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Centre number

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INTERNATIONAL A-LEVEL PSYCHOLOGY

Unit 4 Approaches and Application

Tuesday 26 January 2021 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	



Section A: Approaches in Psychology

Answer **all** questions in the spaces provided.

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Sam used to enjoy travelling in the car until, one day, when the car stopped suddenly on a busy road. Sam is now very frightened of car journeys, and will not go anywhere in the car.

Outline how Sam's fear of car journeys can be explained by the process of classical conditioning.

[6 marks]

Classical conditioning is learning through association. Before conditioning, the sudden stopping of the car on the busy road was an unconditioned stimulus (UCS) that naturally and automatically produced an unconditioned response (UCR) of fear in Sam.

Travelling in the car was originally a neutral stimulus (NS), as it produced no fear; Sam actually enjoyed car journeys. During conditioning, the NS (travelling in the car) was paired with the UCS (the car stopping suddenly), which produced the UCR of fear. Because the two occurred together, Sam formed an association between car travel and fear.

After conditioning, car journeys on their own have become a conditioned stimulus (CS) which now elicits a conditioned response (CR) of fear in Sam, even when the car does not stop suddenly. Through stimulus generalisation he is now frightened of all car journeys, not just on the busy road. His avoidance of going anywhere in the car means he never learns that cars are safe, so extinction cannot occur and the fear is maintained.

NS (car travel) + UCS (sudden stop) → UCR (fear); CS (car journey) → CR (fear).



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Briefly evaluate classical conditioning as a way of understanding behaviour.

[4 marks]

A strength is that classical conditioning measures observable behaviour in highly controlled labs, eg Pavlov's dogs, which gives this approach scientific credibility. Animals can be studied in controlled labs that would be difficult for humans. The principles can also be applied in the real world, eg to explain phobias and to treat them using systematic desensitisation.

However, it is mechanistic and ignores mental events, eg motivation, during learning. Social learning theory shows people play a more active role through mediational processes. It is also deterministic, as behaviour is seen as caused by past associations, leaving no room for free will.

Turn over for the next question

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0 3

Describe and evaluate the biological approach in psychology. In your answer, refer to **at least one** topic you have studied.

[20 marks]

The biological approach explains behaviour in terms of physical processes in the body. It assumes that all thoughts, feelings and behaviour have a physical basis in the brain and nervous system, so psychology should be studied scientifically, like biology.

Genes influence behaviour. Genes are inherited from our parents and carry instructions for our physical characteristics, including the structure of the brain and the production of neurotransmitters. The genotype is a person's actual genetic make-up, whereas the phenotype is the way the genes are expressed through physical and behavioural characteristics, which is affected by interaction with the environment. Twin studies compare concordance rates for monozygotic (MZ) twins, who share 100% of their genes, with dizygotic (DZ) twins, who share about 50%.

Evolution also shapes behaviour. Through natural selection, any behaviour that increased the chances of survival and reproduction was more likely to be passed on, so many behaviours today are adaptive. For example, Baillargeon's research suggests infants have innate object knowledge and fast learning, which would help survival. The evolutionary explanation of sleep suggests sleep evolved to conserve energy and keep animals safe from predators when they cannot forage.

Biological structures influence behaviour. Functions are localised in specific areas of the brain: 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, showing lateralisation.

Plasticity allows the brain to reorganise itself, eg functional recovery after trauma such as a stroke. Neurochemistry also influences behaviour,



as neurotransmitters such as dopamine and serotonin carry messages across the synapse.

One topic is schizophrenia. The genetic explanation is supported by Gottesman's (1991) finding of a concordance rate of about 48% for MZ twins compared with 17% for DZ twins. The dopamine hypothesis states that excess dopamine activity in the subcortical (mesolimbic) pathways causes positive symptoms such as hallucinations and delusions, while low dopamine in the prefrontal cortex may explain negative symptoms. This led to typical antipsychotics, such as chlorpromazine, which block dopamine D2 receptors.

