

## Pearson BTEC National Applied Psychology Revision Guide

### Apply It answers

**PLEASE NOTE:** This document contains suggested model answers that would achieve a good mark if provided by a student in an exam. They are designed to help guide and instruct you but should not be considered definitive.

## Unit 1: Psychological approaches and applications

### Content Area A: Key psychological approaches, their assumptions and concepts

#### *A1: Approaches and assumptions*

##### **Page 10 - Assumptions of the four approaches**

One assumption is that behaviour occurs in a social context. For example, Shana keeps quiet because she is being influenced by everyone else's conformity to the chief executive.

##### **Page 11 - Assumptions of the four approaches**

One assumption is that behaviour is a learned response to environmental stimuli. For example, people bought cakes because they associated the free cake with pleasure (classical conditioning).

#### **A1: Cognitive approach**

##### **Page 12 - Key concept 1: Characteristics of three memory stores**

1. Sensory memory.
2. Short-term memory only lasts a short time, such as up to about 30 seconds. Because it took Nikita time to find her phone, she had forgotten some of the information from her STM.
3. Nikita recalled the name from her LTM which uses semantic encoding. This means any errors are about the meanings of words. Nikita recalled the wrong name, but it was a word that is related in meaning.
4. Nikita's error in confusing 'cars' with 'motors' is supported by Baddeley's research. He found that participants who recalled word lists after 20 minutes made errors that mixed up meanings. This shows that encoding in LTM is semantic, which is the same error Nikita made.

##### **Page 13 - Key concept 1: Characteristics of three memory stores**

1. Short-term memory.
2. Short-term memory has limited capacity of between 5 and 9 items on average. Lena had to remember more than 9 'items' of information so she forgot some because there wasn't room.

3. STM uses acoustic encoding, which means that any errors are based on mixing up sounds of words. Nikita made the error because 'fifty' sounds like 'fifteen' and she was recalling from STM.

4. Lena's STM usually lasts a short time, up to about 30 seconds. But it can be extended by rehearsal, which is what she was doing when she repeated the information over and over to herself.

#### **Page 14 - Key concept 2: Remembering**

1. Recognition.

2. Multiple-choice is easier than 'normal' exam questions because recognition is easier than recall. This is because the alternatives given in multiple choice act as cues to trigger recognition. These cues are absent in 'normal' questions.

3. The key words Vash is using are acting as cues to recall. When Vash recalls a cue, this triggers further recall of material he has revised which is related to the cue. This means he recalls more.

4. Vash is using a well-known practical application of retrieval cues. An example is mnemonics such as BIDMAS for maths operators. The order of letters is a cue for the order of operators. This shows Vash can use knowledge about cues to improve his memory.

#### **Page 15 - Key concept 2: Remembering**

1. Recognition is when Lena remembers the heart rate when her partner tells her. Recall is when Lena correctly remembers the patient's blood pressure.

2. Lena could not recall it because she did not have the right cues. The heart rate was stored in her LTM with a lot of other information making it harder to recall. So she needed a cue to retrieve it.

3. Lena could use external cues, recalling information in the same environment in which she learned it, e.g. the same room. A better way would be for Lena to use cues that are meaningfully related to the material. For example, she could organise information using headings which she stores in LTM. The headings are cues which trigger other material when she retrieves them.

4. The importance of cues is supported by research studies. For example, Tulving and Pearlstone found that participants remembered more words when they were given category headings as cues. This shows that cues could help Lena retrieve handover information that appears to be forgotten.

#### **Page 16 - Key concept 3: Reconstructive memory**

1. Finn's memory may have been affected by confabulation. This happens when details that didn't happen are invented so the memory matches your schema. Finn's schema for 'teaching' includes coursework marking. So he expected to be asked about this in the interview, so it was added to his memory.

2. Amber's recall has been affected by rationalisation. This happened because she recalled the robbery in a distorted way to make it fit her schema for a robbery. She recalled that it was a betting shop that was robbed because her schema says a betting shop is more likely to be robbed than anywhere else.

3. Amber might forget some details of the robbery because they didn't fit her schema for 'robbery', so her recall might be shorter than otherwise. E.g. she might not have recalled that the robbers were carrying bags.

4. Amber's experience is supported by research studies. For example, Bartlett found that his participants' recall was affected by their schemas. They showed rationalisation just like Amber did when she recalled a betting shop was robbed and not a jewellers. This shows that memories like Amber's can be inaccurate because they are reconstructed.

### **Page 17 - Key concept 3: Reconstructive memory**

1. Graeme recalls using a tablet but the café used pen and paper.
2. Graeme recalls an employee called Gaby but no-one of that name has worked there.
3. One concept is rationalisation. This happens when your recall is distorted to fit your schemas. So Graeme recalled using a tablet to take orders because that is more consistent with his schema for 'working in a café' than using pen and paper.

Another concept is confabulation. This happens when you invent details that did not happen so that your memory matches your schema. Graeme recalled getting help from Gaby because this makes sense of his memory of having trouble with the tablet.

4. Graeme's experience is supported by problems with eyewitness testimony. The accuracy of an eyewitness's recall of a crime could be affected by their schema, just like Graeme's recall was affected by rationalisation and confabulation. So in both cases, recall is inaccurate. This means evidence in court is never based on EWT alone.

### **Page 18 - Key concept 4: Cognitive priming**

1. Associative.
2. Associative priming happens because you see/hear a stimulus and then you later notice a related stimulus quicker. Phoenix watched a vlog about fish which primed them to think about chips later in the shop as in our culture this is associated with fish more closely than many other stimuli.
3. Overhearing the colleagues meant that Rafi was primed to think about holidays. This triggered his schema for holidays. When he went on Instagram, the concept of holidays was easy for him to recall so he noticed the video.
4. This could be semantic priming. Having a coffee at the café primed Coco to think about coffee. This triggered her schema for coffee including concepts meaningfully related to it such as 'coffee shop'. When she heard the song, she was able to recognise it easily because of the earlier priming.

### **Page 19 - Key concept 4: Cognitive priming**

1. This is because seeing/hearing a prime means you process/recall a later similar meaning stimulus quicker. So, Wes gave the answer 'yellow' and this primed him later to think of a yellow fruit because it is semantically related to the prime.
2. This is associative priming because later on you think about a stimulus that is related in meaning to the prime. Tam had been thinking about cat food when he later saw the hole. He processed 'mouse' because in Tam's memory mice are associated with cats.
3. You see/hear a stimulus and then later on you process it more quickly or easily when you see/hear it again. Ricky saw popcorn in the adverts which primed him so that later on the foyer he immediately noticed the popcorn machine before any other stimulus.

4. Cognitive priming is very difficult to study scientifically so the research evidence is poor. Studies are hard to replicate and often produce different outcomes so they are not scientific. This means that when Ricky notices the popcorn machine, we do not really know whether this is due to him being primed by the advert earlier or some other reason.

#### **Page 20 - Key concept 5: The role of cognitive scripts**

1. Reading the front of the paper carefully. Putting their hand up when they need more paper.
2. Rowan's exam script in his memory holds his information about what happens in an exam situation and how they should behave. This script is built up from Rowan's experience of exams in the past. They are following the script to make the process run without stress, which is why they find their seat on the chart, etc.
3. Sometimes we assume a script is guiding behaviour when it isn't. So when Rowan puts their bag in the right place, etc., they are not following a script but instead might be imitating others, e.g. responding to external cues. Therefore, memory scripts may be a less important influence on Rowan's behaviour than other factors.

#### **Page 21 - Key concept 5: The role of cognitive scripts**

1. Euan thinking Ettie is 'standoffish'. Euan describing Ettie as a 'boring person'.
2. Euan very quickly put Ettie into his mental category of 'standoffish' based on little information. He then used the characteristics of this category from his memory to fill in the gaps in his knowledge of Ettie. This meant he stereotyped her, describing her as 'a typical boring person' who would do badly in the job.
3. There is a practical application because Euan's perception could be more accurate. He inaccurately judged Ettie's personality very quickly and stereotyped her negatively. He could instead take more time to get to know her without making an instant judgement. This means Euan could avoid negatively stereotyping Ettie and others if he made an effort.

#### **Page 22 - Key concept 6: Cognitive biases**

1. Fundamental attribution error.
2. Sylvia attributed the colleague's behaviour to their personality ('a rude and impolite person') when there could be a different reason they didn't reply to do with the situation.
3. Hostile attribution bias. Sylvia interpreted her colleague's comment as hostile even though it was neutral. So she reacted aggressively to defend herself as she saw it.
4. Because Sylvia has a strong hostile attribution bias, she interprets her colleague's neutral comments as hostile. Sylvia responds with aggressive comments of her own. At the same time she experiences a temporary increase in her HAB. This is a vicious circle which shows the central role of HABs in Sylvia's behaviour.

#### **Page 23 - Key concept 6: Cognitive biases**

1. Sasha says her team is doing very well even though they are not.

2. Sasha already believes her team is the best, so she seeks out posts that confirm this view (when they win) but ignores ones that might contradict it (when they lose). She says her team is doing very well because she only remembers information that supports this opinion.

3. Hostile attribution bias. Sasha has a strong HAB, so she interpreted the brother's comment as hostile. So she reacted aggressively to defend herself as she saw it, making a hostile comment of her own.

4. Understanding Sasha's confirmation bias can help her to reduce it. She could deliberately seek out information that contradicts her existing view that her team is the best. For example, she could read posts after her team has lost. This is useful because it would help Sasha to gain a more balanced and realistic view of her team.

## **A2: Social approach**

### **Page 24 - Key concept 1: Conformity**

1. The other students gradually agreeing with Calvin.
2. One way is normative social influence. Shann goes along with Calvin's answer because they want to fit in with the group and not be rejected. Another way is informational social influence. Shann agrees because they believe Calvin and the other students really know the right answer and are better informed.
3. NSI is an effective explanation because it is supported by Asch's research. His participants conformed with the mistaken majority because they were afraid of disapproval. This is like Shann agreeing just because they did not want to be rejected by the other students.
4. Writing the answer down privately freed Shann from group pressure to conform. They were not afraid of rejection so felt able to disagree.

### **Page 25 - Key concept 1: Conformity**

1. Amani agreeing with the other two.
2. It could be informational social influence. Amani believes that Veronica and Cai have better knowledge than her about the resident. She wants to be right so she agrees.
3. There is research evidence to support why Amani agreed. For example, Sherif's participants agreed with majority opinion because they thought the majority had more expertise at a task. This supports informational social influence because Amani may have believed her colleagues knew more about the patient than she did, so she agreed to wait for the ambulance.
4. Veronica could be showing compliance. Her private opinion is uncertain about calling an ambulance. But she goes along with her colleagues publicly.

