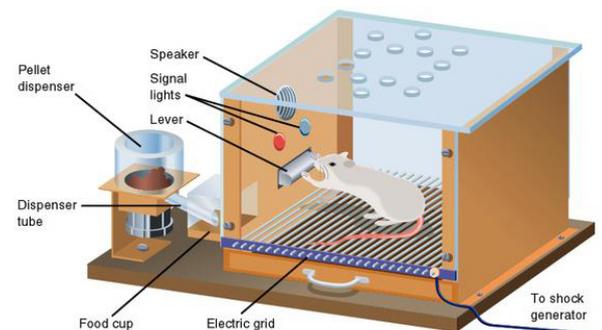
### A01 Introduction and Assumptions:

- The behaviourist approach is an approach to explaining behaviour which suggests that all behaviour is acquired and maintained through classical and operant conditioning. Hence, only behaviour which can be objectively measured and observed is studied, as demonstrated by Skinner's Box. This is due to the founders of behaviourism, Watson and Skinner, disagreeing with the subjective nature of Wundt's introspective methods, and the inability to formulate general laws and universal principles based on his observations.
- From a behaviourist perspective, the basic laws governing learning are the same across both non-humans and humans. Therefore, non-human animals can replace humans in behaviourist experimental research.



### Classical Conditioning and Examples:

- Classical Conditioning = A type of learning which occurs through associations made between the unconditioned stimulus and the neutral stimulus. Before conditioning, the unconditioned stimulus (UCS) produces the unconditioned response (UCR). During conditioning, the neutral stimulus (NS) is repeatedly paired with the UCS, producing an UCR. After conditioning, the neutral stimulus becomes the conditioned stimulus, producing the conditioned response.
- Pavlov demonstrated that dogs could be conditioned to salivate upon hearing a bell, as follows:
  1. Before conditioning, the unconditioned stimulus (food) produced an unconditioned response (salivation).
  2. During conditioning, the unconditioned stimulus was repeatedly paired with a neutral stimulus (a bell), to produce the same unconditioned response of salivation.
  3. An association was made between the unconditioned stimulus and the neutral stimulus.
  4. After conditioning, the neutral stimulus became the conditioned stimulus, producing the conditioned response of salivation.
- Extinction occurs when the conditioned stimulus is no longer paired with the unconditioned stimulus, so the conditioned response becomes extinct/disappears.
- Spontaneous recovery occurs when the individual carries out the conditioned response some time after extinction has occurred.
- Generalisation occurs when slight changes in the conditioned stimulus, such as different pitches of the bell used in Pavlov's experiment, still produces the same conditioned response.



### Operant Conditioning and Examples:

- Operant conditioning = A type of learning where behaviour is acquired and maintained based on its consequences. Reinforcement increases the likelihood of the observed behaviour being repeated, whilst punishment (an unpleasant consequence of behaviour) decreases this likelihood.
- There are two types of reinforcement - positive and negative. Positive reinforcement occurs when we carry out a behaviour to receive a reward e.g. completing homework to receive praise from a teacher. On the other hand, negative reinforcement occurs when we carry out a behaviour to avoid negative consequences e.g. completing homework to avoid being given a detention.
- Skinner's Box = Skinner demonstrated, using a rat, the mechanisms of positive and negative reinforcement. Positive reinforcement was shown when the rats pressed down on a lever to



receive food as a reward, and subsequently learnt to repeat this action to increase their rewards. Negative reinforcement was shown when the rat learnt to press down on the lever to avoid the unpleasant consequence of an electric shock.

### A02 Potential Application Questions:

1. An understanding of the role of classical conditioning in the acquisition and maintenance of a phobia of white rats in Little Albert (Watson and Rayner, 1920). It would be particularly useful to discuss the extinction of Little Albert's phobia when the loud bang /conditioned stimulus no longer produced the conditioned response of crying (when the loud bang was not paired with the sight of the rat). Generalisations of his phobia to other white, fluffy objects may also be discussed.
2. Being able to differentiate between classical and operant conditioning. These two types of learning involve different mechanisms and have been demonstrated in different scenarios.

