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Centre number

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INTERNATIONAL A-LEVEL PSYCHOLOGY

Unit 4 Approaches and Application

Tuesday 17 January 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 Psychology

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

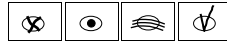
Only **two** answers per question are allowed.

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 1

Which **two** of the following are **not** mediational processes in social learning?

Shade **two** boxes.

[2 marks]

A Attention



B Desensitisation



C Manipulation



D Reproduction



E Retention



Leo is 5 years old and is helping his father wash the car. When his father uses a brush to wash a wheel, Leo washes a wheel with his brush too, using the same action.

0 2

With reference to Leo, explain the social learning processes of:

- (a) Identification
- (b) Modelling

[2 marks + 2 marks]

(a) Identification is when the observer feels a connection with a role model and wants to be like them. Leo sees his father as a role model who is similar to him, as they are both male, so he identifies with him. Because of this, Leo is more likely to imitate his father, so he washes



the wheel using the same action.

(b) Modelling is learning by observing a model's actions. Leo watches the way his father washes the wheel with a brush and extracts information about how it is done. He then reproduces this, washing a wheel with his own brush in the same way as his father, who is a significant role model.

0	3
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Explain **one** strength and **one** limitation of social learning theory.

[3 marks + 3 marks]

Strength: there is research support for social learning theory from controlled lab studies. Bandura et al (1961) found that children who had watched an adult model behave aggressively towards a Bobo doll imitated many of the same aggressive acts, whereas children who saw a non-aggressive model showed little aggression. Because the variables were tightly controlled, this shows cause and effect, and the studies can be replicated. SLT also acknowledges the importance of cognitive mediational processes, such as attention and retention, which explains why learning can occur without direct reinforcement.

Limitation: SLT is sometimes criticised for not taking sufficient note of biology. For example, boys in Bandura's studies were more physically aggressive than girls, which may be due to hormonal differences such as higher testosterone rather than observation alone. SLT also cannot explain all behaviour, such as behaviour that appears without any role model or observation. In addition, Bandura's research has been criticised, as the Bobo doll is designed to be hit, so the studies lack ecological validity and may show demand characteristics, which weakens the support for the theory.

Turn over ►



Adeel behaves well in class because he does not want a bad school report.

Beth is working hard for her test because she will get a present from her parents if she scores more than 80%.

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Reinforcement is an important process in operant conditioning.

Use your knowledge of **two** types of reinforcement to explain the behaviours shown by Adeel and Beth.

[2 marks + 2 marks]

Adeel's behaviour is due to negative reinforcement. This is when a behaviour is strengthened because it avoids or removes something unpleasant. Adeel behaves well in class to avoid the unpleasant consequence of getting a bad school report, so he will not be punished. Because good behaviour avoids this outcome, it is reinforced and he is likely to keep repeating it.

Beth's behaviour is due to positive reinforcement. This is when a behaviour is strengthened because it leads to a pleasant consequence or reward. Beth works hard for her test so that she can gain a reward (a present from her parents) if she scores more than 80%. Because hard work is followed by a reinforcer, she is likely to repeat this behaviour.

0	5
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Briefly explain the difference between phenotype and genotype.

[2 marks]

The genotype is a person's genetic make-up, the genes inherited from their parents. The phenotype is the observable characteristics that result when the genotype interacts with the environment. For example, the genotype sets the maximum height a person could reach, but their actual height (phenotype) also depends on factors like nutrition.



0 6

Describe and evaluate the cognitive approach in psychology.

[12 marks]

The cognitive approach studies internal mental processes such as memory, perception, attention and thinking. It argues that these processes mediate between a stimulus and our response, so to understand behaviour we must understand how the mind processes information. Because mental processes cannot be observed directly, cognitive psychologists use controlled methods such as lab experiments to make inferences about them from behaviour, eg from how many words a participant can recall.

Cognitive psychologists develop theoretical models to show how mental processes might operate. Information processing models see the mind as processing information in stages: input, storage, processing and output. For example, the multi-store model of memory (Atkinson and Shiffrin) proposes that information passes from sensory memory to short-term memory and, through rehearsal, into long-term memory. The approach also uses computer models, comparing the mind to a computer that encodes, stores and retrieves information, and these models have been programmed into computers to test them.

The approach also emphasises the role of schemas. Schemas are mental frameworks of beliefs and expectations, based on past experience, which help us process information quickly, but they can lead to distortions as we fill gaps in our knowledge. More recently, cognitive neuroscience has emerged, which brings together biological and cognitive processes by using brain scans such as fMRI to identify the brain structures involved in mental processes, eg the role of the hippocampus in memory.

