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INTERNATIONAL A-LEVEL PSYCHOLOGY

Unit 4 Approaches and application

Friday 14 June 2024

07:00 GMT

Time allowed: 1 hour 30 minutes

Materials

For this paper you must have:

- a calculator, which you are expected to use where appropriate.

Instructions

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- All working must be shown.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 90.

For Examiner's Use	
Section	Mark
A	
B	
C	
TOTAL	



J U N 2 4 P S 0 4 0 1

Section A: Approaches in PsychologyAnswer **all** questions in the spaces provided.**0 1**In a study of social learning, there were **two** groups of children.

Group 1: the children saw a series of short films in which one child was seen helping another child. For example, when one child fell down, a second child helped him to get up. Every time there was a helping behaviour, an adult praised the child who had helped.

Group 2: the children saw a series of short films of children playing in which there was no helping behaviour and no praise seen.

Using your knowledge of social learning theory, explain which group of children is more likely to show helping behaviour in the future.

[2 marks]

Group 1 is more likely to show helping behaviour in the future. This is because the adult's praise acts as vicarious reinforcement: the children see the model being rewarded for helping, so they expect to be rewarded too and are motivated to imitate the helping behaviour.

0 2Briefly explain **one** strength of social learning theory.**[2 marks]**

There is research support for vicarious reinforcement: Bandura (1965) found children were more likely to imitate an adult model who was rewarded with sweets and lemonade. This supports the role of reinforcement of the model in imitation.



0 3

Evaluate the behaviourist approach.

[6 marks]

A strength is the research support for the behaviourist approach to learning. Pavlov (1927) showed that dogs learned to salivate to a bell paired with food (classical conditioning), and Skinner (1953) showed rats learned to press a lever reinforced with food (operant conditioning).

The approach has also contributed to psychology by explaining anxiety disorders: the two-process model explains how phobias are acquired through classical conditioning and maintained through operant conditioning, as avoidance is negatively reinforced. It also led to treatments using extinction, eg systematic desensitisation and flooding. It helped develop psychology as a science, focusing on objectivity and measurement of observable behaviour.

However, much of the work was on animals in laboratories, so it tells us
Extra space *very little about how humans learn in a social environment.*

The approach is environmentally reductionist, focusing only on stimulus-response explanations and failing to consider other influences, eg the role of testosterone in aggression. It is also environmentally deterministic: all behaviour is learnt from past S-R relationships, leaving no room for free will.

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0 4

Discuss the biological approach. In your answer, refer to **two** topics you have studied.

[20 marks]

The biological approach explains behaviour in terms of evolution, genes, neurochemistry and biological structures. Evolution: behaviours that helped the ancestors of a species to adapt and survive are passed on to future generations through natural selection. Genes: traits and behaviours are inherited; the genotype is a person's genetic make-up, while the phenotype is how these genes are expressed, which is influenced by the environment.

Neurochemistry: neurotransmitters such as dopamine and serotonin, and hormones such as testosterone, affect behaviour and are implicated in certain mental disorders. Biological structures: specific brain areas are responsible for specific behaviours. Phineas Gage (1848) suffered damage to his frontal lobe when an iron rod passed through his skull and his personality changed from calm to impulsive and aggressive. Woollett and Maguire (2011) found that trainee London taxi drivers who passed 'the knowledge' developed a larger posterior hippocampus, showing the role of this structure in spatial memory.

The first topic is biopsychology: localisation of function. Broca's area in the left frontal lobe is responsible for speech production and Wernicke's area in the left temporal lobe for language comprehension, and the motor cortex controls voluntary movement. Hemispheric lateralisation shows that the two hemispheres have different functions, eg language is mostly in the left hemisphere, as shown by Sperry's split-brain research. Case studies such as HM, who could not form new long-term memories after removal of his hippocampus, also support the role of specific structures.



The second topic is schizophrenia. Biological explanations include genetics, as Gottesman and Shields found higher concordance rates for MZ twins than for DZ twins, and the dopamine hypothesis, which states that excess dopamine activity causes positive symptoms such as hallucinations. Biological treatments follow from this: typical antipsychotics block dopamine D2 receptors, and atypical antipsychotics also act on serotonin, reducing both positive and negative symptoms.