A strength of the biological approach is that it is scientific. It uses the experimental method and controlled variables to establish cause and effect, and uses objective technology, such as PET and fMRI scans and EEG, that does not rely on self-report. This gives the approach scientific credibility and research findings are replicable.

There is strong evidence for the biological basis of behaviour, including case studies. Phineas Gage's personality changed after damage to his frontal lobe, and HM lost the ability to form new long-term memories after removal of his hippocampi. Broca's patient 'Tan' could understand but not produce speech, supporting localisation of function.

The approach also has real-life applications, eg the development of antipsychotic drugs, which allow many people with schizophrenia to live in the community rather than in hospital. However, the drugs do not work for everyone and do not cure the disorder, which suggests the biological explanation is incomplete.

On the other hand, the approach is reductionist, as it reduces complex human behaviour to biological processes such as genes and

Turn over ►



neurotransmitters. If schizophrenia were entirely genetic, the concordance rate for MZ twins would be 100%; as it is only about 48%, environmental factors, such as stress or family dysfunction, must also play a role. Also, increased dopamine could be an effect of schizophrenia rather than a cause, so cause and effect is not certain.

The approach supports the nature side of the nature-nurture debate and so can neglect the influence of environment and upbringing. It is also deterministic, as it suggests behaviour is caused by biology over which we have no control, leaving no room for free will. Biological determinism has led to legal arguments, eg reduced responsibility for actions due to brain abnormality, which raises ethical and social issues.

Compared with alternative approaches, the biological approach is more objective than the psychodynamic approach, but less able to explain the role of thinking than the cognitive approach. An interactionist view, such as the diathesis-stress model, in which a genetic vulnerability is triggered by environmental stress, may give the most complete explanation.

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Section B: Issues and Debates in Psychology

Answer **all** questions in the spaces provided.

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According to psychologists, the same behaviour can be explained at different levels.

Explain how writing a text message to a friend can be understood at a reductionist level **and** a holistic level.

[2 marks + 2 marks]

Reductionist level: writing a text message can be reduced to its component parts and explained at a lower, biological level. Neurons in the motor cortex fire and neurotransmitters carry messages across synapses, sending signals down to the muscles in the fingers so they press the keys to write the text message.

Holistic level: a holistic approach considers the behaviour as a whole in its social context rather than breaking it into parts. Writing the text is understood as social behaviour, eg the person is arranging to meet their friend or keeping in touch to maintain the friendship, which involves their emotions, motives and relationship.

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0 5

Many psychologists consider psychology a science and they use a scientific approach to research, for example by using the empirical method.

Explain **one** strength and **one** limitation of using scientific methods in psychological research.

[3 marks + 3 marks]

Strength: science uses empirical methods, such as the experimental method, in which an IV is manipulated and variables are controlled. This provides objective, replicable results, as other researchers can repeat a study using the same standardised procedures to check reliability, and cause and effect can be established. This allows hypotheses to be tested to support theories and can lead to general laws of behaviour, giving psychology scientific credibility and useful applications, eg drug treatments for schizophrenia.

Limitation: using empirical methods with humans can lead to inaccurate results, because people, unlike chemicals, know they are being studied. The experimental situation can lead to demand characteristics, where participants guess the aim and change their behaviour, and to researcher bias. It is also not possible to control all variables with humans, such as mood or past experience, and artificial lab tasks lack ecological validity, so findings may not generalise to real life.



0 6

Discuss the free will and determinism debate in psychology. Refer in your answer to **two** approaches you have studied.

[20 marks]

The free will and determinism debate concerns whether behaviour is freely produced by choice or whether it is caused by forces, internal or external, over which the individual has no control. Free will is the ability to make choices in life: people are self-determining and responsible for their own behaviour. Determinism is the view that all behaviour has a cause and so could, in principle, be predicted.

Hard determinism excludes the possibility of any free will: all behaviour is caused by factors outside the person's control. Soft determinism allows for some free will: behaviour is constrained by biology and environment, but within these limits people can make conscious choices. Biological determinism sees behaviour as caused by genes, brain structure and neurochemistry. Environmental determinism sees behaviour as caused by external forces, such as reinforcement, punishment and parents.