A strength is the use of evidence. Bartlett (1932) asked British

Turn over ►

participants to recall the Native American story 'War of the Ghosts'.

Their recall became shorter and they changed unfamiliar details to fit their own cultural schemas, eg canoes became boats. This supports the idea that schemas play an important role in mental processing, in this case reconstructive memory.

The approach has many useful applications. Beck's negative triad explains depression as caused by faulty, negative thinking, which led to cognitive behavioural therapy (CBT), an effective treatment. Research into reconstructive memory, such as Loftus and Palmer (1974), has improved the way police interview eyewitnesses, making eyewitness testimony more reliable. The approach has also contributed to the field of artificial intelligence and robotics.

Another strength is that the cognitive approach uses scientific methods of research. Lab experiments control extraneous variables and are objective and replicable, which gives the approach scientific rigour and credibility. Cognitive neuroscience has added to this by giving biological evidence for mental processes.

However, experimental studies of mental processes are often artificial, eg recalling lists of unrelated words, so they may be unrepresentative of everyday behaviour and lack ecological validity. Also, mental processes are inferred rather than observed directly, so conclusions may be inaccurate.

The use of models can oversimplify complex processes. For example, the multi-store model sees short-term memory as a single store, but case studies such as KF showed that it has separate components, as later proposed in the working memory model. The approach is also criticised for being mechanistic: by comparing the mind to a computer, it fails to



explain human qualities such as emotion and motivation, which affect

Extra space *how people think and remember.*

On the other hand, the cognitive approach takes a soft determinist stance. It accepts that behaviour is influenced by our cognitive system, but that we have some free will to choose how we think, which is more flexible than the hard determinism of the behaviourist approach.

Overall, the cognitive approach has been very influential, scientific and useful, but because it relies on inference and artificial tasks, and ignores emotion, it is best combined with other approaches.

30

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Section B: Issues and Debates in Psychology

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

Two students were talking after a psychology lesson.

Ali said: "I believe the genes inherited from our parents explain all behaviour".

Mia replied: "I agree that genetic inheritance is partly responsible for behaviour, but I think we also have some control over our choices in life".

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Referring to the conversation, explain what Ali and Mia think about the free will and determinism debate.

[4 marks]

Ali believes in hard determinism, specifically biological determinism. He thinks that all behaviour is determined by forces outside our control, namely the genes inherited from our parents, so we have no free will or choice over our behaviour, because we cannot control the influence of our genes.

Mia believes in soft determinism. She agrees that some elements of behaviour are determined by factors such as genetic inheritance, but thinks we still have control over some choices in life, so there is some free will. Behaviour is partly determined but people can still make conscious choices within these limits.



0 8

Evaluate **one or more** types of reductionism in psychology.**[6 marks]**

Reductionism explains complex behaviour by breaking it down into its simplest parts. Biological reductionism explains behaviour at the level of genes, neurochemistry or brain structure, while environmental (stimulus-response) reductionism explains behaviour as learned associations between stimuli and responses.

A strength is that explaining behaviour at a basic level allows greater understanding of the mechanisms involved. Biological reductionism has led to effective treatments, eg the dopamine hypothesis of schizophrenia led to antipsychotic drugs that block dopamine receptors. It is also the basis of scientific research, as isolating and manipulating variables shows cause and effect, giving psychology credibility as a science.

However, reductionism oversimplifies complex behaviour and tends to describe rather than explain it. Reducing schizophrenia to excess dopamine tells us nothing of the psychological dimension, such as how the patient feels. Environmental reductionism focuses only on overt, observable behaviour and ignores thoughts and emotions. It also ignores the social context of behaviour and, as holism argues, loses sight of the whole person, so combining levels of explanation may be best.

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0 9

Discuss the nature-nurture debate. Refer to **two** approaches you have studied in psychology.

[20 marks]

The nature-nurture debate is about the relative importance of heredity and the environment in determining behaviour. The nature side assumes that heredity is more important. It is rooted in nativist theory, which argues that knowledge and abilities are innate, passed on through genes and appearing through maturation. The nurture side assumes that the environment is more important. It is rooted in empiricist theory, which argues that knowledge derives from experience and learning. Locke saw the mind at birth as a 'tabula rasa' or blank slate on which experiences are written.

