### Exam Practice Answers, Chapter 4

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<th>Question Number</th>
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| 1.              | Compare classical with operant conditioning in terms of strengths and weaknesses. | A02
  - One mark each for any appropriate similarity and or difference between the two theories of conditioning.
  - One mark for each comparison point identified and one mark for each application of that point to the theories of conditioning. | (6) |

**Similarities**

- Both classical and operant conditioning is largely based on studies of non-human animals in the laboratory (1).
- This can lead to problems in generalising from non-human animals to humans. Animals may be more driven by innate factors and therefore may be too different to humans for comparison (1).
- Both theories are easily testable as they use the experimental method which is scientific as it allows strict control over variables (1).
- For example, an independent variable can be manipulated to see the effect on a dependent variable in Skinner’s work with rats and Pavlov’s work with dogs (1).

**Differences**

- Unlike operant conditioning, classical conditioning can only account for the appearance of involuntary reflex responses in new situations (1). It cannot explain the acquisition of entirely new behaviours.
- In contrast, operant conditioning aims to explain why some voluntary behaviour, e.g. pressing a lever, are repeated or maintained through reinforcements (1).
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<td>2.</td>
<td>Evaluate one contemporary study from learning theories.</td>
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**Answer**

*Becker et al. (2002)*

**AO1**

- The purpose of the study was to evaluate the impact of the recent introduction of western television on disordered eating among ethnic Fijian adolescent girls.
- 128 adolescent girls took part in research with mean age of 17 years, all of whom were native Fijians and fluent English speakers. Sixty-three respondents participated in the study in 1995, within a month of television being introduced to the area, and 65 respondents participated in 1998, after television had been broadcast to the area for three years.
- Participants in both samples responded to a modified 26-item eating attitudes test that included questions concerning bingeing and purging behaviours.
- Quantitative data were collected through the questionnaire, where the score of 20 or above was considered high and associated with dieting and self-induced purging.
- Of the participants interviewed, 83% responded that they felt television had specifically influenced their friends and/or themselves to feel differently about or change their body shape or weight and 77% reported that television had influenced their own body image.
- Becker *et al.* claimed that the key indicators of disordered eating were significantly more prevalent following exposure to television, compared to the media-naive population.

**AO3**

- Becker's study involving Fijian girls had a total of only 63 participants in 1995 and 65 in the 1998 follow-up. This is a very small sample size, and makes the study's conclusions difficult to generalise.
- Only one-third (29.2%) of the 1998 sample, or 19 girls, scored high on the eating disorder behaviour test.

**Mark** (4, AO1, 4, AO3)
The girls, though claiming to diet and wanting to emulate the bodies of thin television actresses, did not actually lose weight between the 1995 and 1998 surveys.

In fact, if anything the girls got slightly fatter, as the average BMI went from 24.5 to 24.9.

Becker et al. apparently did not take into account various other possible confounding factors that co-occurred in Fiji between 1995 and 1998. Correlation does not imply causation, and just because television was introduced before the additional 12 girls scored high on an eating disorder test, does not mean that television caused the increase.

*Bastian et al. (2011)*

What do people think of themselves when they have been violent? Do violent video games affect our perception of our and others' humanity?

The research is split into two studies:

**Study 2:**
- Participants in study 1 used Mortal Kombat as the violent game and Top Spin Tennis as the non-violent game.
- Participants were seated in front of a video screen with an X-box video game console. Although both participants were looking at the same screen, a portable dividing wall obscured their view of each other and they were instructed not to interact throughout the course of the experiment.
- Participants then proceeded to play either two-player Mortal Kombat or Top Spin Tennis for 15 minutes. After playing the video game, participants were given a questionnaire to complete.
- Then on a separate scale, participants rated themselves on 8-items. This was used to assess the attribution of how human they thought they were.
- The mean for self-humanity was lower in the violent video game condition. The same was found for
humanity ratings of their opponent.

- Playing the violent video game of Mortal Kombat led to a lower perception of the player's own humanity and a lower perception of humanity of the other player too.