### A03 Evaluation:

- + **Scientific Rigour** = In an attempt to objectively and systematically collect reliable data, the behaviourist approach makes use of highly scientific research methods, particularly the laboratory experiment. Strictly-controlled conditions reduce and control for the effects of confounding and extraneous variables, increasing the reliability and internal validity of the findings (as these are more likely to be replicated when research is conducted under the same conditions). By focusing on behaviour which is observable and can be measured, the behaviourist approach increases the scientific credibility of psychology.
- + **Real-Life Applications** = An increased understanding of classical and operant conditioning has led to the development of treatments and therapies for serious mental disorders. For example, token economies have been used as a way of dealing with offending behaviour: inmates who carry out socially-desirable behaviour (such as tidying their cell and avoiding conflicts) receive tokens (secondary reinforcers) which can be traded for privileges (primary reinforcers), such as extra TV-time. Therefore, behaviourist principles have had positive impacts on the lives of many.
- **Environmental Determinism** = The behaviourist approach sees all behaviour as the product of past reinforcement contingencies, leaving no room for free will or conscious choices. This hard deterministic stance may be a more appropriate explanation for animal behaviour, whereas explanations of human behaviour should also account for emotions, motivations and reasoning skills (e.g. as social learning theory does). Hence, the behaviourist approach may be a limited explanation for human behaviour.
- **Cost-benefit analyses with the use of animals in experimental research** = Skinner's box caused considerable physical harm to the rats, breaching the BPS ethical guideline of protection from harm. Watson and Rayner's classical conditioning experiments on Little Albert failed to protect him from psychological harm, as well as not offering him the opportunity to withdraw. Therefore, much behaviourist research, at least by modern standards, would be viewed as unethical. However, a cost-benefit analysis may show that the benefit of increased understanding of the different types of learning (classical and operant conditioning) outweigh the ethical costs.

## Part 2 – The Learning Approach: Social Learning Theory

### A01 Introduction and Assumptions:

- Social learning theory (SLT) suggests that learning occurs both directly, through classical and operant conditioning, and indirectly, through vicarious reinforcement.
- Assumes that learning occurs through the following stages: An observer identifies themselves with a desirable role model. This role model displays or models a specific behaviour, which is imitated by the observer. The likelihood that the observed behaviour will be imitated is increased if the role model is seen to be 'vicariously reinforced' or rewarded. Therefore, the consequences of the observed behaviour are more important than observing the behaviour alone.
- Role Model = A person with whom the observer identifies with. The role model is usually attractive, has high social status, is of a similar age and the same gender to the observer. This model can exert influence indirectly by not being physically present in the environment but, for example, seen in the media.



- Identification = The process by which an observer relates to/ associates themselves with a role model and aspires to become more like that role model.
- Vicarious reinforcement = A type of indirect learning which occurs when an observer sees their role model being rewarded for displaying a certain behaviour. The observer is then motivated to imitate this behaviour, in an effort to receive the same reward.
- Mediation processes = Cognitive processes which mediate/intervene between stimulus and response. The 4 mediational processes are: Attention, retention, motor reproduction and motivation.
- The first two mediational processes are involved with the observation and understanding of the behaviour, whilst the latter two are involved in the actual imitation of the behaviour. This separation means that observed behaviours do not always need to be reproduced at the same time.

### A02 Potential Applications:

1. Bandura's Bobo Doll Study (Bandura, Ross and Ross, 1961) - 36 boys and 36 girls, aged between 3 and 6 years old, were tested. <sup>1</sup>There were three experimental groups, with the first being exposed to real-life aggressive models, a second group observing the same models displaying aggressive acts on film and a third group viewing an aggressive cartoon character. The researchers found that the children who'd observed an aggressive role model behaved more aggressively themselves towards the Bobo doll compared to the non-aggressive role model control group. Links can be made to the process of social learning theory.
2. Questions may be based upon why some individuals are chosen as role models rather than others, why some children will not reproduce the observed behaviours (individual differences in the use of mediational processes) and the influence of the media on behaviour, according to SLT.
3. Comparisons with other approaches, specifically about why SLT may be a better explanation for human, rather than animal, behaviour.

### A03 Evaluation:

— **Bandura's Bobo Doll experiment ignores the biological differences between boys and girls** = Social learning theory suggests that we learn from experience, and so ignores other biological or psychological factors, thus adopting environmental determinism. However, Bandura ignored the finding that <sup>2</sup>"boys, in relation to girls, exhibited significantly more imitative aggression, more aggressive gun play, and more nonimitative aggressive behaviour". This may be explained due to boys having higher levels of the hormone testosterone, which has been linked to increased aggressiveness. Therefore, this suggests that SLT may not be a complete explanation for gender differences in behaviour, due to not accounting for the biological and hormonal differences between the sexes.

— **Demand characteristics in Bandura's Bobo Doll experiment** = Bandura's study may lack internal validity, due to not entirely investigating the effect of aggressive role models because the Bobo doll is specifically designed to be hit. The study may also lack mundane realism because it may not represent or measure how children would be aggressive in day-to-day situations, perhaps towards objects or people that are not meant to be struck. Therefore, participants may have deliberately acted more aggressively towards the doll in order to please the experimenter (the 'Please-U effect'). This reduces the generalisability of the findings.

+ **Acknowledges the role of human cognition** = Human cognitive and decision-making processes may be considered as more complex than that of animals. SLT has the advantage, over behaviourism, that it recognises the role of mediational processes as the conscious and cognitive insight that humans have into their behaviour. Therefore, SLT may be a better explanation of human behaviour, compared to behaviourism.