The behaviourist approach is an example of environmental, hard determinism. Skinner argued that free will is an illusion: all behaviour is the result of our reinforcement history, learned through classical and operant conditioning. For example, a phobia is caused by a past association between a stimulus and fear, so the person has no choice in being afraid.

The biological approach is also hard determinist. Behaviour is caused by genes and neurochemistry, eg the genetic explanation of schizophrenia suggests a person inherits a vulnerability, and the dopamine hypothesis explains symptoms as caused by excess dopamine. Similarly, Baillargeon's research suggests infants are born with innate object knowledge, so development is biologically determined rather than chosen.

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In contrast, the cognitive approach and social learning theory take a soft determinist position. The cognitive approach accepts that our thinking is limited by our schemas and capacity, but we can choose how to think and act. This is why cognitive therapy for schizophrenia contains some element of free will, as clients are encouraged to challenge and change their irrational thoughts. SLT accepts that we learn through observation, but mediational processes such as motivation mean people choose whether to imitate a model, and Bandura's idea of reciprocal determinism shows we also shape our environment.

In job motivation, need theory is determinist, as behaviour at work is driven by needs, whereas expectancy theory (Vroom) contains elements of free will, as workers consciously decide how much effort to make based on expectations of reward.

A strength of determinism is that it is consistent with the aims of science. It relates to the scientific emphasis on causal relationships, where behaviour has been caused by something not controlled by the individual. Experiments manipulate an IV to show its effect on a DV, so scientific evidence is produced to support causation and thus determinism. This allows behaviour to be predicted and controlled, eg drug treatments for schizophrenia.

However, if behaviour is caused by external or biological forces, then the individual is not responsible for it, leading to an absence of moral responsibility. This is inconsistent with the legal system, which assumes offenders have chosen to break the law and can be punished. Hard determinism is also unfalsifiable, as even when a cause is not found, determinists can argue one simply has not been discovered yet.

Free will seems intuitively correct, as most people feel they have some



control over their own actions and behaviour, and it has positive implications: Roberts et al (1985) found that adolescents with a strong belief in fatalism (that their lives are decided by events outside their control) were at greater risk of depression. However, free will is subjective and impossible to test scientifically, as it is difficult to quantify and measure. Research also suggests the brain prepares an action before we are conscious of deciding to act (Libet), which challenges free will.

In conclusion, there may be a continuum rather than a dichotomy between free will and determinism. Behaviours may not be either determined or freely chosen but contain varying elements of each, so soft determinism, as in the cognitive approach, may give the most useful account of human behaviour.

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Section C: Applied Psychology: Work and the Individual

Answer **all** questions in the spaces provided.

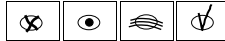
Only **two** answers per question are allowed.

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 7

Which **two** of the following are **not** resources in the job demands-resources (J D-R) model of workplace stress?

Shade **two** boxes.

[2 marks]

A Burnout



B Job appraisal



C Job insecurity



D Level of control



E Training



0 8

Evaluate the job demands-resources (J D-R) model of workplace stress.

[6 marks]

A strength of the JD-R model is that it can explain both health impairment processes and motivational processes. High job demands lead to strain and burnout, while job resources, such as social support and autonomy, lead to motivation and engagement. Research evidence supports the existence of these two pathways (Bakker and Demerouti, 2007), and Schaufeli and Taris (2014) found that research findings support the conceptual framework of the model. Nielsen et al (2011) and Baka (2015) found resources buffer demands.

Including job resources and well-being distinguishes this model from earlier models, eg the job demands-control (JD-C) model, which were relatively simple. The JD-R model is flexible and can be applied to any work environment, as it can incorporate new demands and resources for the digital age.

It also provides useful interventions to reduce strain and burnout in the workplace, eg increasing training and support. However, because the model is so complex, it is impossible to test all the variables at once, unlike the simpler, more testable earlier models.

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0	9
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Briefly outline what psychologists mean by cultural universals in facial expression.