- **Study 2:**
  - Study 2 was designed to overcome the limitations from Study 1, such as it might be the fact that you are in combat with another person that led to the findings, rather than the actual violence in the game.
  - It followed a similar procedure to Study 1, but this time Call of Duty was the violent game and Top Spin Tennis was used again as the non-violent game.

- Playing a violent video game reduces perceptions of one's own humanity even when participants play the game as a first person shooter and when playing in collaboration, rather than against, another co-player.

- Reliability was shown as the results of both studies were the same that people see themselves as less human when playing a video game.

- There was less chance of demand characteristics as the researchers asked the participants if they had suspected any link between dehumanisation and playing violent video games.

- A number of possible extraneous variables were controlled as far as possible including amount of enjoyment, frustration and excitement, meaning the differences in the results were more likely down to the independent variable.

- However, there is still a lack of validity in that the setting was artificial which may have influenced the results, even though other attempts such as using co-players, were used.

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**Capafôns et al. (1998)**

- The purpose of the study was to measure the effectiveness of systematic desensitisation as a treatment for a fear of flying.

- A volunteer sample of 41 participants was allocated to each condition using random sampling. 20 participants were
assigned to the treatment group who would receive the systematic desensitisation, while 21 were assigned to the control group which did not receive any therapy.

- A number of diagnostic scales were used, including Escala de Miedo a Volar (EMV), which measures degree of anxiety perceived in relation to different flight situations. EPAV scales were used to assess the occurrence of catastrophic thoughts, such as the wings falling off or the fear of the engine catching fire.

- A video made from a subjective perspective about a trip by plane was also used. Three minutes prior to the showing of the video, an interview was completed where measurements were taken on the EPV, EPAV scale and heart rate, temperature and muscular tension were measured.

- The interval between pre- and post-test sessions was about eight weeks. For the treatment group, this involved two one-hour sessions a week and 12 to 15 sessions in total. The session used traditional training techniques of breathing, progressive muscle relaxation and imagination. After eight weeks, the treatment and control group were invited back to retake the questionnaire and simulated video test. The control group watched the video, but did not have systematic desensitization therapy.

- The control group which did not have any form of treatment showed no reduction in the participants' assessment of their own fear of flying or objective measures of arousal.

- There were no significant differences between the control group and treatment group prior to treatment. The treatment group showed significant improvement in their fear compared with the control group, which suggests that it could be an effective treatment for the fear of flying.

**AO3**

- Strength of this study is its scientific method of assessment. Measures of fear and anxiety were achieved through quantifiable data (such as the use of scales) and objective measures (such as heart rate).
- The laboratory setting means that every participant experienced the initial stages of the experiment in the same way and minimised extraneous variables.
- Results cannot be generalised to other fears and only apply to fear of flying which limits generalisability as does the small and self-selected sample.
- Credibility was achieved through using a number of measures such as interviews and self-reports alongside a control group that was carefully matched with the treatment group on factors such as age, gender and strength of fear.
Evaluate the use of observational methods in psychology.

- **Naturalistic observation** (i.e. unstructured observation) involves studying the spontaneous behaviour of participants in natural surroundings. The researcher simply records what they see in whatever way they can.

- Controlled observations (usually a structured observation) are likely to be carried out in a psychology laboratory. The researcher decides where the observation will take place, at what time, with which participants, in what circumstances and uses a standardised procedure. Participants are randomly allocated to each independent variable group.

- Participant observation is a variant of natural observations, but here the researcher joins in and becomes part of the group they are studying to get a deeper insight into their lives.

- Participant observations can be either cover or overt. Covert is where the study is carried out 'under cover'. The researcher's real identity and purpose are kept concealed from the group being studied.

- Controlled observations can be easily replicated by other researchers by using the same observation schedule. This means it is easy to test for reliability.

- The data obtained from structured observations are easier and quicker to analyse as it is quantitative (i.e. numerical), making this a less time-consuming method compared to naturalistic observations.