A strength of the biological approach is that it is scientific, so it is able to establish cause and effect. It uses objective methods that follow the scientific method, eg lab experiments, and PET and fMRI scans, which measure brain activity directly. This produces reliable, replicable data and gives psychology scientific credibility.

Another strength is its real-life application. It has contributed to treatments for a variety of disorders, eg SSRIs for depression and antipsychotic drugs for schizophrenia, which allow many patients to live independently. There is also strong evidence for the biological basis of behaviour from cases such as Phineas Gage and HM. The approach supports the nature side of the nature-nurture debate.

However, the approach is reductionist, as it reduces all human behaviour to biological processes. For example, the dopamine hypothesis ignores the role of family stress and expressed emotion in schizophrenia, and MZ concordance is never 100%, which suggests environmental factors also matter (the diathesis-stress model). Drugs also do not work for all patients and may only treat symptoms rather than causes.

The approach is also deterministic, suggesting that behaviour is caused by genes, neurotransmitters and brain structures. This contrasts with the

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Extra space *notion of free will and raises issues of moral responsibility, eg whether someone with high testosterone is responsible for aggression. In comparison with alternative approaches, the cognitive approach focuses on mental processes such as faulty thinking, and the behaviourist approach on learning from the environment, which can explain behaviours the biological approach cannot, such as phobias learned through conditioning. Case studies like Gage are also unique, so findings may not generalise.*

Overall, the biological approach provides scientific evidence and effective treatments, but it is best combined with psychological explanations in an interactionist view.



Section B: Issues and Debates in PsychologyAnswer **all** questions in the spaces provided.Only **one** answer per question is allowed.

For each question completely fill in the circle alongside the appropriate answer.

CORRECT METHOD



WRONG METHODS



If you want to change your answer you must cross out your original answer as shown.



If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown.

**0 5**

Identify the feature of science described in the following behaviour.

A psychologist recorded the time taken by participants to recall a word list. She did this accurately, without any bias or emotion.

Shade **one** box only.**[1 mark]****A** Falsifiability**B** Hypothesis testing**C** Objectivity**D** Theory construction**0 6**

Briefly outline what is meant by replicability.

[1 mark]*Replicability is when an experiment can be repeated with similar results.***Turn over for the next question****Turn over ►**

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Briefly evaluate the use of the empirical method in psychology.

[4 marks]

A strength is that the empirical method emphasises objective methods which can establish cause and effect. Data are gathered by direct observation and measurement, which increases internal validity and makes findings testable and replicable.

However, behaviour is taken out of its social context, eg in a laboratory, so findings may lack ecological validity. The empirical method is also reductionist, as it tests only one element of behaviour at a time, oversimplifying complex behaviour.

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Briefly outline the nature–nurture debate.

[2 marks]

The nature-nurture debate is about the extent to which our behaviour is due to heredity (nature), such as inherited genes, or to the environment around us (nurture), such as learning and experience.



0 9

Jack says, "I think all human behaviour can be explained by studying individual chemicals and processes in the body."

Hari replies, "I am not so sure. That would be a bit like trying to explain what a cake is by looking at the flour, eggs, sugar and butter that are used to make it."

Explain Jack and Hari's conversation using your knowledge of holism and reductionism.

[4 marks]

Jack is referring to reductionism: behaviour can be explained by studying the basic elements (chemicals and processes) that underlie it. This is like trying to understand the taste and feel of a cake by studying one of the eggs used to make it.

Hari is referring to holism: behaviour is too complex to be explained by any one thing. His cake example shows behaviour is more complex than individual chemicals and processes, just as a cake is different from any of its ingredients.

1 0

Evaluate reductionism as a way of explaining human behaviour.

[6 marks]

A strength is that the component parts of behaviour can be tested using the empirical method, eg levels of testosterone and their effect on aggression. This offers a causal explanation for behaviour, eg the role of low serotonin in depression, and the possibility of treatments, eg SSRIs which target the neurotransmitters underlying depression. Environmental reductionism can also explain learning in terms of stimulus-response units.