### **Page 26 - Key concept 2: Types of conformity**

1. Compliance.
2. Compliance is a shallow type of conformity where the person agrees with others publicly but privately holds a different opinion. Kiana privately is indifferent about the march. But she goes along with her friends, perhaps because she wants to be accepted by them (normative social influence).

3. Internalisation is a deep and permanent type of conformity. After 10 years, Kiana is deeply committed to the cause so it appears her private opinions have changed, influenced by her friends. This is probably because of informational social influence because Kiana believes her friends' view of climate change is right.

4. Most conformity research is not done in real-life situations. The groups of participants used are not groups in any meaningful sense, e.g. in Asch's study. This is very different to Kiana's experience of being deeply involved in a group of like-minded people. Therefore, the main influence on Kiana's behaviour may not be conformity but a non-social factor e.g. cognitive.

### **Page 27 - Key concept 2: Types of conformity**

1. Compliance.

2. This is because Sunny publicly agrees with his friends (to fit in) and goes to the nightclub. But his private opinion does not change because he would rather not go.

3. Sunny may identify with his group of friends. Perhaps he looks up to them or wants to be like them in some way, e.g. he admires their 'sense of fun'. So he publicly agrees to go with them and if he enjoys it he may change some of his private views.

4. Sunny identifies with his role as a medical doctor. This means he conforms with the values of the medical profession when faced with someone who needs his help.

5. It is useful because it is supported by research evidence. For example, Sunny showed compliance by agreeing to go out with his friends. This is like participants in Asch's study who conformed with opinions they knew were wrong. This shows that there is a scientific basis for understanding Sunny's conformity behaviour.

### **Page 28 - Key concept 3: In-groups and out-groups**

1. Teachers thinking boys are naturally better at physics than girls.

2. Someone stereotypes when they assume the characteristics of a social category ('girl') apply to individuals. So teachers who believe 'girls' are not as good at physics as boys may assume individual girls in their classes will not do as well as the boys (just because they are girls).

3. Physics teachers who have this negative view of girls may behave towards girls in line with their stereotype, e.g. they expect the girls to do worse than the boys. Girls then share these lowered expectations and may underperform, e.g. in exams (self-fulfilling).

4. Girls doing physics might be discriminated against because teachers have low expectations of them and view them as an 'out-group'. So the girls are asked fewer questions, are praised by the teacher less than the boys, experience lowered self-esteem, etc.

### **Page 29 - Key concept 3: In-groups and out-groups**

1. The GP's comment about older women not being fit enough for surgery.

2. The GP views 'older women' as a social category sharing certain characteristics, in this case 'being unfit for surgery'. The GP then assumes each individual older woman fits into this category and is unfit for surgery, even though individual older women are different.

3. Prejudice is a negative attitude towards an out-group. The GP who thinks older women are less able to understand than younger women is clearly expressing a prejudice against older women.
4. If the GP believes older women are 'less able to understand', they may spend less time explaining or treat their symptoms less seriously.

#### **Page 30 - Key concept 4: Intra-group dynamics**

1. Roles – each individual has a specific role in the group, e.g. Evie makes sure the group is 'on task' and getting the work done.

Common goals – each group member shares the same goal of helping to reduce stress in the college.

2. Groupthink occurs because group members have a strong need to agree with each other. This is why the students decide not to let anyone else into the group, because they might disrupt their agreement. They do not want to listen to alternative views. Even Frida eventually agrees with the rest of the group on this.
3. Group cohesion. The group members share a common goal so they 'stick together', especially if they perceive themselves as similar, e.g. they are all students, concerned about stress, etc. This means the students will enjoy meeting together, communicate well and work efficiently.
4. The students should consider ways of avoiding groupthink. For example, they should follow Frida's advice to admit new members, encourage criticism and break the group up into smaller units. This shows that improving their intra-group dynamics could help the group to work more effectively to reduce stress.

#### **Page 31 - Key concept 4: Intra-group dynamics**

1. Having common goals would help the group to be more cohesive. They would feel they were working together to improve job satisfaction. This would help to motivate them, improve communication, reduce squabbling and give them direction so they feel they know what to do.
2. When the task is complex, other people's presence reduces performance. So each individual needs to feel they are not being evaluated, e.g. allow ideas to be expressed without judgement. Also, if the group size is reduced that would mean fewer people to observe your performance.
3. Everyone needs to know clearly what their role in the group is. This would help everyone to know what they are meant to be doing and reduce squabbling. For example, someone should be the task leader to keep the group on track. Someone else can make sure they praise and encourage others.
4. The poor performance of the group is supported by research. If the group members knew their roles, they could understand what their goals are. Gowan found that group performance improved by 31% when members worked towards personal and group goals. This shows that the group's performance can be understood in terms of intra-group dynamics.

#### **Page 32 - Key concept 5: Influences of others on the self**

1. Shay has a positive view of their compassion for patients.
2. Shay may have compared themselves with their colleagues. Perhaps some of them are not as compassionate with patients as Shay is, so they feel positive about themselves in comparison.
3. Shay realises that doing paperwork is not one of his positive qualities.

4. Shay probably got this perception from feedback from other people. For example, feedback from managers in Shay's appraisals may have highlighted their problems with paperwork.

5. There is research support for this. For example, one study showed that having positive relationships increases our self-esteem (part of self-concept). Shay has good relationships with patients and colleagues. This contributes to Shay's positive self-concept, which in turn improves the quality of his relationships a positive feedback loop.

### **Page 33 - Key concept 5: Influences of others on the self**

1. Part of Talia's self-image is that planning is her main weakness. Her self-esteem is increased by the good feedback.

2. Talia may have had feedback from her teachers which suggested planning was one of her weaknesses, so 'I am not a good planner' became part of her self-image.

The positive feedback she got from previous projects would contribute to her self-concept by increasing her self-esteem, feeling good about her abilities.

3. She was confident about the current project because she did well on previous ones.

4. Talia received positive feedback for her project. Also, she would be encouraged by her friends asking for her advice. This would help Talia overcome any self-doubt and persuade her she was capable of achieving success.

5. Self-concept is poorly defined. For example, it is unclear whether Talia's self-concept is based on her feelings or her beliefs or both. There is too much overlap between her self-image and self-esteem to separate them. This means self-concept is vague so our understanding of how other people have influenced Talia's self-concept is very limited.

### **Page 34 - Key concept 1: Classical conditioning**

1. UCS is the bad food. NS is the restaurant. CR is feeling sick.

2. Classical conditioning explains this. Rudi has associated the restaurant with feeling sick. The restaurant is now a conditioned (learnt) stimulus.

3. Rudi's experience is supported by research evidence. Watson and Rayner presented Little Albert with a white rat he was not afraid of. They paired this with a loud noise. Albert learnt to be afraid of the white rat even without the noise. This shows that it is straightforward for Rudi to form an association between a restaurant and feeling sick.

4. When people save money they feel happy (unconditioned response). Someone who buys a candle from Rudi associates this with saving money. Feeling happy becomes a conditioned response to buying candles, so they continue doing this even when the price returns to normal.

### **Page 35 - Key concept 1: Classical conditioning**

1. A type of learning (conditioning) that occurs when we associate two stimuli with each other.

2. CS is fruit in the bowl/supermarket. CR is excitement at seeing fruit.

3. The fruit was originally a neutral stimulus that did not produce excitement in Tay. The fruit became associated with the sights and sounds of Tay's favourite gambling websites. So now, Tay is excited by the fruit in the bowl/supermarket even when they are not on the websites.



4. Classical conditioning struggles to explain complex behaviours. Tay learnt to be excited by gambling websites because they found them rewarding, which is operant conditioning. The rewarding pleasure generalised to other situations where Tay encountered fruit. Therefore, classical conditioning is just a partial explanation of Tay's behaviour.

### **Page 36 Key concept 2: Operant conditioning**

1. When Frida was praised by the teacher, she found this rewarding. This was a pleasant consequence of her getting the answer right, which positively reinforced Frida's behaviour. This meant Frida was more likely to try and give a correct answer again, to experience the reward again.

2. Punishment is a consequence of a behaviour that reduces the likelihood of that behaviour. The behaviour here is Denny's refusal to tidy up. Having his Xbox removed punishes this behaviour, so he tidies up.

3. Positive reinforcement – Denny's mum could reward him for any behaviour that leads to a tidier room, e.g. with sweets, points, praise, etc.

Negative reinforcement – Denny's mum could 'ground' him, an unpleasant consequence of not tidying his room which Denny could avoid by tidying it.

4. Operant conditioning has many practical applications. Denny can be successfully conditioned to tidy his room by rewarding him (positive reinforcement), removing an unpleasant consequence (negative reinforcement) or punishing him. These methods are also used in education. This shows that operant conditioning can explain many behaviours in real-world situations.

### **Page 37 - Key concept 2: Operant conditioning**

1. When Herbie told a joke, he would find his mum's response of laughing to be rewarding. This pleasant consequence would reinforce his joke-telling, making him more likely to do it again.

2. This is explained by negative reinforcement. Spiders make Herbie feel anxious. By avoiding going into the room, Herbie reduces his anxiety. This negatively reinforces his avoidance behaviour, making it likely he will avoid going into the room again.

3. Operant conditioning can explain how Herbie's spider phobia is maintained through negative reinforcement but it cannot explain how the phobia began. A better explanation for this is classical conditioning. Herbie may have associated a spider with a feeling panic or anxiety. This means operant conditioning is not a full explanation of Herbie's behaviour.

4. Extrinsic rewards – Herbie enjoys the money he gets paid for hairdressing. This reward from an outside source is positively reinforcing.

Intrinsic rewards – Herbie also finds his work interesting, so he does it because it is rewarding in itself even without external rewards.

### **Page 38 - Key concept 3: Social learning theory**

1. Observation – Safiya carefully watches the coach as she shows how to shoot.

Modelling – Safiya followed the steps shown by the coach.

2. The coach is a model because she demonstrates the steps involved in taking the perfect shot. Safiya pays attention to the coach's behaviour through observation. Safiya retains the coach's actions in memory and later reproduces the shooting behaviour by imitating it.

3. Safiya is more likely to imitate the model's shooting behaviour if she observes the model being rewarded for a successful shot, e.g. if the coach is applauded and praised for her success.