- Like case studies, naturalistic observation is often used to generate new ideas. Because it gives the researcher the opportunity to study the total situation, it often suggests avenues of enquiry not thought of before.

- Natural observations are less reliable as other variables cannot be controlled. This makes it difficult for another researcher to
repeat the study in exactly the same way.

- If the researcher becomes too involved they may lose objectivity and become biased. There is always the danger that we will 'see' what we expect (or want) to see. This is a problem as they could selectively report information instead of noting everything they observe. Thus reducing the validity of their data.
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| 4.              | Evaluate Bandura et al.'s (1961) study in terms of validity and generalisability | A01  
  - The purpose of the study was to see whether observation of the same-sex role model would lead to copying the aggressive behaviour of the same sex role model.  
  - Children aged three to six years (36 boys and 36 girls) were divided into three groups. There was a control group which did not see a model. There were two groups who were exposed to adult models who behaved in either aggressive or non-aggressive ways.  
  - The experimenter took each child to a playroom. In the playroom, they met an adult (the model) who was invited to 'join in the game'. In the non-aggressive condition, the model assembled the Tinker toys for ten minutes. In the aggressive condition, this lasted only one minute after which the model attacked the Bobo doll.  
  - After exposure to the model, all participants were put in a situation designed to frustrate them. This was to increase the likelihood of aggression being displayed.  
  - In the final stage, the children were offered non-aggressive toys. The children were allowed to play here for 20 minutes. They were observed by the experimenters using a one-way mirror.  
  - The results showed that observation and imitation can explain how specific acts are learnt and that this occurred without reinforcements being given.  
|                 |         | A03  
  - As this is a laboratory study, it suffers from low ecological validity as bashing a bobo doll is not reflective of real life and set in an artificial situation.  
  - The study uses a very limited social situation between child and model, and there is no interaction between either at any point | (4, AO1, 4, AO3) |
which reduces validity.

- As the model and the child are strangers, the situation is quite unlike 'normal' modelling, which often takes place within the family, which is again not reflective of real life, thus reducing validity.
- The sample was large enough and participants were all taken from the same nursery, which was for the students and staff at one of the world’s top universities. These children might have unusual home lives and particularly educated parents, making them unrepresentative of normal children.
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<td>5.</td>
<td>Evaluate Watson and Rayner (1920) study of Little Albert.</td>
<td>A01&lt;br&gt;• The researchers aimed to demonstrate that classical conditioning could be used to create a fear response in a child to an innocuous stimulus.&lt;br&gt;• A laboratory experiment was carried out using a single participant; a male infant aged nine months at the start of the study.&lt;br&gt;• Little Albert was presented with the white rat. When he reached for it, the researchers struck a four-foot metal bar just behind his ear, making a loud noise and frightening Albert. The sound of the bar being banged was an <em>unconditioned stimulus</em> because it elicited a fear response from the start. This was done seven times over the next seven weeks and each time Little Albert burst into tears.&lt;br&gt;• In the first trial, when the metal bar was struck, Albert displayed some distress, jumping violently and sticking his face into a mattress. In the second trial, Albert was suspicious of the rat, and by the next session he leaned away from the rat as soon as it was presented.&lt;br&gt;• This study clearly showed that it is possible to create an emotional response in humans after only a few pairings of the stimuli.&lt;br&gt; A03&lt;br&gt;• The study can be criticised for only using one participant. This means it is difficult to generalise the findings because the sample is not representative. We cannot assume that other children or adults would learn in the same way. This is illustrated by Watson and Rayner being unable to replicate their findings.&lt;br&gt;• The study does have an explanation to real life in that it explains how phobias may develop through associating one thing with another. In Albert’s case the rat (NS) was associated...</td>
<td>(4, A01, 4, A03)</td>
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with the loud bang (UCS) over a number of trials.