[2 marks]

Cultural universals in facial expression means that certain facial expressions are the same and recognised across all cultures, eg the facial expressions showing basic emotions such as happiness, surprise, anger, fear, sadness and disgust (Ekman). This suggests they are innate.

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Briefly explain **one** limitation of research into cultural universals in facial expression.

[2 marks]

Research often uses photographs of 'models' posing facial expressions to a given emotion (eg Ekman). Emotion also includes autonomic changes and feelings, so posed stimuli may not be valid. Lab studies lack ecological validity, so they may not reflect real-life emotions.



1 1

At a meeting of people interested in climate change, the group wanted to decide what action to take. At first, most people did not want to take extreme action. As the meeting progressed, the group's opinion became more extreme. By the end of the meeting, everyone had agreed to take extreme action on climate change.

Use your knowledge of group processes to explain **two** factors that might have influenced the group's decision-making on climate change.

[6 marks]

Group polarisation: this is the tendency for a group's decision to be more extreme than the original views of its members. At first, most people at the meeting did not want to take extreme action, but by the end extreme action was agreed, so the group decision was more extreme than the original attitudes on climate change. During discussion, members heard persuasive arguments in favour of action that they had not considered (informational influence), and by social comparison they may have moved towards a stronger position to be seen as committed to the group's cause.

Risky shift: this is a type of group polarisation where the group decision is riskier than the individuals' original views. Both the group view on what action to take and the individuals' views on climate change became riskier, and a risky decision (extreme action) was taken. Responsibility for the risky decision is shared across the whole group (diffusion of responsibility), so each person feels less personally accountable for the consequences.

Extra space *Groupthink may also have occurred: the group drifted into a decision without considering the consequences, wanting to avoid conflict and reach a consensus, so doubts about extreme action were not voiced and everyone agreed.*

Turn over ►



1 2

Discuss **one or more** theories of job motivation and satisfaction.**[12 marks]**

Vroom's (1964) expectancy theory is a cognitive theory that sees workers as rational decision makers who choose how much effort to put into their work. Motivation depends on three factors. Expectancy is the belief that effort will lead to good performance. Instrumentality is the belief that good performance will be rewarded. Valence is the value the person places on the reward. $Motivation = E \times I \times V$, so if any factor is zero, the worker will not be motivated, eg if a worker does not value a promotion, offering one will not motivate them.

Need theories, in contrast, see motivation as driven by needs. Maslow (1957) proposed a hierarchy from physiological and safety needs up to esteem and self-actualisation; at work these could be met by pay, job security, recognition and challenging tasks. McClelland's achievement motivation theory (1988) identified the needs for achievement, affiliation and power, and Farren (1998) identified 12 main areas of human need, including work, family and health.

Goal-setting theory (Locke, 1968) states that specific, difficult but achievable goals lead to higher performance than vague goals such as 'do your best', especially when workers are committed to the goals and receive feedback.

Expectancy theory is supported by research. Van Eerde and Thierry (1996) carried out a meta-analysis and found that the components of the theory were related to measures of work motivation and performance. It is also useful, as it shows managers that rewards must be valued by each worker and clearly linked to performance. However, it assumes workers are rational and calculate effort, which may not be



true, as emotion and habit also influence behaviour, and the three factors are difficult to measure objectively.

Comparing need theories with expectancy theory, need theories are more deterministic, as behaviour is driven by needs, whereas expectancy theory gives workers more choice. Need theories are difficult to test, as needs cannot be observed, and Maslow's hierarchy has been criticised as reflecting individualist Western culture.

There are problems in understanding the many interacting characteristics, such as pay, colleagues, personality and job design, that influence motivation and satisfaction, so a single theory cannot explain them all.

Research is also affected by the Hawthorne effect (Hawthorne experiments, 1933): productivity increased whenever the workers were observed, whatever the change in conditions, suggesting attention, not the variable studied, affected motivation. This makes it hard to know whether findings support the theories.

Finally, the theories focus on people in traditional types of employment rather than people who work from home or are self-employed, which questions their temporal validity, as patterns of work have changed greatly. Overall, combining theories gives the best ability to explain motivation and satisfaction at work.

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