The relative contributions of nature and nurture are investigated using twin and adoption studies. If identical (MZ) twins, who share 100% of their genes, are more similar than non-identical (DZ) twins, who share about 50%, this suggests a genetic influence. Adoption studies compare adopted children with their biological and adoptive parents to separate genes from environment. Most psychologists now take an interactionist approach, which suggests that both genetics (nature) and the environment (nurture) influence behaviour. Genes also interact with the environment: the genotype is a person's genetic make-up, while the phenotype is how these genes are expressed after interacting with the environment. Epigenetics shows that life experiences can place markers on DNA that switch genes on or off, which may even affect the genetic code passed to offspring.

The behaviourist approach takes an extreme nurture position. It argues that all behaviour is learned from the environment through classical and operant conditioning. For example, Watson and Rayner (1920) conditioned



Little Albert to fear a white rat by pairing it with a loud noise, suggesting phobias are learned. Social learning theory is also largely nurture, as behaviour is learned by observing and imitating role models in the environment, as in Bandura's Bobo doll study, although it accepts that cognitive mediational processes are involved.

The biological approach assumes that genetic make-up mainly drives behaviour (nature). For example, schizophrenia is explained by a genetic vulnerability and by neurochemical factors such as excess dopamine.

However, it acknowledges that the environment affects development to some extent, as the phenotype results from genes interacting with the environment, and environmental factors such as stress or drug use can affect neurochemistry.

Evidence supports the influence of nature. Twin studies of schizophrenia show higher concordance for MZ pairs than for DZ pairs, eg Gottesman (1991) found concordance of about 48% for MZ twins compared with 17% for DZ twins. Baillargeon's research found that very young infants looked longer at 'impossible' events, suggesting an innate understanding of object permanence, which supports the nature side. However, because MZ concordance is never 100%, the environment must also play a part, and MZ twins may be treated more similarly than DZ twins, so their shared environment is a confounding variable.

Evidence also supports the influence of nurture and learning. Studies of scaffolding (Wood, Bruner and Ross, 1976) show that children's cognitive development depends on support from more knowledgeable others in their environment. Behaviourist research also shows that behaviour can be changed through conditioning, eg systematic desensitisation is an

Turn over ►



effective treatment for phobias, which suggests that maladaptive behaviour is learned.

Taking either extreme stance has implications. A nature stance is biologically determinist and could be used to justify discrimination, eg suggesting that intelligence is fixed by genes could lead to fewer educational opportunities for some groups. A nurture stance is more optimistic, as behaviour can be changed through education, therapy and changes to the environment, but it may lead to blaming parents for children's disorders and it ignores clear genetic evidence.

This shows the need for an interactionist view that takes account of both nature and nurture. The diathesis-stress model of mental illness is interactionist: it suggests psychopathology is caused by a biological vulnerability (diathesis, nature) that is only expressed when there is an environmental trigger (stress, nurture). It has proved useful in understanding and treating schizophrenia. Tienari et al (2004) found

Extra space that adopted children whose biological mothers had schizophrenia were more likely to develop the disorder if they were raised in dysfunctional adoptive families, supporting a gene-environment interaction. Constructivism adds that individuals inherit tendencies that lead them to seek out certain environments, so nature shapes nurture. In conclusion, the behaviourist approach and social learning theory emphasise nurture, while the biological approach emphasises nature, but research suggests that it is impossible to fully separate the two. The interactionist approach is the most realistic, although it is harder to test scientifically, as so many variables interact and it is difficult to measure how much each contributes.



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Section C: Applied Psychology: Work and the Individual

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

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A study was carried out to investigate social facilitation. Twelve participants were asked to solve a simple puzzle. The time taken to solve the puzzle was measured. There were two groups:

Group A: 6 participants solved the puzzle independently, each working alone in a separate room.

Group B: 6 participants solved the puzzle independently, but all working in the same room.

The results were as follows:

Table 1 - Average number of minutes taken to solve the puzzle

Group A	18
Group B	12

1 0 . 1

Outline what is meant by social facilitation.

[2 marks]

Social facilitation is the tendency for people to perform differently, usually better, in the presence of others than when they are alone. Improved performance is shown on simple or well-learned tasks when others are present, either as a passive audience (audience effect) or as co-actors doing the same task.

1 0 . 2

With reference to social facilitation, explain the findings shown in **Table 1**.

[4 marks]

The results show that Group B, the co-action group who worked in the same room, solved the puzzle much quicker (12 minutes on average) than Group A, who worked alone in separate rooms (18 minutes). Group B completed the task 6 minutes, or 33%, quicker than Group A. This is an example of social facilitation, as people often perform better



in a group setting than alone on a simple task like this puzzle. The presence of co-actors increases arousal (Zajonc), and on a simple, well-learned task this strengthens the dominant, correct response, so Group B performed faster. Evaluation apprehension, worrying about being judged by the others, may also have motivated Group B to work faster, whereas Group A had no one present.