- The study does support the learning view that the principles of learning are the same for animals as for humans. For example, both Pavlov and Watson and Rayner showed that learning occurs through association. This therefore challenges anthropomorphism which is the criticism that we cannot generalise from animals to humans.

- The study is unethical as it gives an infant a phobia which could stay with him for life. It may not be ethical to subject participants to procedures which cause distress. It is questionable whether what the researchers were trying to do outweighs the negative effects for Albert.
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<td>6.</td>
<td>Outline how operant conditioning might explain gambling behaviour.</td>
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**Answer**

**Mark**

A01

- Gambling relates to operant conditioning because it is considered a form of positive reinforcement using a variable ratio schedule of reinforcement, especially with slot machines (1).
- Gambling leads to a rush of adrenaline when experiencing a win or near-win, is socially rewarding through praise from peers, and financially rewarding after a win (1).
- Variable ratio schedules of reinforcement mean that you are reinforced on a variable rate, as opposed to a fixed ratio schedule of reinforcement (1).
- Variable ratio schedules mean that people are reinforced after an unknown amount of tries or pulls (1).
- Variable ratios are effective in general because people know there is a payoff, but do not know when, and that is exactly why they keep on betting (1).
- The gambler learns that wins will be intermittent, and with persistence, wins will occur (1).
Question 7. Compare classical with operant conditioning as an explanation of learning.

Answer

A02

- One mark each for any appropriate similarity and or difference between the two theories of conditioning.
- One mark for each comparison point identified and one mark for each application of that point to the theories of conditioning.

**Similarities**

- Both theories have a range of practical applications in the real-world (1).
- The principles of classical conditioning are used successfully in behavioural therapies, such as aversion therapy and systematic desensitisation, to help cure phobias and addictions. Gambling can be explained using the concept of schedules of reinforcement in operant conditioning, as winning is a positive reinforcer which occurs unpredictably and so keeps people motivated (1).
- It is difficult to show that a particular adult behaviour was acquired through either classical or operant conditioning (1).
- This is because we have not been able to study the person from birth and therefore, it is impossible to identify the specific causes or consequences which may have led to that behaviour (1).

**Differences**

- Operant conditioning can explain a wider range of learning than classical conditioning (1).
- Classical conditioning only looks at how we learn to use reflex behaviours in new situations, whereas operant conditioning considers voluntary behaviours. Clearly human behaviour is much more than a set of reflex behaviours (1).
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<td>8.</td>
<td>Evaluate ethical issues regarding the use of animals.</td>
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<td>A01</td>
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<td>• If animals are to be constrained, harmed or stressed in any way we must assess whether the knowledge gained justifies the procedure. Procedures that cause pain or distress to animals are illegal in the UK.</td>
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<td>• Researchers should have knowledge of a species' natural history as well as its special needs. Endangered species should not be collected in the wild except as a serious attempt at conservation.</td>
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<td>• Caging conditions should take into account the social behaviour of the species. Some are distressed by being isolated; others will be distressed by being caged together.</td>
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<td>• Experimenters should have a sound knowledge of experimental design such that the minimum number of animals can be used to maximum effect. Statisticians may be able to advise on techniques of analysis which can give meaningful results from the fewest number of subjects.</td>
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<td>• We cannot assess the suffering of animals. It is morally wrong to inflict pain and distress on animals. They are as important as humans and have rights.</td>
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<td>• Animals can be used for experimentation where ethical considerations would prevent the use of human participants. An effect shown in animal studies may provide insights for theory in the study of human behaviour.</td>
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<td>• Animals are subjected to far higher levels of hardship and there are large numbers of animals used unnecessarily. This outweighs the extent of human suffering alleviated.</td>
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<td>• Animal studies have been useful in the testing of psychoactive drugs.</td>
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<td></td>
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<td>• Human suffering can be alleviated through knowledge gained from animal experimentation.</td>
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<td>9.</td>
<td>Evaluate systematic desensitisation as a treatment for phobias.</td>
<td>Systematic desensitisation (SD) takes place over a number of sessions depending on the strength of the phobia and the client's ability to relax. Therapist and client jointly agree what the therapeutic goal should be and the therapy is deemed successful once this goal has been reached. The process can either be <em>in vivo</em> (exposure to the real object) or <em>in vitro</em> (imaginary exposure to the object). There are four stages to systematic desensitisation: functional analysis, construction of an anxiety hierarchy, relaxation training and gradual exposure. The patient is then introduced to objects low down on the anxiety hierarchy. As the anxiety response to each object is extinguished, so the next item on the hierarchy is presented.</td>
<td>(4, AO1, 4, AO3)</td>
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<td>A03</td>
<td>Systematic desensitisation fails to identify and treat the underlying causes of abnormality. Therefore, while the technique may change behaviour another kind of problem behaviour may develop because the causes have not been addressed. Systematic desensitisation is very effective with simple phobias. However, complex and social phobias do not respond so well and relapse rates are high. Craske and Barlow (1993) found between 60 and 80% of agoraphobics showed some improvement after SD, but it was only slight and often clients relapse completely after six months. McGrath <em>et al.</em> (1990) found that 75% of patients with specific phobias showed clinically significant improvement following SD.</td>
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10. Outline what is meant by learning theories.