4. Coaching through observation and modelling may not have much effect on Safiya's skills compared with other factors. For example, Safiya may have genes that make her skilful, such as hand-eye co-ordination. This suggests that social learning might not be a complete explanation of how coaching affects Safiya's basketball skills.

### **Page 39 - Key concept 3: Social learning theory**

1. Emile could learn what the procedures are through observing other care workers demonstrating the behaviours required (models). He could pay careful attention to these behaviours, retaining the steps involved in memory. He could then recall these actions later and imitate them.

2. The effectiveness of social learning is supported by research evidence. Bandura et al. showed that children imitate aggressive models, especially when the model's behaviour is reinforced. This supports the idea that Emil could learn his new role through observation, modelling, imitation and vicarious reinforcement.

3. Modelling – by demonstrating how to make scrambled eggs, Emile is modelling the behaviours involved for the resident to retain in memory and imitate.

Vicarious reinforcement – Emile finds the task rewarding (fun, enjoyment) and the resident experiences this second-hand, so is more likely to imitate Emile.

### **Page 40 - Key concept 1: Influence of biology on behaviour and traits**

1. Genes – as depression seems to run in Scott's family (dad and sister), it is possible they have genes that contribute in some way to depression.

Neurochemistry – some neurotransmitters affect mood, so perhaps an imbalance of neurotransmitters in Scott's brain explains their depression.

2. It is a personality type, a collection of traits that include sociability, impulsiveness, friendliness and loudness.

3. Scott enjoys being with their friends and likes to have new experiences.

4. Scott may have an underactive nervous system, which was probably genetically inherited from their parents. Therefore to arouse their nervous system to normal levels, Scott has to experience constant stimulation, e.g. being sociable and doing parachute jumps.

5. There is support from research into genetics. Studies comparing identical and nonidentical twins show that a heritability estimate for extraversion could be as high as 57%. This suggests that Scott's personality is quite strongly influenced by biology in the form of genes.

### **Page 41 - Key concept 1: Influence of biology on behaviour and traits**

1. Neuroanatomy – the structure of Rita's brain and/or nervous system may have experienced some damage. For example, damage to the left side of her brain could lead to problems with movement on the right side of her body.

2. It is a personality type or collection of traits that include being withdrawn, unsociable and shy.

3. Rita likes her own company and prefers not to deal with customers.

4. They are quiet.

5. Rita may have genetically inherited an overactive nervous system. This overactivity is uncomfortable, so to reduce the discomfort Rita has to avoid stimulating her nervous system further. So she avoids socialising and new experiences.

6. Rita's genes may make it more likely she will become an introvert, but this is not inevitable. Learning experiences play a key role, e.g. if Rita has been raised to spend time on her own that might be why she is an introvert. This suggests that non-biological factors may be more important influences on Rita's personality.

#### **Page 42 - Key concept 2: Genetics and inheritance**

1. Same phenotype because they both have panic attacks.

Different genotypes because they are siblings but not identical twins.

2. Paloma and Ivo have similar genotypes because they are siblings. But although they share some genes, their expressed traits (phenotypes) are not the same because their genotypes interact with environmental influences, which are different for the two. This is why Paloma is an extravert and Ivo is an introvert.

3. The SRY gene is on the Y chromosome. If Paloma's embryo inherits a Y chromosome, the SRY gene will switch on other genes and cause the embryo to develop testes. These produce the male sex hormone testosterone, which causes the embryo to become biologically male. With no SRY gene, other genes stay switched off and the embryo develops into a biological female.

#### **Page 43 - Key concept 2: Genetics and inheritance**

1. Same genotype – Franky and Kenny are identical twins.

Different phenotypes – Franky has depression but Kenny does not.

2. Franky and Kenny are identical twins with the same genes (genotype). But they have different observable characteristics (phenotypes) – Franky has depression but Kenny does not. This is because they experience different environmental influences, which interact with their genotypes.

3. The influence of genes is often oversimplified. It is inaccurate to say that there is a 'gene for depression' – Franky and Kenny have the same genes but only Franky has depression. Genes increase the risk of depression but do not cause it. This shows that the influence of environmental factors is also important.

4. A baby may have a genotype linked with galactosemia but it is not inevitable that they get the disorder. This is because whether the disorder appears (phenotype) depends on the environment. The disorder can be avoided by changing the baby's diet. So the phenotype depends on the interaction between both the genotype and the environment.

#### **Page 44 - Key concept 3: Neuroanatomy**

1. Numbness in Silas's left arm and leg due to bleeding in a part of his brain.

2. One specific area of Silas's brain controls sensations in the left side of his body. This area was damaged by bleeding, so the sensations in his left side were affected.

3. Silas experienced numbness and tingling only on his left side and not his right. This is because the bleeding occurred in the right hemisphere of his brain which controls the left side of the body.
4. This is because of the brain's plasticity.
5. The plasticity of Silas's brain means healthy areas in his right hemisphere might adapt and take over the functions of the damaged area.

#### **Page 45 - Key concept 3: Neuroanatomy**

1. Milli was unable to speak clearly after damage to her brain.
2. Milli's ability to speak was controlled by a specific area in her brain. When this was damaged in the crash, its normal function was affected so she could not speak clearly.
3. The areas controlling Milli's ability to speak clearly and move the right side of her body are located in her left hemisphere only. When this side of her brain was damaged, these functions were affected.
4. This is because Milli's brain has plasticity. Healthy areas in Milli's brain may have taken over the functions of damaged areas. This process could lead to some improvement when supported by rehabilitation therapy.
5. Milli's experience is supported by research. A rehab programme using gaming activities protected people against cognitive decline by supporting brain plasticity. The therapy Milli received supported her brain's plasticity, so her condition improved. This shows that understanding neuroanatomy can lead to beneficial interventions.

#### **Page 46 - Key concept 4: Organisation of the nervous system**

1. Scarlett's brain is part of her CNS and it recognises that the situation is stressful. Her brain sends signals down the spinal cord to her autonomic nervous system. This triggers a sequence of bodily events that make up the fight or flight syndrome. The sympathetic branch of Scarlett's ANS activates arousal so her heart races and she breathes fast.
2. Parasympathetic division of the ANS. This is triggered after the stressor is over. It activates Scarlett's rest and digest response. This brings Scarlett's body back to its normal resting state, e.g. reducing her heart rate.
3. Scarlett's response is not just caused by her nervous system. Hormones and glands of the endocrine system are also involved, e.g. adrenaline is produced by the adrenal glands as part of fight or flight. This means that we can't fully explain Scarlett's response without considering the endocrine system.

#### **Page 47 - Key concept 4: Organisation of the nervous system**

1. Wilf's brain is part of his CNS and it recognises that the concert is a highly stressful situation. His brain sends signals down the spinal cord to his autonomic nervous system. This triggers a sequence of bodily events that make up the fight or flight syndrome. The sympathetic branch of Wilf's ANS activates arousal so he sweats and his hand shakes.
2. Parasympathetic division of the ANS. This is triggered when Wilf gets into the piece and ignores the stress of the audience. It activates Wilf's rest and digest response. This starts bringing Wilf's body back to its normal resting state, e.g. reducing his sweating and shaking.

3. Wilf's experience shows a real-life application. Research shows that his anxiety is caused by activation of the sympathetic division. This can be prevented by drugs, helping to improve performance. This shows that understanding the organisation of the nervous system can help performers to reduce anxiety and stress.

#### **Page 48 - Key concept 5: Neurochemistry**

1. Adrenaline

2. When Arlo saw the dog, the sympathetic division of his ANS was activated and this stimulated release of adrenaline into his bloodstream. This triggered arousal in his body, e.g. shaking, heart racing.

3. A chemical that allows communication between neurons.

4. Marlo may have an abnormally low level of serotonin in his CNS. This has been associated with sleep disorders, which might explain why Marlo is sleeping poorly.

5. Low serotonin may not be able to explain Marlo's depression. A recent study of thousands of people found no direct or consistent evidence that depression is caused by low serotonin. This suggests that neurochemistry might not play a central role in Marlo's depression and another factor is involved.

#### **Page 49 - Key concept 5: Neurochemistry**

1. A chemical messenger produced within glands of the endocrine system.

2. Cortisol.

3. Cortisol helps Salma's body cope with the effects of long-term stressors, e.g. mobilise and restore energy supplies to keep her response going. But it also damages the body long-term, e.g. suppressing Salma's immune system.

4. This does not take non-biological factors into account. For example, if Salma thinks about her stressors as opportunities and not disasters, it could reduce her stress response. This shows that neurochemistry is not a complete account of Salma's long-term stress response because it neglects cognitive factors.

#### **Page 50 - Key concept 6: Evolutionary psychology**

1. Huda might experience the fight/flight/freeze response. Because the interview is a stressor, the sympathetic division of her ANS will activate and create physiological arousal. So Huda might 'freeze', e.g. she might not be able to remember answers to questions.

2. There is gender bias in evolutionary psychology. Fight/flight/freeze is more applicable to men. Huda's women ancestors would find 'tend and befriend' more adaptive, to protect offspring by getting support from social networks. Therefore, the evolutionary psychology explanation might not apply to Huda's behaviour.

3. The male's bushy mane is attractive to female lions because it is a signal of his 'fitness'. So a male with a very bushy mane has an advantage in attracting potential mates. This increases the male's chances of reproducing and passing on the genes that made him so attractive.

#### **Page 51 - Key concept 6: Evolutionary psychology**

1. Ancestors with characteristics that helped them stay alive passed their genes on.
2. The robin's aggression is a characteristic that helps it survive in hard times (e.g. low food). The genes that contribute to this characteristics also survive and are passed on.
3. Stress/fight, flight, freeze.
4. Genome lag. The genome changes over very long timescales but the world changes much faster, e.g. the fight/flight/freeze response evolved to suit the EEA but is often inappropriate now.
5. There is some gender bias in evolutionary psychology. The fight/flight/freeze response is a more appropriate explanation of men's response to stress or threat. But it does not apply so well to women, because tend and befriend is more adaptive to protect offspring.

## Content Area B: Application of psychological approaches

### Page 52 - Cognitive approach to explaining aggression in society

1. Nancie's was instrumental/cold-blooded. Curtis's was hostile/hot-blooded.
2. Priming for aggression could explain this. Because Nancie had seen the fight, she was primed to be aggressive towards her brother, to think of aggression as a way to get what she wanted.
3. Because Nancie has a strong hostile attribution bias, she interprets her brother's facial expression as angry/aggressive even if it is neutral. Nancie interprets accidental physical behaviour as deliberate ('on purpose'), which may lead to her becoming aggressive herself.
4. One cognitive explanation of aggression is cognitive priming. An aggressive stimulus can prime aggressive thoughts. If you later on see or hear a related stimulus (nudge, comment), this can 'trigger' an aggressive cognitive script. The script is stored in memory and it prepares us to be 'ready' for aggression.