1	1
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Mimi is going to an office for a job interview. She asks her friend, Pete, about non-verbal communication.

Briefly explain **two** types of non-verbal communication Pete could suggest are important for Mimi's interview.

[4 marks]

Eye contact: Pete could advise Mimi not to avoid eye contact with the interviewer, as the amount of eye contact, such as the frequency of glances and patterns of fixation, is important. Appropriate eye contact creates a positive first impression, making her seem confident, honest and interested, whereas avoiding it may suggest nervousness or lack of interest. She should not stare, though, as too much can seem hostile, and norms vary between cultures.

Facial expressions: Pete could advise Mimi to make sure she is smiling, as a smile is a universal expression of happiness that makes her seem friendly and approachable, and not to frown or look bored. Ekman found facial expressions for six basic emotions are recognised across cultures, so the interviewer will interpret these cues easily.

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1 2

Discuss **one** model of workplace stress.**[20 marks]**

One model of workplace stress is the job demands-resources (JD-R) model, proposed by Demerouti et al (2001). It suggests that every job has its own specific risk factors associated with stress, but these can be classified into two general categories: job demands and job resources. Job demands are the physical, psychological, social or organisational aspects of the job that require sustained physical and mental effort, eg a high workload, time pressure, emotionally demanding interactions with clients, or a poor physical environment. They are not necessarily negative, but when they require high effort they are associated with physiological and psychological costs, such as fatigue and anxiety. If job demands are high for a long time, this leads to strain and can lead to burnout.

Job resources are the physical, psychological, social or organisational aspects of the job that help workers achieve their work goals, reduce job demands and their associated costs, and stimulate personal growth and development. Examples include training, social support from colleagues and supervisors, feedback, autonomy and career opportunities. They are critical for motivation and engagement.

Later versions of the model added personal resources as a component of job resources. These are aspects of personality, such as resilience, self-efficacy, optimism and an internal locus of control, which affect how a worker perceives and copes with demands. The model therefore proposes two processes: a health impairment process, where high demands lead to strain and burnout, and a motivational process, where high resources lead to engagement and good performance. Resources can



also buffer the effect of high demands, so a worker with high demands but high resources will experience less stress.

Research has supported the usefulness of the JD-R model, particularly job resources. Bakker et al (2005) studied over 1000 employees of a higher education institute and found that high job demands, such as work overload, did not result in high levels of burnout if employees had high job resources, such as autonomy, feedback and a good relationship with their supervisor. This supports the buffering role of resources.

Nielsen et al (2011) also found that job resources such as social support and good leadership were linked to well-being and performance, while Baka (2015) found that job demands were linked to burnout and that resources such as social support could reduce this effect, giving further support to the model.

The JD-R model is more complex and realistic than the earlier job demands-control (JD-C) model (Karasek, 1979), which proposed that stress results from high demands combined with low decision latitude (control). The JD-C model only includes control as a resource, whereas the JD-R model includes a wide range of resources, including social support and personal resources. However, this complexity makes the JD-R model difficult to test in its entirety, as there are so many possible demands and resources that research tends to test only a few variables at a time.

A strength of the JD-R model is that it is very flexible. Because demands and resources are defined generally, it can be applied to a wide range of work environments, from hospitals to call centres. It is also adaptable to the digital age and changing work patterns, such as remote

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working.

Extra space *The model also has practical applications, as it has provided interventions to reduce strain and burnout in the workplace.*

Organisations can measure the demands and resources in a job and then either reduce excessive demands, eg by redesigning workloads, or increase resources, eg by providing training, mentoring and social support. This can improve well-being and reduce absence.

However, research into the JD-R model relies heavily on self-report questionnaires. These may be open to social desirability bias, where workers give answers that make them look good, which has implications for the support of the model. Much of the research is also cross-sectional and correlational, so it cannot establish cause and effect: burnout may cause workers to perceive their demands as higher, rather than demands causing burnout.

The model could also be criticised for underemphasising individual differences, although the inclusion of personal resources partly addresses this. For example, people with a Type A personality or an external locus of control may experience more stress from the same demands.

In conclusion, the JD-R model is a useful and well-supported model of workplace stress that is more comprehensive than the JD-C model and can be applied to many jobs, but its complexity and reliance on self-report data mean that its claims about cause and effect should be treated with some caution.

END OF QUESTIONS



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