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<td>Learning theories examine the effects of the environment in the shaping of behaviour and believe that as scientific psychologists, we should only study observable behaviour (1).</td>
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<td>The learning approach views the mind as a ‘black box’ which we cannot access. Therefore, it only studies overt behaviours and the stimuli which cause them (1).</td>
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<td>The most important influence on learning and behaviour is our environment. We are born as a tabula rasa (blank slate) and learning/experience makes us the people we become (1).</td>
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<td>It focuses on how nurture shapes individuals in terms of behaviour, through for example family, peers, social and cultural situations. This is viewed as far more important than the influence of genetics (1).</td>
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<td>Learning theories originate from behaviourism which believes all our behaviour is ‘programmed’ into us by the world around us (1).</td>
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<td>Individual differences are a result of different sets of environmental stimuli which shape our behavioural responses (1).</td>
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<td>11.</td>
<td>Evaluate the use of content analysis in psychology.</td>
<td>Content analysis is a technique for systematically describing written, spoken or visual communication. Content analysis is used by psychologists in order to analyse qualitative data. The researcher will usually try to categorise what has been recorded in magazines, books, advertisements, speeches, etc. The content for analysis can be from secondary sources or produced by surveys such as those for marketing. Coding units are constructed so the content can be categorised according to the study aim. A researcher records incidents that match the coding unit with tallies or frequencies.</td>
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A03

- It is a reliable way to analyse qualitative data as the coding units are not open to interpretation and so are applied in the same way over time and with different researchers.
- As the material is permanent, many researchers can analyse the sources to gain inter-rater reliability. However, coding units may not always be the same ones and subtle messages may be missed by researchers.
- It allows a statistical analysis to be conducted if required as there is usually quantitative data as a result of the procedure.
- It suffers from reductionism in that it reduces data into parts from the whole. This means validity will be reduced in complex datasets as it may be difficult to find categories that represent the full dataset properly.
### Question 12

Hussain has a fear of bees, every time he sees a bee; he starts to panic and cries out for his mama. Using your knowledge of classical conditioning, explain how Hussain might have developed his fear of bees.

### Answer

Classical conditioning would propose that first a panic attack occurs (UCR), in response to Hussain being stung by a bee (UCS) (1). This results in an association being established between anxiety and that bee. Subsequently, this anxiety becomes generalised to all bees (1). Consequently, Hussain will actively avoid being near bees in the future (NS) (1). Avoidance of bees is further reinforced because anxiety is reduced when Hussain adopts alternative strategies, such as not going out into the garden (1).

![Classical Conditioning Diagram](image)

**UCS**: Being stung by bee

**UCR**: Panic

**NS + UCS**: Bee + being stung by bee

**UCR**: Panic

**CS**: Bee

**CR**: Panic

Total Marks: 4