When Nancie watched the fight, the aggression may have primed her to later on think of aggressive behaviour as a way to get what she wanted. If she has experienced aggressive situations frequently in the past, Nancie may have a wide range of aggressive cognitive scripts. She retrieves these more quickly than other scripts. So she reacts to situations with aggression instead of humour, for example.

Hostile attribution bias could also be a cause of aggression. This is a bias towards perceiving hostility or threat where it does not exist. Someone with a strong HAB expects other people to be aggressive.

Nancie interprets her brother's facial expression as angry/aggressive even when it is neutral. She also interprets accidental behaviour as deliberate ('on purpose'). Nancie might then behave aggressively herself, leading to an escalation of physical violence which is self-fulfilling. Nancie would conclude she was right to expect aggression from her brother, which would become part of her aggressive cognitive script and reinforce her HAB.

A strength of the cognitive approach is that there is evidence to support it. For example, there was a review of studies which showed an association between HABs and aggression. Nancie is more likely to behave aggressively because she has a strong HAB. Therefore, research shows that cognitive factors are centrally involved in aggressive behaviour.

However, a lot of research is correlational, e.g. studies show a link between scripts/HABs and aggressive behaviour. But in Nancie this link could be explained by a non-cognitive factor. E.g. perhaps biochemistry explains why she is aggressive and has a strong HAB/cognitive script. This means that cognitive factors are not the full explanation of why Nancie behaves aggressively.

In conclusion, Nancie's aggressive behaviour is complex and can only be explained by a range of factors. These include cognitive factors such as a strong HAB. But biological and social factors may be even more important.

362 words

### Page 53 - Cognitive approach to explaining aggression in society

1. Hostile.
2. Hostile attribution bias and cognitive scripts.

3. Karina may have a strong hostile attribution bias so she wrongly interprets other people's comments as aggressive even when they are neutral. This leads her to behave aggressively.

Karina may have a cognitive script for social media interactions which is aggressive. The script primes Karina to be aggressive whenever she believes she is threatened or confronted.

4. Cognitive priming helps explain Karina's aggression. An aggressive stimulus can prime aggressive thoughts. If you later see or hear a related stimulus (a comment on social media), this can 'trigger' an aggressive cognitive script. The script is stored in memory and it prepares us to be 'ready' for aggression.

Priming occurs over time and is not a 'one-off' event. Karina is likely exposed to many social media posts so she probably has a wide of aggressive cognitive scripts. She retrieves these more quickly than other scripts. So she reacts on social media with aggression instead of humour, for example.

Hostile attribution bias can also be a cause of aggression. This is a bias towards perceiving hostility or threat where it does not exist. Someone with a strong HAB expects other people to be aggressive.

Karina interprets social media posts as aggressive even then they are neutral. She then responds aggressively, which could lead to an escalation of verbal aggression (a 'war of words') which is self-fulfilling. Karina might conclude she was right to expect aggression from other posters, which would become part of her aggressive cognitive script and reinforce her HAB.

A strength of the cognitive approach is that it has real-world benefits. Cognitive therapy can help to reduce aggressive behaviours by changing HABs and thoughts that prime aggressive behaviour. Karina could get help to stop responding with aggression by re-interpreting social media posts as neutral rather than hostile. This means that using the cognitive approach can reduce aggression and the social costs associated with it.

A weakness is that cognitive factors may not be causing Karina's aggressive posting. The link between Karina's scripts/HABs and her aggressive posting could be explained by a non-cognitive alternative such as the biological approach. This means that Karina may be genetically predisposed to have a strong HAB and to be aggressive, but the HAB does not cause the aggression.

In conclusion, Karina's aggressive posting on social media is a complex behaviour and can only be explained by a range of factors. These include cognitive factors such as a strong HAB. But biological and social factors may be even more important.

357 words

### **Page 54 - Social approach to explaining aggression in society**

1. Rocky's comment reflects the social norms of a culture in which women are expected to be nurturing and caring. So it violates those norms to see women behaving aggressively by boxing.
2. Rocky's chosen media provide role models for him to imitate, e.g. characters in video games, famous boxers. Rocky is more likely to imitate these models when he identifies with them and their characteristics (e.g. same gender, wealthy, powerful).
3. Rocky's aggressive behaviour may have been influenced by the prison environment. Violence in the prison may have been widespread because the staff failed to apply discipline consistently. Or inmates formed into gangs, so Rocky was expected to join one and behave aggressively to fit in.



4. Rocky's aggressive behaviour may have been influenced by the prison environment. Violence in the prison may have been widespread because the staff failed to apply discipline consistently. Or inmates formed into gangs, so Rocky was expected to join one and behave aggressively to fit in.

The social approach understands aggression in terms of social norms. Cultures usually have norms about how genders are expected to behave. In many cultures, the gender norm for men is that they can use aggression to achieve social rewards, e.g. status. This is so common that many societies stereotype men and boys as physically aggressive.

As Rocky is male, he may have grown up in an environment which encouraged him to conform to this cultural norm. So being aggressive is a way for Rocky to be masculine. This is a self-fulfilling prophecy. Rocky conforms to the stereotypical norm because he is expected to. His violent behaviour then confirms the stereotype.

Another social influence on Rocky is the media. Some TV programmes provide aggressive role models for people to imitate. Rocky frequently watches boxing matches and plays boxing games, which creates social norms more accepting of aggression for Rocky to conform to. Rocky's behaviour may become disinhibited as a result, so he carries out physical assaults.

The social approach can also explain Rocky's aggression in prison. Rocky's behaviour may have been caused by the prison's environment. For example, Rocky may have witnessed inconsistent application of prison rules by staff. This helps create a social norm in the prison of 'getting away with it'. By assaulting other inmates, Rocky was conforming with this norm.

One strength of the social approach is it can be applied practically. Rocky's aggressive behaviour in prison could have been reduced by prison staff applying rules consistently. Rocky would be less likely to develop a sense of injustice that could cause him to be aggressive. This shows that understanding the social causes of aggression is beneficial in reducing institutional aggression.

Another strength is that there is evidence to support the social approach. For example, one study showed that people behave more aggressively (giving fake shocks) after watching a film portraying violence as socially acceptable. This is disinhibition, like when Rocky watches boxing/plays boxing games which create social norms favouring aggression. This research suggests we can understand Rocky's behaviour in terms of social factors, e.g. media influences on his perception of social norms.

354 words

### **Page 55 - Social approach to explaining aggression in society**

1. Role modelling.

2. The gang leader is a role model for Gwen, who is likely to imitate their aggressive behaviour because she identifies with them (looks up to them).

Because Gwen has seen a lot of aggression she may be desensitised to it. This means Gwen may lack empathy for victims, which removes one barrier to her behaving aggressively.

3. Gwen may experience disinhibition. There are strong social inhibitions against aggression. But these may be weakened in Gwen if she repeatedly watches aggression in the media. Gwen's viewing may create social norms that are more accepting of aggression (she sees it as 'normal').

4. The social approach claims aggression is due to conformity to group norms. Members of social groups conform to the attitudes and behaviours of the group so they fit in. It is likely that Gwen will

conform to the aggressive norms of her gang so she can become a true part of the group, accepted by the other members.

Gwen has a role model to help with this – the gang leader. Gwen may imitate the leader's aggressive behaviour, especially as Gwen looks up to them. Imitation is more likely because the leader has characteristics Gwen admires, such as fighting ability and status.

The social approach also explains aggression in terms of desensitisation. When Gwen first witnessed aggressive behaviour she probably experienced physiological arousal (increased heart rate, etc.). However, Gwen has been exposed to aggression repeatedly. She may now be used to its effects and become desensitised. Gwen feels less empathy for the gang's victims, which makes it more likely she will behave aggressively.

Gwen also watches TV programmes that feature aggressive behaviours. Therefore her own aggression can be explained by disinhibition via media influences. Normally there are strong social inhibitions against aggression. But these may be weakened in Gwen because she repeatedly watches aggression in the media. Gwen's viewing may create social norms that are more accepting of aggression, so she sees it as 'normal'.

One strength of the social approach is evidence supporting it. Krahe *et al.* showed that physiological arousal associated with aggression gradually reduces in people who view violent media. This supports the view that Gwen witnessing aggression in the media and in real life may desensitise her to its effects. This research suggests that social factors can be powerful influences on aggressive behaviour.

However, one weakness is that biological factors may outweigh social influences. The biological approach can explain evidence showing that testosterone and aggression are linked in both men and women. Even though Gwen is female, her level of testosterone may be high enough to make it likely she will behave aggressively. Therefore, social influences are only partial explanations of aggression and may have less effect than biological factors.

353 words

### **Page 56 - Behaviourist and social learning approaches to explaining aggression in society**

1. Gus saying good things about Hubert in meetings.
2. When Gus praises Hubert, he is rewarding Hubert for his aggressive behaviour towards colleagues. This reinforces Hubert's aggressive behaviour and makes it more likely to happen again.
3. Gus is probably a role model for Hubert. Hubert carefully observes Gus's behaviour and is likely to imitate it because he looks up to Gus. This is even more likely because Gus's behaviour has been rewarded by promotion. So Hubert experiences vicarious reinforcement.
4. Behaviour is shaped by its consequences, so if it is reinforced it is more likely to occur again. Positive reinforcement occurs through application of rewards. Aggressive behaviours are learnt through positive reinforcement because aggression is an effective way of gaining rewards. This explains Hubert's behaviour because Gus praises Hubert in staff meetings. So Hubert is aggressive towards colleagues because he is rewarded for this behaviour by Gus.

Hubert's aggressive behaviour may be strengthened if Gus positively reinforces it only occasionally. For example, Gus praises him not in every staff meeting but just in some meetings and without a predictable pattern. Hubert has to wait for praise from Gus so when it arrives it feels more rewarding. No doubt Gus praises Hubert other times as well, e.g. to his face, in appraisals, etc.

Hubert's behaviour is positively reinforced by two types of reward. Intangible rewards come in the form of praise from Gus, his status/power in the company and feelings of pleasure he experiences as a result. Hubert's status means colleagues fear his power, which also positively reinforces his aggression because he enjoys it. Hubert also has tangible rewards because he is deputy manager. Promotion to this role is a real reward (with more money) for his aggressive behaviour.

