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Forename(s)

Candidate signature

I declare this is my own work.

INTERNATIONAL A-LEVEL PSYCHOLOGY

Unit 4 Approaches and application

Wednesday 21 June 2023 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 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 1 . 1**Which **one** of **A**, **B**, **C** or **D** best describes the following behaviour?

Learning that involves observing the consequences of other people's actions.

Shade **one** box.**[1 mark]****A** Identification☐**B** Imitation☐**C** Modelling☐**D** Vicarious reinforcement☒**0 1 . 2**

What are mediational processes in social learning?

[1 mark]

Cognitive processes (eg attention, retention) occurring between observing and imitating a behaviour, making it more or less likely to be repeated.



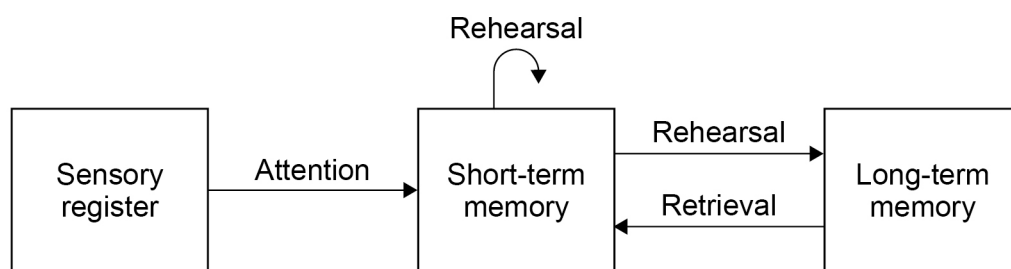
0 2

Distinguish between **two** types of reinforcement.

[2 marks]

Positive reinforcement involves the provision of a reward (a pleasant consequence) to shape or obtain a behaviour, whereas negative reinforcement works by the removal of an unpleasant stimulus to shape or obtain a behaviour.

0 3

Figure 1 The multi-store model of memory

Using your knowledge of the cognitive approach, explain how theoretical models, like that shown in **Figure 1**, can be a useful way of helping psychologists understand internal mental processes.

[4 marks]

Mental processes such as memory cannot be directly seen, so models let psychologists test them indirectly, eg the multi-store model generates testable theories of how memory works.

Models use computer terms such as input, storage and output, so the MSM explains how information is coded, stored and retrieved. They also show the stages of processing: information passes through the sensory register, STM and LTM.

Turn over ►



0 4 . 1

Glen is a 76-year-old man who has suddenly lost the ability to produce speech.

Explain how psychologists could use the biological approach to investigate possible causes for Glen's difficulties.

[4 marks]

Psychologists could look at biological structures by using brain scans such as fMRI or MRI to look for possible lesions, eg from a stroke, in Broca's area in the left frontal lobe, which is responsible for speech production. They could study genes by checking whether Glen's close relatives have experienced the same thing, and neurochemistry, using psychoactive drugs to block or enhance certain neurotransmitters to see if his speech production improves.

0 4 . 2

Evaluate the use of the biological approach to understand behaviour.

[6 marks]

The approach has made a valuable contribution to psychology, eg the role of Broca's area in language. It has led to drugs which target the neurotransmitters involved in schizophrenia and depression, eg antipsychotics and SSRIs, and to understand genetic factors in behaviours such as aggression and schizophrenia,, and the evolutionary advantages of behaviours such as sleep.

However, the approach is deterministic, as it assumes behaviour is caused by biological factors, allowing no free will. There are problems with cause and effect: dopamine is involved in schizophrenia, but the disorder may change dopamine levels. It is also reductionist, explaining the complex symptoms of schizophrenia by faulty neurotransmitter levels ignoring family and society.



0 5

Describe and evaluate Pavlov's research into classical conditioning.

[12 marks]

Pavlov conducted controlled laboratory experiments into digestion in dogs and noticed that the dogs came to salivate at the presence of the research assistants who usually fed them, before any food was given. He went on to investigate this process systematically.

Pavlov observed that the presentation of food to a hungry dog led to salivation. This was a reflex response that required no learning, so he described the food as an unconditioned stimulus (UCS) leading to an unconditioned response (UCR), salivation.

He then rang a bell, a neutral stimulus (NS) which on its own produced no salivation, at the same time as the food (UCS) was presented. After repeated pairings, the dog formed an association between the neutral stimulus and the unconditioned stimulus, so that the bell alone, now a conditioned stimulus (CS), led to salivation, now a conditioned response (CR). He also found that if the bell was repeatedly presented without food, the CR gradually disappeared (extinction).

This research gave rise to the theory of classical conditioning, where learning is by association between stimuli. It assumes that behaviours are directly observable and measurable, and that learning is the same as performance.

A strength of Pavlov's research is that he carefully controlled variables, eg the number of trials during which the bell was sounded and the timing of the bell and food. This standardised procedure means the study could be replicated, and the use of the scientific method allows cause and effect to be established, increasing the reliability and credibility of the findings.