<sup>1</sup> Bandura, Ross and Ross, Imitation of Film-Mediated Aggressive Model, *Journal of Abnormal and Social Psychology*, 1963, 66(1), 3-11.

<sup>2</sup> Bandura, Ross and Ross, Imitation of Film-Mediated Aggressive Model, *Journal of Abnormal and Social Psychology*, 1963, 66(1), 3-11.



### Part 3: Introduction to Key Study - Becker et al (2002)

- Becker investigated the link between exposure to media/TV and the incidence rates of eating disorders, and particularly looked towards classical conditioning/social learning theory to explain this. The island of Fiji was studied in a natural experiment, as this location was one of the last in the world to receive satellite TV.
- The researchers used a total of 128 participants between 1995 and 1998 (girls with an average age of 17), who all completed the EAT-26 questionnaire before being interviewed about any potential diet changes and the importance of weight.
- The researchers found a 30% increase in the incidence of TV exposure in the girl's households, with 74% having reported that they were dissatisfied with their body image in 1998, despite Fijian culture seeing 'plump' women as the ideal for beauty. The qualitative data gathered from the interviews showed that the girls made comparisons between themselves and the role models on TV, which supports the idea of modeling and social learning theory as a mechanism for disordered eating behaviour.

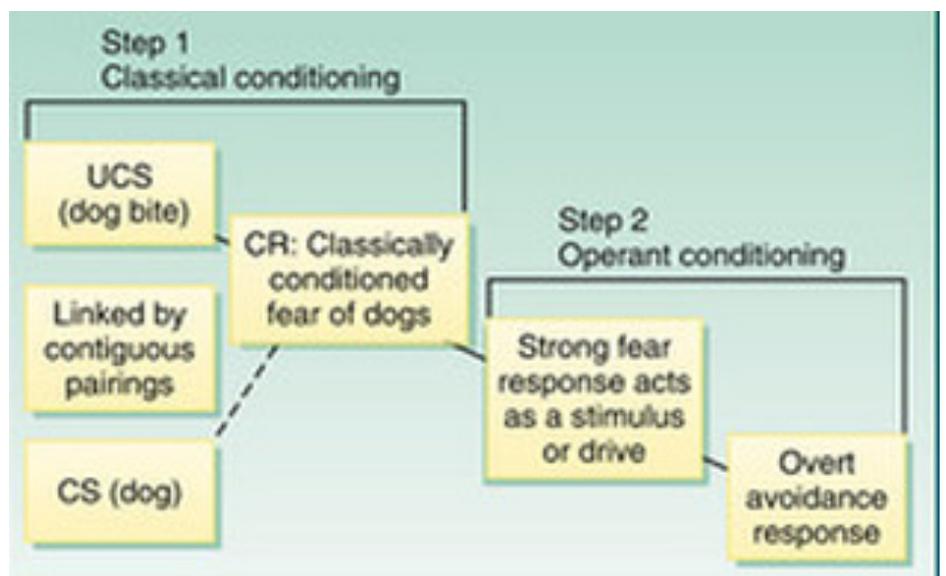
— **There are issues of generalisability** with this study. Since Fiji had been so isolated from the world, they had developed strong cultural beliefs about norms and standards for beauty, which differ significantly from that of the Western world. This, alongside the small sample size, suggests that the findings are culture-bound, and so cannot readily be applied to Western cultures where teenagers are typically exposed to 'skinny' role models from an early age by growing up with TV as a cultural norm.

+ **A particular strength related to the methodology is that the interviews were recorded.** This means that a content analysis could be carried out (coding the qualitative data) and then these results could be statistically analysed, to assess the significance of the frequency of each of the comments. This means that the data could be interpreted objectively, increasing the validity of the conclusions drawn.

— **The main issue of validity stems from the fact that the Becker et al study was a natural experiment.** This means that extraneous and confounding variables were not controlled for, and so these variables may have caused the changes in eating behaviour, as opposed to social learning theory through the influence of the introduction of TV. For example, it is naive to assume that the only influence of TV would be on eating behaviour, as there would be many changes in society and the way in which citizens spent their free time when TV was introduced.

### Part 4: The Behavioural Approach to Explaining Phobias

Mowrer suggested that phobias are acquired through classical conditioning and then maintained through operant conditioning. Watson and Rayner demonstrated how Little Albert associated the fear caused by a loud bang with a white rat. He was exposed to a white rat (NS), producing no response. When paired with the loud bang (UCS), this produced the UCR of fear. Through several repetitions, Albert made the association between the rat (CS) and fear (CR). This conditioning then generalised to other objects e.g. white fluffy Santa Claus hats. Operant conditioning takes place when a behaviour is rewarded or punished. For example, phobics practice avoidance behaviours, meaning that they avoid the phobic stimulus. By avoiding this phobic stimulus, they avoid the associated fear. By avoiding such an unpleasant consequence, the avoidance behaviour is negatively reinforced and likely



to be repeated again, hence maintaining the phobia.