One strength of operant conditioning is its practical uses in many contexts. It is frequently used to reward behaviours in the workplace. Hopefully these behaviours are positive and desirable, e.g. teamworking, helping colleagues, etc. But the same rewards can be used to reinforce workplace bullying and aggression, as shown by Gus's rewarding of Hubert. These uses demonstrate the effectiveness of operant conditioning in explaining aggression.

However, a weakness is that alternative approaches may be better explanations. Hubert may simply be someone who behaves aggressively in most situations. This could be for biological reasons, e.g. Hubert has inherited certain genes or has a sensitive amygdala. This is a better explanation because it explains a broader range of aggressive behaviours, rather than being limited to reinforcements in very specific circumstances.

In conclusion, Hubert's behaviour has many causes. Conditioning and social learning are not complete explanations but they give useful insights into a complex behaviour.

360 words

### **Page 57 - Behaviourist and social learning approaches to explaining aggression in society**

1. The other kids telling Ade how great he is.
2. Ade finds it rewarding (e.g. self-esteem) when the other kids praise him for being aggressive. This is positive reinforcement of his aggression, so he is more likely to be aggressive again.
3. Role modelling – Ade is a role model for Caiden. Caiden observes Ade using aggression and is likely to imitate the aggressive behaviour because he admires Ade (identification).  
Vicarious reinforcement – Ade observes the consequences of Caiden's aggression, which is positive reinforcement through praise by the other kids. Ade experiences this reward for himself, making him more likely to be aggressive.
4. Social learning theory understands aggression in terms of observational learning, modelling and imitation. People often learn aggressive behaviours by imitating them after observing aggressive models. Ade is an aggressive leader of the gang who provides Caiden with a role model. Caiden carefully watches how Ade physically performs aggressive behaviours. Caiden stores these actions in memory to retrieve later, to imitate Ade's behaviour.

However, just because Caiden observes Ade's behaviour does not guarantee he will imitate them. Two additional social learning factors make imitation more likely.

The first is identification. Caiden identifies with Ade because he admires him and wants to be a leader like him. Furthermore, they are the same gender, so this is a similarity that Caiden will also identify with.

The second factor is vicarious reinforcement. Caiden does not just observe Ade's behaviour, he also observes its consequences. When Ade is rewarded for being aggressive, e.g. praise from others, Caiden experiences this reinforcement 'second hand' or vicariously. Caiden learns that aggression is an effective way of gaining a desired reward.

A strength of the social learning explanation is evidence supporting it. One study found that boys aged 9-12 years experienced vicarious reinforcement by observing the rewarding consequences of each other's aggression. This explains how Caiden is likely to imitate Ade's aggressive behaviours. This study shows that social learning is a powerful way in which aggression can be learned by gang members.

Another strength is that social learning offers practical ways to reduce aggression. Caiden learns to be aggressive through observing and imitating a role model. The same processes can be used in a pro-social way. For example, Caiden could be mentored by someone who provides him with a non-aggressive role model. Caiden would learn that there are alternatives to aggression in solving problems, gaining rewards, etc. This shows that the social learning approach could help reduce the costs to individuals and society of aggressive behaviours caused by Caiden's gang.

In conclusion, because aggression is complex Caiden's behaviour has many causes. Social learning does not give us a complete understanding but it does give us useful insights.

348 words

### **Page 58 - Biological approach to explaining aggression in society**

1. Amygdala.

2. Family members may have high levels of the male sex hormone testosterone. High levels are linked with aggressive behaviour even in women.

They may have low levels of the neurotransmitter serotonin. Low levels disrupt neuron activity in the orbito-frontal cortex, reducing behavioural self-control and increasing aggression.

3. Family members may have inherited a low-activity version of the MAOA gene. This would give them low enzyme activity disrupting neurotransmitters and leading to aggressive behaviour.

4. The biological approach understands aggression in terms of genes. Aggression has been linked to the low-activity variant of the MAOA gene. Children in this family may have inherited this variant, so they have low enzyme activity in their synapses. This means the activity of the neurotransmitter serotonin is disrupted, which Brunner linked to high levels of aggression.

This links to another biological factor, biochemistry. Normal levels of serotonin in the OFC of the brain keep us emotionally stable. But the father and children may have low serotonin levels in the OFC (perhaps genetic). This disrupts neuron activity causing them to become emotionally unstable and have lower self-control. Their behaviour would become more impulsive, which includes aggression.

Another biochemical factor is the male sex hormone testosterone. The father is male and may have high levels of testosterone, which has been closely linked with aggression. Although men are generally more aggressive than women, high testosterone has been linked with aggression in females as well.

One strength is that we can get real-world benefits from understanding biological factors. The children do not have to become aggressive just because their father is. For example, understanding the role of biochemistry could lead to drugs to control and reduce aggression. Even knowing that aggression could be genetic means psychological support can be given to 'at risk' families to reduce the impact of genes. Therefore, the biological approach can provide potential ways to reduce the costs of aggression to individuals and societies.

A weakness of the biological approach is that the social learning alternative may be better. The father and his children are aggressive, so the biological approach assumes a genetic reason. However, it is just as likely that the children have learnt to be aggressive from observing the father as a role model. They may also experience vicarious reinforcement and thus imitate his aggressive behaviour. This shows that the causes of aggression are not fully explained by the biological approach.

In conclusion, aggressive behaviour is complex and can only be understood with a range of factors. These include biological factors such as genes. But social and learning factors may be even more important.

357 words

### **Page 59 - Biological approach to explaining aggression in society**

1. Ciaran's aggressive behaviour is an attempt to prevent Livia from reproducing with rivals and increasing his own chances of reproducing and passing on his genes.
2. Ciaran may have a sensitive amygdala, part of his limbic system. It regulates emotional behaviour and responds to environmental threats. Ciaran may have an over-sensitive amygdala because he is easily provoked and responds quickly with aggression.

3. Ciaran might have low serotonin which disrupts the orbito-frontal cortex and reduces his behavioural self-control. He becomes more impulsive, including aggressive behaviour.

Ciaran will also have high dopamine if he is in competition with others for resources, e.g. adult attention. He uses aggression to provide a rewarding dopamine boost by winning.

4. The biological approach understands aggression in terms of brain structures. The key one is the amygdala which helps regulate our emotional behaviour. Ciaran may have an oversensitive amygdala, because this is an important predictor of aggressive behaviour. As with most aggressive people, Ciaran's amygdala is highly sensitive to threatening stimuli in the environment. This is indicated by the fact that he is easily provoked and quick to use aggression.

The biological understanding of aggression also includes biochemistry. The neurotransmitter serotonin affects aggression by influencing the OFC of the brain. Ciaran may have low levels of serotonin in his OFC. This disrupts his OFC activity and causes him to become emotionally unstable, reducing his behavioural self-control. Ciaran would then become more impulsive, which explains why he is easily provoked into being aggressive.

Dopamine is another neurotransmitter involved in aggression. It is the brain's own reward chemical and affects aggression in situations of competition for resources. As Ciaran is very jealous, he may see other males as competing with him for Livia. This would motivate Ciaran into using aggression to 'win' his competition with other males because it gives him a rewarding dopamine boost.

A strength of the biological approach is that it is supported by evidence. For example, research by Coccaro *et al.* used brain scans. These showed increased activity in the amygdala when people viewed images of angry faces. This supports the view that Ciaran's aggression is partly a response to environmental threat due to a biological factor, an oversensitive amygdala.

However, a weakness is that the social approach may be a more effective alternative. When Ciaran is aggressive, he may be conforming to social norms of stereotyped masculinity. In many cultures, these say that men are expected to use aggression to get what they want. This shows that a complete understanding of aggression has to take non-biological factors into account.

In conclusion, Ciaran's aggression has many causes. Biological factors are not complete explanations but they give useful insights into a complex behaviour.

333 words

### **Page 60 - Cognitive approach to consumer behaviour**

1. A car should be comfortable.
2. An advert might include certain desirable features of a car, e.g. by showing images related to 'comfort'. This attribute would prime Bax to notice features of cars associated with comfort. So Bax chose this car because it is closely linked with comfort in his schema for 'car'.
3. Confirmation bias explains Bax's brand loyalty. Having bought the car he looks for reasons to confirm he made the right choice. He remembers the car was expensive, so it must be the best.
4. The cognitive approach understands consumer behaviour in terms of cognitive priming. For example, adverts highlight desirable features/attributes of a product. The consumer associates these attributes with the product. For Bax, speed and comfort are important attributes of a new car and are part of his 'car' schema. When he thinks about comfort and speed, Bax may associate one model in particular with these attributes. That is the one he will be most likely to buy.

The cognitive approach also explains consumer behaviour in terms of cognitive biases. Our buying decisions are not completely rational or logical. They are affected by our inbuilt biases in the ways we process information. For example, when we buy a product we look for evidence to confirm that we made the right choice. We also ignore any evidence that alternative brands might have been better.

For Bax, the fact his car was expensive confirms he was right to buy it. This is self-fulfilling. He bought the car because he thought it was the best. And he thinks it must be the best because he bought it. This explains Bax's brand loyalty. Because he bought this model, he is predisposed to recall its good features, forget its bad points and ignore alternatives.

A strength of the cognitive approach is evidence to support it. One study showed that people's descriptions of wine they were tasting were influenced by background music playing at the same time ('zingy and refreshing', etc.). The music primed the participants to describe the wine in a certain way. This suggests Bax could have been influenced by priming in the adverts he saw.

However, a weakness of the cognitive approach is that overall, the research findings are contradictory. Many studies do not support the view that cognitive factors affect consumer behaviour. Studies throw up surprising findings that often cannot be replicated by other researchers. This means there is little scientific basis for concluding that Bax's buying decisions are affected by cognitive priming and biases.

In conclusion, Bax's consumer behaviour is complex and is best explained by a range of factors. These include cognitive factors such as priming but the cognitive approach is not a full explanation.

362 words

### **Page 61 - Cognitive approach to consumer behaviour**

1. Schema help make our environment more predictable. The specific supermarket Rylee shops at is part of his schema for 'shops'. When he thinks of shops, he easily recalls the supermarket so it is more likely he will go there.

2. Adverts highlight features of phones and phone brands, e.g. size, speed, cost. Such features would be primed in Rylee's mind. As he already has a certain brand, he may associate these desirable features with that brand and so is primed to think positively about it.

3. Authority bias could explain this. Rylee gives the celebrity's opinion some credibility because he sees the celebrity as someone who is knowledgeable about the phone (an authority or expert).