However, reductionism is an over-simplification of human behaviour, which often does not have a single cause. There is also a loss of context, as a person's social environment may be required to understand some behaviours, so behaviour may be better explained by more holistic approaches such as social learning theory.

Turn over ►



1 1

Mei's mother, father and older brother are all engineers.

During a careers discussion, Mei says, "Obviously, I'll be an engineer. It's in the genes I've inherited and the environment I grew up in."

Sophie says, "Surely you have the free choice to be anything you wish; you might choose to be a doctor, for example."

Discuss the free-will and determinism debate in psychology. Refer to the conversation between Mei and Sophie in your answer.

[12 marks]

Determinism is the belief that behaviour is caused by forces outside of our control. Hard determinism suggests there is no room for free will, as all behaviour has a cause. Soft determinism suggests that there is room for free will, but this is constrained by the options available to us.

Biological determinism is the belief that behaviour is caused by biological structures such as genes and neurotransmitters, while environmental determinism is the belief that behaviour is caused by learning from the environment around us, eg through reinforcement. In contrast, free will is the belief that behaviour is governed by our own choices, as humanistic psychologists argue.

Mei is referring to both biological and environmental determinism. She believes she will be an engineer because she shares genes with her mother, father and older brother, who are all engineers, so she may have inherited abilities such as spatial or mathematical skills. She has also grown up seeing her family working on engineering projects and talking about engineering, so she may have learned this interest through observation and reinforcement. Her word 'obviously' suggests a hard determinist view.

Sophie is referring to free will, as she suggests that Mei has a choice in what she does in the future and could choose to become a doctor instead. This is closer to soft determinism or free will, where Mei's



background may influence her, but she can still make her own decision.

A strength of determinism is that it is in line with the objectives of science, as psychologists conduct experiments to determine the causes of behaviour. Identifying causes allows behaviour to be predicted and controlled, which has led to treatments, eg drugs for schizophrenia. Twin and family studies also provide some support for genetic influences on abilities and interests, supporting Mei's view.

However, determinism is reductionist, as it reduces humans to little more than machines responding to genes or stimuli, and in this way it often loses the essence of what it is to be human. Hard determinism is also unfalsifiable, as a cause can always be claimed after the event. For example, if Mei's brother had become a doctor, a determinist could still find a cause for this.

A strength of free will is that it is essential for moral responsibility and the justice system, as it means people are free to choose between courses of action and can be held responsible for them. It also fits our subjective experience of making choices, such as Mei weighing up careers, and believing we have control is linked to better mental health.

However, explanations based on free will are difficult to test empirically, as choices cannot be measured objectively, so they are based more on belief than evidence. Libet's research also found that brain activity preparing for a movement occurred before people were aware of deciding to move, which challenges free will.

Overall, soft determinism may be the most useful position: Mei's genes and upbringing may make engineering more likely, but, as Sophie suggests, she still has some choice within these constraints.

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Section C: Applied Psychology: Work and the IndividualAnswer **all** questions in the spaces provided.**1 2**

Briefly outline what is meant by workplace stress.

[2 marks]

Workplace stress is workers' anxiety about their jobs. It is often the result of high job demands and low control (autonomy), and can lead to mental and physical health problems, poor performance and absenteeism.

1 3

Paulo is a chef working at a local restaurant. The restaurant is losing customers and money, so Paulo will have to wait for the pay rise he is due and for the coffee machine that the restaurant staff were promised.

Paulo's boss designs the menu and tells him what to cook. Paulo is sure he could attract more customers if he could choose the menu and cook his own dishes. Recently, Paulo has complained about a lack of motivation and satisfaction at work.

Using your knowledge of need theory, explain what Paulo's boss could do to improve Paulo's motivation and satisfaction at work.

[6 marks]

Paulo's boss should first interview him to find out whether he is motivated by intrinsic needs (eg recognition for designing a better menu) or extrinsic needs (eg pay and benefits such as the coffee machine).