Turn over ►

Pavlov's work also contributed to the development of the behaviourist approach by showing similarities in the way animals and humans learn (the comparative approach). There is support from Watson and Rayner's (1920) Little Albert study, in which a young child was conditioned to fear a white rat by pairing it with a loud noise, which increases the validity of classical conditioning as an explanation of human behaviour.

Another strength is the practical applications of Pavlov's research, including treatments for phobias such as systematic desensitisation and flooding, which use the principles of association and extinction to replace a fear response with relaxation. This shows the research has real-world value.

However, Pavlov's research used dogs, and animals are not humans, so we should be cautious when generalising the findings. Humans have the ability to think and choose whether to act or not, so their learning may be more complex than a simple stimulus-response association.

Classical conditioning also does not take into account thoughts or cognition, so it cannot explain more complex behaviours such as language or problem solving. It is environmentally reductionist and deterministic, ignoring biological influences and free will. The research also raises ethical issues, as the dogs underwent surgery to collect their saliva.

Overall, Pavlov's research was highly controlled and influential, but it offers only a partial explanation of human learning.



[illegible]

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Section B: Issues and Debates in Psychology

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

Ben and Sarah are talking after class. Ben says, "I think that all human behaviour is determined by the environment around us."

Sarah replies, "That's not true, we do learn behaviour but we have the choice whether or not to perform it."

0	6
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Using your knowledge of free will and determinism, explain Ben's and Sarah's comments.

[4 marks]

Ben believes in hard (environmental) determinism. He thinks all human behaviour is caused by environmental forces outside our control, such as reinforcement, so there is no free will.

Sarah believes in soft determinism. She accepts that we do learn behaviour from the environment, eg through observation, but argues that we still have control over how we respond and can choose whether or not to perform the behaviour, so there is some free will within these constraints.



0 7

Reductionism is the idea that any behaviour can be fully explained by looking at its most basic components.

0 7 . 1

Briefly discuss **one** strength of using a reductionist approach in psychology.

[3 marks]

A strength is that reductionism can be used to provide treatments.

Biological reductionism explains mental illness in terms of basic components such as neurotransmitters, eg low serotonin in depression.

This has led to psychoactive drugs such as SSRIs which target these neurotransmitters and have helped many patients, showing reductionism has practical value.

0 7 . 2

Briefly discuss **one** limitation of using a reductionist approach in psychology.

[3 marks]

A limitation is that reductionism oversimplifies complex behaviour and often describes rather than explains it. For example, reducing schizophrenia to excess dopamine tells us nothing of the person's feelings or cognition, and takes no account of the social context, such as family dysfunction. Holism argues the whole person is greater than the sum of their parts.

Turn over for the next question

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0 8

Many psychologists define psychology as 'the scientific study of the mind and behaviour'.

Discuss the ways in which psychology is a science. Refer to **one or more** topics you have studied in your answer.

[20 marks]

Psychology is defined as the scientific study of the mind and behaviour, and it attempts to use the key features of science when it investigates all behaviours. One key feature is the empirical method, where only behaviour that can be directly observed and measured is studied. Another is objectivity, where events are recorded as they actually happen without being influenced by the researcher's expectations or bias.

Science also requires replicability: all variables apart from the IV are controlled, giving others the ability to repeat the experiment and get similar results. Experiments manipulate an independent variable (IV) and measure its effect on a dependent variable (DV), while controlling extraneous variables, so that cause and effect can be established and internal validity is improved.

Science uses hypotheses, which are precise, testable statements that make specific predictions. Testing hypotheses leads either to the hypothesis being retained and the theory supported, or to the hypothesis being rejected and the theory amended. Theories must therefore be falsifiable. Over time, general laws can be developed which can be used to predict future behaviour.

Sperry's (1968) split-brain research shows these features. He used a highly controlled, standardised procedure, presenting images to one visual field of patients whose corpus callosum had been cut, which allowed replication by other psychologists and supported lateralisation of function. Asch (1951) investigated conformity using a standardised protocol with



confederates giving wrong answers on a line-judging task, which increased the replicability of his research and enabled explanations of types of conformity to be widely accepted.

Loftus and Palmer (1974) manipulated the verb used to describe a simulated car crash (eg 'smashed' or 'contacted') and measured speed estimates, showing cause and effect under controlled conditions. The impact of her research on the fragility of memory has radically altered the way in which eye-witness testimony is used in court. Similarly, Piaget's observational research produced a theory that prompted refined observation strategies such as Baillargeon's (1985) work, which used observation, timing and standardisation to investigate unseen mental processes in infants.

These examples show that psychological theories supported by studies using the scientific method have credibility and are more likely to be accepted by society and other researchers. There is also evidence that scientific methods have practical applications: explanations such as recall being affected by leading questions, or the need to scaffold a child's learning to aid cognitive development, have stood the test of time.

Without applying the features of science there would be little acceptance of psychological theories, and being falsifiable is crucial to theoretical explanations.

However, there are issues with the drive for scientific approval. Highly controlled laboratory experiments such as Loftus and Palmer's lack ecological validity, as watching a film clip is not the same as witnessing a real crash. Other methods such as questionnaires and interviews may be a more ethical or useful approach to studying cultural differences in

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human behaviour.