4. The cognitive approach explains consumer behaviour in terms of schema. Schemata are mental packages of knowledge about aspects of the world, which help to make our environment more predictable. The specific supermarket Rylee shops at is part of his schema for 'shops'. When he thinks of shops, he easily recalls the supermarket so it is more likely he will go there. Rylee also associates the attributes of quality and value with this supermarket. So when he thinks of these attributes, he again recalls this supermarket.

The same is true of the phone. Rylee may closely associate his current brand with desirable attributes such as size and speed. So he is primed to think positively about the brand and this is why he buys a model he already has.

The cognitive approach also explains consumer behaviour in terms of cognitive biases. Our buying decisions are usually not rational or logical. They are influenced by flaws in the ways we process information. One such flaw is authority bias. We tend to give more credibility to an authority figure, e.g. a celebrity closely associated with a product.

Rylee gives the celebrity's opinion credibility because he sees the celebrity as someone who is knowledgeable about the phone. This is even more so if the celebrity is someone Rylee likes or admires. Authority bias is so powerful Rylee will be influenced by the celebrity's opinion even if Rylee knows the celebrity is not really an expert.

A strength of the cognitive approach is there are practical applications. For example, Rylee could become aware of how advertising tries to exploit our information processing biases. So he could deliberately avoid giving celebrities unjustified credibility. Therefore, the cognitive approach gives us ways of improving our buying decisions, potentially saving money.

However, a weakness is that there are ethical issues involved in the cognitive approach. Adverts exploit consumers' inbuilt cognitive biases. They do this in ways that consumers are not aware of. For instance, a celebrity is used to advertise the phone because advertisers know consumers like Rylee respond positively due to authority bias. This means that psychologists involved in designing adverts to exploit cognitive biases may be acting unethically.

361 words

## **Page 62 - Social approach to consumer behaviour**

1. People make decisions about how to behave based on their beliefs about what everyone else is doing. Tahlia increases her homework time because other students tell her they are spending more hours.

2. Tahlia is unsure so she looks to others for guidance about which earphones to buy. Music students have more knowledge about music than the average, so Tahlia will trust their opinions and buy Earpods.

3. One major concept from the social approach that explains consumer behaviour is the bandwagon effect. Many people will do something because they perceive others are doing it. Once you think a product or brand is being bought by many other people, you are more likely to join in (jump on the

bandwagon). This is why Talia increases her homework hours. She discovers that other students are working more hours than her. She increases her hours because she doesn't want to get left behind.

The second concept is social proof. In situations where we are unsure what to do or think, we look to others for guidance about what is happening. So we may agree with other people because we believe they know more than us. Again perception is key – we only have to believe that other people are more informed than us.

Tahlia is unsure about which earphones to buy so she looks to others. The obvious people to look to is music students because they have more knowledge about music than the average person. Tahlia will trust their opinions and buy the Earpods because the music students prefer them.

A strength of the social approach is research support for the bandwagon effect. One study showed that a celebrity endorsement of a product influenced students to display a large logo of the product's brand. The endorsement created the illusion that the product was popular. This shows that the bandwagon effect can explain how Talia was socially influenced to increase her homework hours.

However, a weakness is that social proof is more effective in some cultures than in others. One study found that knowing that many others agreed to something influenced people more in a collectivist culture (Poland) than in an individualist one (USA). If Talia lived in a different culture, she might not be so influenced by the music students. Therefore, social proof is not always a strong influence on consumer behaviour because it varies from culture to culture.

In conclusion, the social approach gives us some important insights into consumer behaviour. But this is complex and can only be explained by a range of factors, e.g. cognitive and learning.

360 words

### **Page 63 - Social approach to consumer behaviour**

1. People buy products or change their behaviour because they believe others are doing so.
2. When Cerys reads the sign, she believes that many other people are using the bins to recycle plastic. Like most people, Cerys has a need to behave like others do, so she also uses the bin.
3. Cerys sees the video and follows the campaigner's behaviour because she trusts their greater knowledge of the environmental impact of plastic.
4. The social approach explains consumer behaviour in terms of people's desire to conform. One major social concept that explains this is the bandwagon effect. Many people will do something because they perceive others are doing it. Once you think many other people are behaving in a certain way, you are more likely to join in (jump on the bandwagon).

For example, when Cerys reads the sign, she believes that many others are using the bins to recycle plastic. The sign is a kind of advertising which exploits Cerys' need to behave like others do. Its message is 'If you use the bin, you will be like all of these other lovely people concerned about the environment'.

The second concept is social proof. In situations where we are unsure what to do or think, we look to others for guidance about what is happening. So we may agree with other people because we believe they know more than us. Again, perception is key – we only have to believe that other people are more informed than us.



Cerys watches the video and believes that the campaigner has greater knowledge of the environmental impact of plastic. Therefore she conforms to the campaigner's behaviour and uses the bin as well.

One strength of the social approach is research evidence to support it. An example is a study by Burger and Shelton. People who saw a sign saying '90% of the time people use the stairs instead of the lift' were more likely to use the stairs. This finding supports the bandwagon effect. It suggests that Cerys used the recycling bins because she perceived that many other people were doing the same.

One weakness is that the behaviourist approach may be a more effective alternative explanation. Cerys may use the recycling bin because it is rewarding. She feels good about doing her bit for the environment. The pleasure she experiences is positive reinforcement of using the bin, which makes it more likely she will do it again. This suggests that the social approach is less effective because Cerys doesn't need to know how many other people are doing the same thing.

356 words

### **Page 64 - Behaviourist and social learning approaches to consumer behaviour**

1. Getting something for nothing (free coffee) is a stimulus that makes people feel happy. Potential students may learn to associate the college with this happy feeling. So the college becomes a conditioned stimulus and potential students feel happy e.g. when they look at the brochure.
2. The consequence for someone buying a coffee is a pleasant one, i.e. getting a loyalty point. The point rewards the behaviour. It is positive reinforcement so the person is likely to repeat the behaviour and buy a coffee again (there is also the prospect of a bigger reward, getting a free cake).
3. Classical conditioning explains the increased sales in terms of emotional associations between stimuli. Students learnt to associate the coffee with positive feelings such as happiness, e.g. when they had coffee with friends they enjoyed being with.

The coffee is initially an NS and the friends are a UCS. An association is formed between enjoyment/pleasure (UCR) and the coffee. The coffee eventually produces enjoyment/pleasure on its own and is now a CS. The pleasure gained from it is a CR. Students then buy coffee to experience this enjoyment again. Repeated pairing of friends and coffee 'renews' the CR and prevents it from being extinguished.

Operant conditioning can explain the increase in sales in terms of positive reinforcement. The pleasurable consequences of a behaviour mean the behaviour is likely to be repeated.

The consequence for a student buying a coffee is a pleasurable one – they get a loyalty point. The point rewards the buying behaviour because the student enjoys the feeling they are getting 'something for nothing'. Getting a point positively reinforces the behaviour so the student is likely to buy a coffee again. In this way, the students are conditioned to be loyal. If they 'stray' to another coffee provider, they will not get the positive reinforcement from the bonus points.

One strength is evidence to support conditioning in consumer behaviour. In one study, participants had positive opinions of a made-up toothpaste when it was paired with positive images. The more pairings, the more positive the opinions (role of repetition). These findings support the view that coffee sales increased partly because of the emotional associations students made through classical conditioning.

One weakness is that conditioning does not explain cognitive factors. The canteen's scheme entices students into loyalty because they expect a future tangible reward (the free cake). But expectations are cognitive factors which the behaviourist approach fails to account for in its focus on conditioning of behaviour. Therefore, the behaviourist approach is an incomplete explanation of consumer behaviour and the cognitive approach may be more effective.

In conclusion, conditioning gives us some important insights into consumer behaviour, especially operant. But its understanding is limited because it does not take important factors into account.

362 words

### **Page 65 - Behaviourist and social learning approaches to consumer behaviour**

1. It should link the festival to positive feelings such as happiness and warmth, e.g. by including images of attractive people enjoying themselves and text that uses positive words.
2. Extinction means that a conditioned response (e.g. happiness) to the festival weakens over time. The villagers could prevent this by using repetition. They should deliver another flyer nearer the time of the festival, to restrengthen the association between the festival and positive emotions.
3. By using operant conditioning, giving a free cake with each cup. The cake would be a rewarding consequence of buying the mulled wine. Positive reinforcement means people are more likely to buy another cup.
4. People might see the TV star as a celebrity role model. If they admire the celebrity's status or attractiveness, they might go to the festival because the celebrity is going (imitation).
5. The behaviourist approach can explain the success of the festival in terms of operant conditioning. Skinner argued that pleasurable consequences of a behaviour mean the behaviour is likely to be repeated.

If the festivalgoers have a pleasurable experience, they are likely to return and perhaps bring more people with them. By getting free cake with the mulled wine, the festivalgoers experience a pleasurable consequence of being at the festival. This is because people like to feel they are getting a bargain or 'something for nothing'. This positively reinforces people's presence at the festival, so they are more likely to come back.

In terms of social learning, many people may view the TV star as a celebrity role model. Some people might go to the festival because they know the celebrity is going, so they imitate their behaviour. This is more likely to happen when the celebrity is someone people admire, perhaps because they are attractive or have status or wealth. This is also true if the festivalgoers believe the celebrity is similar to themselves, e.g. if the celebrity is known for their likeable, 'down-to-earth' personality.

A strength of the behaviourist approach is evidence to support the role of social learning. For example, Knoll and Matthes carried out a review of many studies. They found that attitudes towards products were more positive when they were endorsed by a celebrity. This helps to explain why a TV star's presence could increase attendance, because people feel more positively about the 'product', in this case the festival.

However, a weakness is that operant conditioning does not consider cognitive factors. Cognitive factors are involved because people generally think carefully about products and services. They often make rational decisions, which is one reason why comparison websites are popular. The festivalgoers are going to consider a much wider range of factors than just a free cake. This suggests that conditioning is an incomplete explanation and the cognitive approach may be better.

In conclusion, people have many complex reasons for attending a festival. At least some involve cognitive factors (expectations, etc.) which the behaviourist approach does not take into account.

352 words

### **Page 66 - Biological approach to consumer behaviour**

1. Facial coding and eye tracking.

2. Facial coding – use electrodes and the facial action coding system to measure people’s emotional reactions to the advert through their expressions. Change the aspects of the advert that people respond negatively to, e.g. frowning.

Eye tracking – measure where people are looking when they watch the advert. People will look longer at aspects that excite or confuse them, so change the aspects that are confusing.