His boss could let Paulo try out his own menu and dishes. This would satisfy Paulo's own desires (intrinsic motivation) and improve his job satisfaction and motivation. If the new menu attracts more customers, this success would reinforce his improved feelings about work. It would also help him to self-actualise (Maslow's hierarchy of needs).

His boss could also give an extrinsic reward, such as the pay rise or the promised coffee machine, which is outside Paulo's ability to produce, increasing his satisfaction and motivating him to work harder.

Turn over ►

1 4

Company **A** and Company **B** have played each other in nine football matches. Company **A**'s team is leading with five wins and wears red shirts. Company **B**'s team only has four wins and wears blue shirts.

On the day of the 10th match, Company **A** does not have enough players. When the manager of Company **B** asks if one of his workers would be willing to wear a red shirt and play for Company **A** in the match, all the workers refuse.

Use your knowledge of group membership effect to explain why no one from Company **B** would volunteer to play for Company **A** in the match.

[6 marks]

The team shirts give the players a social identity as red shirt (Company A) or blue shirt (Company B) players. Company B's workers see themselves as belonging together as a group rather than as individuals (deindividuation), so none of them would volunteer to wear a red shirt. According to social identity theory, through social comparison the workers compare their group with the other group to boost self-esteem. As Company A is leading five wins to four and this is the final 10th match, no one from Company B would want to help Company A to succeed and win the series.

The workers will also have an ingroup bias towards their own company and against the other company (outgroup), regarding their own company as superior. Therefore no one from Company B would want to be seen as disloyal to their ingroup, or to join a company they think is inferior to their own.



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Explain **two** strengths of the job demands–resources (JDR) model.

[4 marks]

Strength 1 *It is a better predictor of stress than the job demands-control model, as it deals with a larger range of variables relevant to the work environment, including both job demands and job resources.*

Strength 2 *It has research support: Nielsen et al (2011) found that, in Norwegian offshore oil workers, both the health (demands, risk perception) and resources (safety perception) pathways were supported.*

Turn over for the next question

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1 6

Discuss cultural universals in facial expression.

[12 marks]

Facial expressions are a key feature of non-verbal communication and can convey emotions such as anger, happiness, sadness, fear, surprise and disgust. Reading basic emotions in faces is thought to be an innate survival mechanism, as it allows us to quickly detect threat or friendliness; first impressions can be formed with just a 100 millisecond exposure to a face (Willis and Todorov, 2006).

Cultural universals are behaviours found in all cultures. Conveying emotion through facial expressions is common across all cultures, and people from all cultures can reliably detect six basic emotions in human faces.

Ekman's (1987) cross-cultural study showed photographs of facial expressions to participants in ten cultures and found universal recognition of the six basic emotions, supporting this view.

However, research has also found cultural differences. Wong et al (2008) found cultural differences in expressions of grief, and Sabini and Green (2004) found no unique facial expressions for love and jealousy. This suggests that cultural universals only apply to basic emotions, and more complex emotions are not universally expressed.

Supporting evidence for universality comes from Ekman's research, which has been replicated, increasing reliability. There is also support for the facial feedback hypothesis, as models who posed expressions did tend to 'feel' the emotion they were conveying, which increases the validity of posed expressions.

Cultural universals support the nature side of the nature-nurture debate, as the expression and recognition of basic emotions are thought to be genetically determined and evolved because they aided survival. This is



supported by the fact that expressions are found across very different cultures.

However, many studies in this area involve emotions displayed in staged photographs, which lack ecological validity, as real-life expressions are often more subtle, mixed and change quickly. Forced-choice methods, where participants pick from a list of emotion words, may also inflate agreement.

Another limitation is that many studies use meta-analysis, so data may be difficult to compare, as procedures are often not standardised. Display rules learned in each culture also influence when emotions are shown, so although basic expressions may be universal, their use is shaped by culture.

Overall, there is good evidence that a small number of basic facial expressions are cultural universals, but complex emotions and display rules vary between cultures, so both nature and nurture are involved.

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