+ **The main advantage of this theory is that it can explain the mechanism behind the acquisition and maintenance of phobias**, which classical or operant conditioning alone cannot do. This translates to practical benefits in systematic desensitisation and flooding. Mowrer emphasises the importance of exposing the patient to the phobic stimulus because this prevents the negative reinforcement of avoidance behaviour. The patient realises that the phobic stimulus is harmless and that their responses are irrational/disproportionate, thus translating into a successful therapy.

— = **Buck suggested that safety is a greater motivator for avoidance behaviour**, rather than simply avoiding the anxiety associated with the phobic stimulus. For example, he uses the example of social anxiety phobias - such sufferers can venture out into public but only with a trusted friend, despite still being exposed to hundreds of strangers which would usually trigger their anxiety. This means that Mowrer's explanation of phobias may be incomplete and only suited for some.

— = **Alternative explanation for the acquisition of phobias** - Seligman suggested that we are more likely to develop phobias towards 'prepared' stimuli. These are stimuli which would have posed a threat to our evolutionary ancestors, such as fire or deep water, and so running away from such a stimulus increases the likelihood of survival and reproduction, and so this behaviour has a selective evolutionary advantage. This means that alternative theories can explain why some phobias (i.e. towards prepared stimuli) are much more frequent than other phobias (i.e. towards unprepared stimuli).

### **Part 5: The Behavioural Approach to Treating Phobias**

Systematic desensitisation is a behavioural therapy designed to reduce phobic anxiety through gradual exposure to the phobic stimulus. It relies upon the principle of counterconditioning i.e. learning a new response to the phobic stimulus i.e. one of relaxation rather than panic. This works due to reciprocal inhibition i.e. it's impossible to be both relaxed and anxious at the same time. Firstly, the patient and therapist draw up an anxiety hierarchy together, made up of situations involving the phobic stimulus, ordered from least to most nerve-wrecking. The therapist then teaches the patient relaxation techniques e.g. breathing techniques and meditation, to be used at each of these anxiety levels. The patient works their way up through the hierarchy, only progressing to the next level when they have remained calm in the present level. The phobia is cured when the patient can remain calm at the highest anxiety level.

+ **Supporting evidence** = Gilroy et al. followed up 42 patients treated in three sessions of systematic desensitisation for a spider phobia. Their progress was compared to a control group of 50 patients who learnt only relaxation techniques. The extent of such phobias was measured using the Spider Questionnaire and through observation. At 3 and 33 months, the systematic desensitisation group showed a reduction in their symptoms as compared to the control group, and so has been used as evidence supporting the effectiveness of flooding.

+ **Systematic desensitisation is suitable for many patients, including those with learning difficulties** = Anxiety disorders are often accompanied with learning disabilities meaning that such patients may not be able to make the full cognitive commitment associated with cognitive behavioural therapy, or have the ability to evaluate their own thoughts. Therefore, systematic desensitisation would be a particularly suitable alternative for them.

+ **More acceptable to patients, as shown by low refusal and attrition rates.** = This idea also has economical implications because it increases the likelihood that the patient will agree to start and continue with the therapy, as opposed to getting 'cold feet' and wasting the time and effort of the therapist!

Flooding is a behavioural therapy designed to reduce phobic anxiety in one session, through immediate exposure to the phobic stimulus. This occurs in a secure environment from which the patient cannot escape - without the option of practising avoidance behaviour, such behaviour is not



reinforced and so the phobia is not maintained. Thus, in the case of a spider phobia, the patient will instantly be exposed to a room full of large spiders, which can crawl over them. This relies on the principle that it is physically impossible to maintain a state of heightened anxiety for a prolonged period, meaning that eventually, the patient will learn that the phobic stimulus is harmless.

+ = **Cost-effective** - Ougrin compared flooding to cognitive therapies and found it to be cheaper. This is because the patient's phobia will typically be cured in one session, thus alleviating their symptoms as quickly as possible and so allowing them to continue living a normal life. This also means that such a therapy is relatively non-invasive in the normal lives of patients, and so is yet another reason to choose flooding over systematic desensitisation.

— = **Less effective for complex phobias**. Social phobias involve both anxiety and a cognitive aspect i.e. thinking unpleasant thoughts about a situation. Thus, in such cases, cognitive therapy may be more appropriate because this therapy can target the distal causes of the phobia, as opposed to the mere proximal (indirect) causes. This suggests that alternatives may be more effective.