3. One neuromarketing technique is facial coding. People’s facial expressions often reflect how they feel. But the emotional meaning of facial expressions is often unclear and open to interpretation. Therefore, a system is needed to measure them more objectively.

Potential customers could have electrodes attached to their faces to measure tiny muscle movements as they watch the advert. The facial action coding system (FACS) could then be used to classify emotional reactions to the advert through facial expressions. The company could then change aspects of the advert that the customers react to negatively, e.g. by frowning.

Another technique is eye tracking. Eye movements reflect the activities of brain areas involved in vision and are linked to cognitive functions such as attention. Eye tracking technology can be used to follow a person’s eye movements as they view a product, advert, label, etc.

The technique would show which areas of the advert customers look at the most. People gaze longer at things they find exciting, interesting or motivating. But they also gaze longer at things they find confusing. The company could then change the aspects of the advert customers find confusing, to make them exciting or interesting instead.

A strength is that neuromarketing techniques can be useful. Sometimes people are not consciously aware of what they like or do not like about an advert. Neuromarketing techniques measure responses the customer is unaware of, e.g. looking longer at areas of an advert they like. This means that neuromarketing techniques may give us insights into consumer behaviour that we cannot get with any other method.

However, there are ethical issues with neuromarketing. The scientific basis of neuromarketing is questionable. For example, facial coding and eye tracking by themselves do not tell us whether a customer ‘likes’ the drinks company’s advert. But this has not stopped neuromarketers making exaggerated claims to sell their ‘expertise’ to companies. Therefore neuromarketers are acting unethically if they are offering insights that could be gained from simply talking to customers.

In conclusion, neuromarketing may give us some insights into consumer behaviour. But this behaviour is complex and cannot be fully understood only in terms of biological factors.

356 words

### **Page 67 - Biological approach to consumer behaviour**

1. They could use fMRI brain scanning. Volunteer customers are shown images of the products as they lie in a scanner. fMRI shows which brain areas are most active, including areas indicating if the customers like the products. Increase the prices if customers like them a lot, reduce them if not.
2. Eye-tracking technology shows which parts of the packaging (e.g. labels) customers look at most. People gaze longer at areas they find either exciting/interesting or confusing. The company should change the aspects of the packaging that customers find confusing to make them exciting.
3. Attach electrodes to customers' faces to detect slight movements of muscles. Then use the facial action coding system to measure emotional reactions to the branding (e.g. logo) through facial expressions. Change aspects of the branding that people react negatively to, e.g. frowning.
4. Two main neuromarketing techniques could help the management team understand how customers think and feel.

The first technique is brain scanning or fMRI. This measures activity of the brain when it is 'working'. An active brain area uses more oxygen, so more blood flows to this area and this is measured by an fMRI scanning machine. The more active the brain area, the greater the blood flow.

Volunteer customers could be shown images of the supermarket's products as they lie in a scanning machine. The scan would produce a 'real-time' 3-D image showing the level of activity in brain areas known to be involved in pleasure and reward. This could indicate how much the customer likes a product. Managers could then increase prices if customers like the products a lot or reduce them otherwise.

Another neuromarketing technique is facial coding. People's facial expressions often reflect how they feel. But because expressions are open to interpretation, a system is needed to measure them more objectively.

Customers could have electrodes attached to their faces to measure tiny muscle movements. The facial action coding system (FACS) could then be used to classify emotional reactions to the branding through facial expressions. The company could then change aspects of the branding (e.g. logo) that customers react to negatively, e.g. by frowning.

A strength is that neuromarketing techniques can be useful. Sometimes people are not consciously aware of what they like or do not like about a product. Neuromarketing techniques measure responses the customer is unaware of. For example, customers may not realise they are looking longer at areas of packaging they like. This means that neuromarketing techniques may give us insights into consumer behaviour that we cannot get with any other method.

On the other hand, there is evidence that other methods can be more useful. One study used neuromarketing techniques and focus groups (non-neuromarketing) to measure participants responses to real adverts. The best method for predicting advertising success was the focus group, in which participants discussed their responses. This suggests that the supermarket managers would be wise to include focus groups if they want insights into how to improve their operations.

357 words

### **Page 68 - Cognitive approach to explaining gender**

1. Selina was born a boy so her sex is biologically male, e.g. anatomy, chromosomes. However, psychologically and socially she considers herself to be a woman, which is her gender.
2. Alpha bias by Selina's employer.

3. The employer's alpha bias is a strongly binary view of gender that Selina does not conform to. Her employer may well see her as 'abnormal' or 'disordered' or at the very least 'not a team player'. Selina may therefore be discriminated against, for example by losing out on promotions.

### **Page 69 - Cognitive approach to explaining gender**

1. Baxter has a schema that contains his knowledge related to gender. This includes the knowledge that women are nurses and men are engineers. A yellow hard-hat is an item consistent with this gender knowledge. So Baxter incorrectly recalls that it is daddy who needs the hat for his job.

2. The assistant holds a stereotype of gender roles based on a traditional view of gender. This stereotype primes the assistant to expect that Baxter's mum will collect him, because that is traditionally part of a woman's role.

3. A fixed view about what is appropriate behaviour for women and men in a society or social group.

4. The manager's gender schema contains stereotypes of gender, i.e. a traditional view of men and women's behaviour. This stereotype primes him to expect men to be better at maths than women. This in turn leads him to discriminate in favour of men in the application process.

5. The cognitive approach understands gender in terms of schema. Children develop a gender schema containing knowledge related to gender. They are more likely to store and recall information consistent with their gender schema. For example, part of Baxter's gender schema is that engineering is 'for men' and nursing is 'for women'.

A child's gender schema is reinforced by confirmation bias. The child will pay attention to (and actively look for) information consistent with the gender schema. But they will ignore gender-inconsistent information, or recall of it will be inaccurate. This explains why Baxter recalls the yellow hat as belonging to daddy. His recall has been distorted to fit his gender schema, as happens in reconstructive memory.

The cognitive approach also uses priming to explain gender. People often have gender-role stereotypes, fixed views of men's and women's roles based on 'traditional' ideas about gender behaviour. Gender stereotypes that you accept prime you to expect men and women to behave in certain ways or have certain characteristics.

For example, the manager's gender schema contains a stereotype of gender which primes him to expect men to be better at maths than women. This in turn may lead him to discriminate in favour of men in the application process.

A strength of the cognitive approach is evidence to support its explanation of gender. In one study gender participants' gender schema were primed before they did the cold pressor test (arm in freezing water). When men primed their schema for feminine-typical behaviours, they reported less pain and anxiety from the test. This finding shows that priming gender roles can affect even involuntary behaviours, e.g. experience of pain.

A weakness is that there are alternative approaches to gender. For example, the rewards and punishments parents/carers give children for their gender-related behaviour may be more important influences than schema. The cognitive approach does not explain how social factors affect the manager's stereotyping or Baxter's inaccurate recall. This means the cognitive approach gives us only an incomplete understanding of gender.

In conclusion, there is a wide range of influences on gender. Cognitive factors do not give us a complete understanding but they give useful insights into a complex concept.

361 words

### **Page 70 - Social approach to explaining gender**

1. Normative peer influences – Farah’s friends provided norms of gender-typical behaviour, so by playing together ‘like girls’ they fit in and avoid being rejected.

Informational peer influences – Farah’s friends were also sources of information about gender-related behaviours, so they learn from each other what behaviours are expected of girls.

2. Normative social influence says that Farah will conform to a gender role in order to fit in with the group. As most of her friends are boys, Farah may conform to a masculine-typical gender role to be accepted by the group.

3. The social approach says gender is influenced by people around us, including peers. Most children can state their gender by age 3 years, when gender segregation begins. By primary school most children spend little time with other-gender peers.

All of Farah’s friends were girls and they all spent their time playing together. Their influence on each other’s gender is normative and informational. For instance, Farah’s friends provide norms of gender-typical behaviour such as ‘we like playing with dolls’. Farah conforms with these norms so she is accepted by her friends rather than rejected. Her friends are also sources of information about gender, e.g. ‘boys are horrible’. Farah may accept such views because she believes her friends are better informed about gender-appropriate behaviour.

In adolescence, gender typicality becomes a powerful influence on gender identity. Farah may judge how closely her own personal qualities fit a gender category. She does this by comparing herself with her peers. As most of her friends are boys, she may judge that she has a lot in common with them, e.g. enjoying playing football when other girls don’t. Farah may question her gender identity and conclude that she is not a typical girl.

At the same time, Farah feels pressure to conform to a gender-typical role from her parents and girls at school. Gender non-conformity may cause Farah stress, which could lead her to experience gender dysphoria if it is severe.

A weakness is that an alternative approach may be more effective. For example, it is hard to see how some people become gender non-conforming when they are influenced by people who are gender-typical. Perhaps Farah’s gender identity depends on how she thinks about gender and perceives the influences on her. This suggests we need cognitive factors to get a fuller understanding of gender.

Another weakness is that some social influences on gender are quite weak. Some aspects of gender are influenced by peers, e.g. gender conformity. But other aspects are not influenced by peers, e.g. gender typicality. Although Farah compares herself with her peers, this probably has little effect on her gender identity. This suggests that the social approach does not explain all aspects of gender.

361 words

### **Page 71 - Social approach to explaining gender**

1. Gender cannot be divided into two distinct categories, e.g. man and woman.

2. Cultures can determine the extent to which gender is seen as binary. In some cultures there is a ‘third gender’, e.g. the fa’afafine of Samoa who are biological males but adopt a women’s traditional gender role.

3. Nat would feel pressure to conform through normative social influence. Pressure to behave in ways typical of a traditional gender role (e.g. being feminine) would come from Nat's parents and peers.

Nat may have conformed to a non-typical gender role through informational social influence. Non-binary social media influencers could be a source of information about gender-atypical behaviour.

4. The social approach explains gender in terms of peer influences. Peer influences are normative because our peer groups establish norms of gender-appropriate behaviour. As an adolescent, Nat may have felt pressure to conform to a traditionally typical gender role. So their peers would accept them for being typically feminine. Nat's peers would also be sources of information about what is gender-appropriate behaviour.

Nat could also compare themselves to their peers in order to judge their gender typicality. Nat may judge that they do not have much in common and conclude they are not a typical man or woman. Nat might then decide that their gender identify is non-binary.

The social approach also understands gender in terms of cultural influences. Culture can determine the extent to which gender is seen as binary. This would contribute to the stress Nat experienced – their gender non-conformity would be viewed negatively on a cultural level. But some cultural norms are more accepting of non-binary identities. For example, in some cultures there is a 'third gender', e.g. the fa'afafine of Samoa who are biological males but adopt a women's traditional gender role.