There are also times when case studies are useful even though they are not considered scientific, as the rich detail they provide, often collected over an individual's lifetime, can give a unique insight into their particular difficulties, eg the case of HM. Research using correlational techniques can be less convincing because cause and effect cannot be established.

There are still difficulties in the process of inference, as the jump from data to explanations of behaviour might be flawed, eg the assumption that chemical imbalances cause, rather than result from, disorders such as depression. Some areas of psychology, such as the humanistic approach, focus on subjective experience which cannot be objectively measured.

Overall, it might be sensible to conclude that, as far as possible and when appropriate, psychology is a science, while recognising that some behaviour is better studied with other methods.

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Section C: Applied Psychology: Work and the Individual

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

0 9

What is meant by social loafing?

[2 marks]

Social loafing is the tendency for individuals to expend less effort when working collectively in a group than when working individually, eg because their own contribution cannot be identified.

1 0

A researcher asked participants from different countries to match six different emotions to six photographs of faces. He found that it did not matter which country people came from; all the participants were able to match the emotions to the photographs of faces correctly.

Using your knowledge of cultural universals in facial expression, explain the results found by the researcher.

[4 marks]

All participants recognised the emotions in the photographs correctly regardless of their country, which suggests that we are biologically programmed to recognise basic emotions in faces. This is likely to be innate because it helped our ancestors survive.

The results suggest that basic emotions such as happiness, sadness, surprise, anger, fear and disgust are cultural universals, and the photographs must have been depicting the six basic emotions because all participants could identify them, as Ekman found.



1	1
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Chen is feeling unhappy at work. He has very little autonomy in organising his working day and the tasks he is given to do are meaningless and boring. He has a meeting to discuss changes to his job that might improve his satisfaction.

Using your knowledge of well-being, suggest **two** changes that could improve Chen's satisfaction at work.

[4 marks]

Change 1 *Chen could ask for more autonomy and responsibility to organise his own working day and tasks, with feedback so he has knowledge of the results. This will improve his motivation and well-being.*

Change 2 *Chen could ask for greater skill variety and a clearly identifiable task of significance to the company (job characteristics model), making his work less boring and more meaningful.*

Turn over for the next question

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1 2

Describe and evaluate research into the effects of workload and control on workplace stress.

[20 marks]

Rotter (1966) proposed the concept of locus of control (LoC). People with an internal LoC feel that they are in control of events around them and that their behaviour will lead to predictable consequences. People with an external LoC feel that they are at the mercy of events around them and can do little to control them. Therefore externals will experience more workplace stress, as they feel they are not in control of their workload. A strong internal LoC is associated with psychological health and greater resistance to stress.

Karasek's (1979) job demands-control model (JD-C) suggests that the effects of workload depend on the interaction of job demands with decision latitude, which is the control a worker has over decision making. Low decision latitude combined with high demands produces a high strain job, which leads to the most stress and illness, whereas high demands with high control produce an active job that can be motivating.

Marmot et al (1997) studied over 10,000 British civil servants in the Whitehall I and II studies. Workers reported on their job demands and control using questionnaires and were followed up for about five years. Lower-grade workers had twice the rate of heart disease of higher-grade workers. The degree of decision latitude, or lack of control, was linked to stress-related heart disease, while workload (job demands) was not, suggesting control is more important than workload.

Marmot's study has support from Johansson et al (1978), who found higher levels of stress hormones (adrenaline) and stress-related illness in a group of highly skilled sawmill employees whose repetitive, machine-paced work gave them little or no control over their work,



compared to a low-risk control group. This increases the validity of the claim that lack of control causes workplace stress.

Marmot's study raised awareness of the importance of decision latitude for the health of workers, and so has made a positive contribution to the understanding of work-related stress and illness. Karasek's model also has important practical applications: the interaction between demands and decision latitude predicts that the stressful effects of lack of control can be reduced if the job itself is of low demand, and organisations can redesign jobs to give workers more control.

However, Rotter's locus of control model fails to take account of the complex interaction between locus of control and the demands of the job. For example, a shop-floor worker will have little control, but the demands of the job are low, so he or she does not feel stressed. This suggests control cannot be considered separately from workload.

Many studies, including Marmot's, are based on self-report methods, so there is a potential for social desirability bias, eg workers may under-report or exaggerate their workload and lack of control, making results about the effects of workload and control less valid. The measures are also correlational, so we cannot be sure lack of control causes stress rather than other factors linked to low job grade, such as income, diet or smoking.

Samples are often limited, eg Marmot studied government civil servants and Johansson studied sawmill workers, so it is difficult to generalise the findings on workload and control to other groups of workers, cultures or to women. Individual differences such as personality type and hardiness may also explain why some workers with high workload and

Turn over ►



Extra space *low control do not become stressed.*

Overall, research consistently suggests that lack of control is a key cause of workplace stress, especially when combined with high workload, but individual differences and methodological issues mean the relationship is more complex than the models suggest.

END OF QUESTIONS



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