8.7 Holism and Reductionism in Psychological Explanation

AQA 7182 · about 50 minutes · Write-in edition

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 Classify the conditioning explanation as holistic or reductionist and state its level.

(Total for Question 1 is 1 mark)

2 Explain levels of explanation for aggression with one example at each level.

(Total for Question 2 is 4 marks)

3 Distinguish biological and environmental reductionism with examples.

(Total for Question 3 is 4 marks)

4 Classify the community programme explanation and give its level.

(Total for Question 4 is 4 marks)

5 Explain one strength of reductionism: scientific testability, with example.

(Total for Question 5 is 3 marks)

6 Explain one strength of holism: ecological validity, with example, and acknowledge one trade-off.

(Total for Question 6 is 6 marks)

7 Discuss holism and reductionism in psychology, with strengths, limitations, levels of explanation and examples.

(Total for Question 7 is 16 marks)

Mark scheme · 8.7 Holism and Reductionism in Psychological Explanation

Question 1

environmental (stimulus-response) reductionism; level = psychological/behavioural cao **B1**

Answer: Environmental (stimulus-response) reductionism; level = psychological/behavioural.

Question 2

names lowest level as biological and gives an example, e.g. high testosterone linked to aggressive behaviour oe **M1**

names a middle/psychological level and gives an example, e.g. cognitive biases or learning from reinforcement leading to aggressive responses oe **M1**

names highest level as social/cultural and gives an example, e.g. cultural norms that tolerate aggression or groupthink in gang cultures oe **M1**

explains hierarchy: lower levels focus on biological mechanisms, higher levels consider social context and meaning, so explanations operate at different scales oe **A1**

Answer: Lowest: biological, e.g. testosterone or neural differences linked to aggression. Middle: psychological, e.g. learned aggressive responses or hostile attribution bias. Highest: social/cultural, e.g. cultural norms or peer-group influences that encourage aggression. The levels form a hierarchy from physiological mechanisms up to social context.

Question 3

states biological reductionism explains behaviour in terms of biological structures/processes, e.g. genes, neurotransmitters or hormones oe **M1**

gives an example, e.g. explaining aggression as caused by high testosterone or frontal lobe dysfunction oe **A1**

states environmental reductionism explains behaviour as learned stimulus-response associations or reinforcement histories oe **M1**

gives an example, e.g. explaining aggression as learned by observing aggressive role models or reinforced by rewards oe **A1**

Answer: Biological reductionism: explains behaviour via biological mechanisms, e.g. aggression linked to testosterone or neural deficits. Environmental reductionism: explains behaviour via learned associations, e.g. aggression learned by modelling or reinforcement.

Question 4

identifies the explanation as holistic oe **M1**

justifies by noting it refers to multiple interacting social and psychological influences rather than a single component oe **A1**

states the level as social/cultural or multi-level (social/environmental) oe **M1**

brief justification linking poverty, schooling and peer pressure to social/cultural level influences oe **A1**

Answer: Holistic; level = social/cultural (or multi-level), because it cites interacting social and environmental factors such as poverty, schooling and peer pressure.

Question 5

identifies scientific testability as a strength, because reductionist claims can be operationalised and tested under controlled conditions oe **M1**

gives an example, e.g. testing drug effects on neurotransmitter levels and measuring symptom change in depression oe **A1**

explains why this matters: allows precise measurement, replication and cumulative scientific knowledge oe **A1**

Answer: Reductionist explanations are scientifically testable because they break behaviour into measurable parts, for example testing how a drug alters neurotransmitter levels and depressive symptoms. This allows precise measurement, replication and cumulative knowledge.

Question 6

identifies ecological validity as a strength of holism, because it considers behaviour in real-world settings and interactions oe **M1**

gives an applied example, e.g. community mental health interventions that consider family, culture and economic factors when treating disorder oe **M1**

explains why this matters: integrating multiple influences produces explanations and treatments that better match complex real-world cases oe **A1**

acknowledges a trade-off: holistic explanations may be less amenable to simple testing or precise measurement oe **M1**

explains consequence: this can make scientific evaluation and replication harder, but increases real-world relevance oe **A1**

links back: therefore holism improves ecological validity and practical usefulness despite reduced experimental control oe **A1**

Answer: Holistic explanations consider behaviour in its real-world context, improving ecological validity. For example, community mental health approaches that account for family, culture and economic factors often produce more relevant treatment plans than single-factor models. The trade-off is that holism is harder to test precisely, but it yields explanations and interventions that better fit complex real cases.

Question 7

Level 4 Detailed and accurate knowledge of holism and reductionism is demonstrated. Evaluation is thorough and balanced, considering methodological, theoretical and practical points and interacting evidence. Levels of explanation are used accurately and applied to clear real-world examples. Arguments are coherent, well organised and use appropriate terminology.	**13-16**
Level 3 Knowledge is generally accurate with reasonable breadth. Evaluation addresses strengths and limitations of both positions with some balance. Levels of explanation are described and applied, though application may be less developed. Answer is mostly clear and structured.	**9-12**
Level 2 Knowledge is present but may be incomplete or partially inaccurate. Evaluation is limited or one-sided. Levels of explanation may be described but not well integrated with examples. Organisation may be uneven.	**5-8**
Level 1 Basic or minimal knowledge. Evaluation is superficial or missing. Little or no application to levels of explanation or real-world examples. Response lacks structure.	**1-4**
Level 0 No creditable content.	**0**

Indicative content:

- AO1: Holism defined as explaining behaviour by reference to the whole person or system, with the humanistic approach as a clear advocate, focusing on personal meaning and self-actualisation.
- AO1: Reductionism defined as explaining behaviour by breaking it into simpler units; biological reductionism (genes, neurotransmitters, hormones) and environmental reductionism (stimulus-response learning) are main forms.
- AO1: Levels of explanation explained: lowest biological, middle psychological, highest social/cultural; examples such as aggression or depression given at each level.
- AO3: Strengths of reductionism: scientific testability and parsimony, allowing precise experiments and cumulative findings, illustrated by neurochemical research and drug trials.
- AO3: Limitations of reductionism: oversimplification, loss of ecological validity, ignoring interactions and subjective meaning, risking inappropriate interventions when higher-level causes matter.
- AO3: Strengths of holism: ecological validity and richer, more useful explanations for complex behaviour, illustrated by community mental health and systemic family therapy approaches.
- AO3: Limitations of holism: difficulty of scientific testing, problems with parsimony and lack of precise prediction, risk of unfalsifiable explanations.
- AO3: Balanced evaluation: many contemporary psychologists adopt an integrative, multi-level approach, using reductionist methods where appropriate and holistic thinking for applied problems; levels of explanation can complement each other.
- AO3: Methodological issues: laboratory control and replication favour reductionist studies, whereas field studies and qualitative methods better capture holistic phenomena; this matters for evidence and application.
- AO3: Ethical and practical implications: reductionist biological interventions such as drugs can be effective but may neglect social causes; holistic interventions may be more person-centred but harder to evaluate and fund.