A strength of the social approach is its practical uses. Nat felt pressure from other people to conform to gender-typical roles and behaviours. This made them very stressed yet they still developed a non-binary identity. This can happen when the person has access to alternative gender norms and sources of information, e.g. gender-non-conforming social media influencers. This shows that the social approach can help to reduce the stress associated with gender-non-conformity.

Another strength is that there is evidence supporting the social approach. Women in some culture have active roles in the workplace and men are the main caregivers of children. In other cultures, men and women still face pressure to conform to traditional stereotyped roles. In some cultures, people who identify as non-binary or 'third gender' are accepted. This shows that culture is a powerful influence on a wide range of gender identities.

In conclusion, Nat's gender is complex and can only be explained by a range of factors. These include social factors such as conformity. But biological and cognitive factors are also important.

360 words

### **Page 72 - Behaviourist and social learning approaches to explaining gender**

1. Rewards could provide positive reinforcement of gender-typical behaviours. Romily was praised by teachers for her language skills, which are encouraged for girls in our culture.

Punishment is used to discourage gender-atypical behaviours. So Romily was told off when she wanted to play with toy tools, which are considered 'for boys' in our culture.

2. Parents/carers are models of gender behaviour for children. Romilly may have observed her mum enjoying her career in journalism, using language skills which are considered gender-appropriate for women and girls in our culture. So Romilly imitated her mum's gender-related career choice.

3. Romilly may have observed gender-typical models in traditional media (TV soap operas, reality shows) or in online media (influencers). When models were praised for behaving in gender-typical ways (e.g. caring), Romilly may have imitated this through vicarious reinforcement.

4. The behaviourist approach explains gender in terms of operant conditioning. Children are rewarded by adults and peers when they behave in gender-typical ways. So reinforcement is differential, i.e. boys are reinforced for being masculine and girls for being feminine.

Romilly was praised by her teachers for her language skills, which are strongly encouraged for girls in many cultures. Because such rewards are experienced as pleasurable, they provide positive reinforcement of the gender-typical behaviour. So Romilly would feel good about her language skills and be more likely to use them again. Also, gender-atypical behaviours are punished, making them less likely to be repeated. Romilly experienced this when she was told off for trying to play with her brother's toys.

Gender can also be explained in terms of social learning. Parents/carers are often role models of gender-typical behaviours for children. Children observe these behaviours but they also observe the consequences of them. When the observed behaviour is rewarded, a child is more likely to imitate the behaviour (vicarious reinforcement).

For example, Romilly may have observed her mum enjoying her career in journalism, using language skills which are considered gender-appropriate for women and girls in our culture. So Romilly imitated her mum's gender-related career choice.

A strength is support from 'Baby X' studies. Mothers interacted with babies depending on how the babies were dressed, e.g. when dressed as girls the babies were reinforced for being passive. Romilly was reinforced in a similar way, for being gender-typical. This shows that gender-typical behaviour is reinforced differentially for boys and girls from a young age.

However, a weakness is that children are more active in acquiring gender than social learning suggests. Many children become more gender-atypical than their parents/carers. This is hard to explain if we learn gender from passively observing and imitating role models. Instead, we actively construct our gender rather than 'receive' it. This suggests the social learning approach does not give a complete explanation of gender and that additional factors are required, e.g. cognitive.

In conclusion, Romilly's gender has many influences. Conditioning and social learning are not complete explanations but they give useful insights into a complex concept.

355 words

### **Page 73 - Behaviourist and social learning approaches to explaining gender**

1. Dad praising Dalia for being pretty and well-dressed. Dad telling Digby off for playing with dolls.
2. When Digby did well at school his dad praised him, which Digby would find rewarding. This was positive reinforcement of a behaviour often considered gender-appropriate for boys, so Digby would continue doing it.

When Digby tried to play with dolls, this gender-atypical behaviour was punished by his dad telling him off. This made it less likely Digby would repeat a behaviour considered gender-inappropriate for boys.

3. The influencer is a model behaving in a gender-typical way by using make-up. Dalia observes this behaviour and sees that it is rewarded by the influencer's status and positive reaction from others.



Dalia experience vicarious reinforcement and wants to imitate the influencer's gender-typical behaviour.

4. The behaviourist approach explains gender in terms of operant conditioning. Children are rewarded by adults and peers when they behave in gender-typical ways. Because such rewards are experienced as pleasurable, they provide positive reinforcement of the gender-typical behaviour. This increases the likelihood of the behaviour being repeated.

Reinforcement is differential, i.e. boys are reinforced for being masculine and girls for being feminine. For example, Dalia is rewarded by her dad with praise for being pretty and well-dressed. Digby's dad praises him for doing well at school. Therefore, Dalia is likely to continue being feminine and Digby to be masculine. Also, gender-atypical behaviours are punished, making them less likely to be repeated. Digby experienced this when he was told off for trying to play with his sister's dolls.

We can also use social learning to explain gender. Other people are often role models of gender-typical behaviours for children. Children observe these behaviours but they also observe the consequences of them. When the observed behaviour is rewarded, a child is more likely to imitate the behaviour (vicarious reinforcement).

For Dalia, the influencer is a role model behaving in a gender-typical way by using make-up. Dalia observes this behaviour and sees that it is rewarded by the influencer's status and positive reaction from others. Dalia experiences vicarious reinforcement and wants to imitate the influencer's gender-typical behaviour, so she pesters her parents for make-up.

A strength is that the approaches explain how gender can change. If a gender-typical identity can be formed through operant conditioning and social learning, so can an atypical identity. E.g. if differential reinforcement were reversed with Digby rewarded for being feminine and Dalia for being masculine. Therefore, social learning can explain a wide range of gender identities, including fluid and non-binary.

However, there may be more useful alternative approaches to understanding gender. For example, the biological approach could be more effective because it explains evidence that the behaviourist/social learning approaches cannot. For example, the correlation between high levels of testosterone and a male gender identity. This suggests that the behaviourist and social learning approaches cannot give us a complete understanding of gender.

352 words

### **Page 74 - Biological approach to explaining gender**

1. As an embryo in the womb, testosterone released from his testes would have masculinised Olaf's brain. For example, he will have developed a relatively bigger amygdala than females.

2. Olaf may have masculine-typical traits (competitive) because his ancestor males were dominant and mated most often. The genes that contributed to their dominance survived and were passed on.

3. One alternative is the social learning approach. Both approaches suggest that men and women develop traits that are adapted to gender-typical roles, e.g. aggression for hunter males. However, the biological approach claims this happens through survival of the fittest whereas the social learning approach explains it in terms of observational learning and modelling.

4. The biological approach explains gender in terms of the effects of sex hormones. A key hormonal influence on gender is testosterone. Production is triggered in the womb by the SRY gene, inherited by embryos that are genetically male.

As an embryo in the womb, testosterone released from Olaf's testes would have masculinised his brain. For example, he will have developed a relatively bigger amygdala than females. This could partly explain Olaf's aggressively competitive approach to work and life.

Evolutionary explanations also help us understand gender. For example, survival of the fittest suggests that the most dominant males mated most often. The genes that contributed to this dominance survived and were passed on. Olaf's male ancestors developed masculine-typical traits useful in competition with other males for short-term mating.

Another evolutionary explanation is genome lag. The division of labour that existed in the environment of evolutionary adaptation meant it was an advantage for males to be providers. Men were hunters and needed masculine-typical traits such as aggression to provide resources for mates. But rapid social changes mean that this is no longer the case. This explains why Olaf believes he has to be the breadwinner for his family. It is a hangover from the EEA which has not kept pace with social changes.

One strength is that there is evidence for the influence of biology on gender. For example, in congenital adrenal hyperplasia (CAH) a genetically female foetus (XX) is exposed to high levels of testosterone and develops external genitalia resembling a penis. But the vast majority of women with CAH want to live as a woman. This shows how a biological factor (female chromosomes) continues to affect gender identity (living as a woman) despite physical changes produced by testosterone.

However, an alternative approach may be more effective. One such approach is social learning. Olaf may have learnt his aggressively competitive approach to work and life. Perhaps his father had similar traits and Olaf observed him being rewarded for expressing them. Olaf would learn to imitate his father through vicarious reinforcement. This suggests that the biological view that Olaf inherited his masculinity is a limited approach to understanding gender.

357 words

### **Page 75 - Biological approach to explaining gender**

1. They may influence Leela to develop a gender identity as a woman. She may display caring behaviour, e.g. looking after babies.
2. Leela's ancestor women may have developed traits that were adapted to a feminine-typical role. One key trait is caring. The genes that contributed to ancestor women being successful carers of their offspring would survive and be passed on so Leela eventually inherited them.
3. Genetic females inherit two X chromosomes, one from each parent. But Gigi has inherited just one X chromosome, thus developing Turner's syndrome.
4. The biological approach explains gender in terms of the effects of sex hormones. For example, oestrogen determines female sexual characteristics at puberty, e.g. development of reproductive tissues. It also helps to regulate the menstrual cycle. Leela's oestrogen levels are partly involved in influencing her femininity and her desire to have children.

Gigi's experience also demonstrates the influence of biological factors on gender, in her case chromosomes. Genetic females inherit two X chromosomes, one from each parent. But Gigi inherited just one X chromosome, which is the genetic cause of Turner's syndrome.

Evolutionary explanations also help us understand gender. For example, in terms of survival of the fittest Leela's ancestor women gathered (e.g. picked fruit) and developed feminine-typical traits to

ensure reproductive success, such as nurturing and caring. The genes that contributed to these traits survived in the offspring and were passed on. Caring for offspring increased their survival chances.

In terms of genome lag, the division of labour that existed in the environment of evolutionary adaptation meant it was an advantage for females to be caring and nurturing. But rapid social changes mean that this is no longer the case. This explains why Leela feels it is her role to look after babies and the home. It is a hangover from the EEA which has not kept pace with social changes.

A weakness of the biological approach is it views gender as binary. Leela's gender is stereotypically feminine (caring, babies, home) and very clearly different from a masculine role. But there is evidence that the difference is not so clear because there is a 'third gender' in some cultures. This shows that gender is more fluid and influenced by culture than the biological approach suggests.

Another weakness is that the social learning approach may be more effective. Leela may have learnt her love of babies and home-making. Perhaps her mother showed similar behaviours and Leela observed her being rewarded for them. So Leela imitated her mother through vicarious reinforcement. This suggests that the biological view that Leela's femininity is a result of hormones and evolution is a limited approach to understanding gender.

352 words