3.4 Animal Studies of Attachment: Lorenz and Harlow: 30-minute Pack

AQA 7182 · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 Outline the procedure of Harlow's 1958/59 studies with rhesus monkeys reared with wire and cloth surrogate mothers, naming the key experimental manipulation and how contact and feeding were separated.

(Total for Question 1 is 4 marks)

2 Outline the main findings from Harlow's surrogate mother studies, including the role of contact comfort and the consequences of maternal deprivation for later social and sexual behaviour in rhesus monkeys.

(Total for Question 2 is 4 marks)

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3 Ethics and validity: Harlow's mother-deprivation procedure caused distress to infant monkeys. Identify two ethical issues raised by Harlow's studies, and for each explain why it is an ethical problem and how modern ethical safeguards in animal research would address it.

(Total for Question 3 is 6 marks)

4 Evaluation: Discuss one problem of generalising from Lorenz's results with greylag goslings to human attachment, one practical value of Harlow's findings for understanding human child-rearing or animal husbandry, and one limitation of applying those findings. For each point, explain why it matters.

(Total for Question 4 is 6 marks)

5 Explain two long-term behavioural consequences for rhesus monkeys that experienced maternal deprivation in Harlow's studies, naming specific adult behaviours observed.

(Total for Question 5 is 4 marks)

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Mark scheme · 3.4 Animal Studies of Attachment: Lorenz and Harlow: 30-minute Pack

Question 1

states infant rhesus monkeys were reared with two surrogate mothers, one made of wire and one covered in cloth oe	**M1**
states that in some conditions the wire mother provided milk while the cloth mother provided no milk, separating contact comfort from feeding oe	**M1**
states that researchers measured which mother the infants spent more time with, and their response to a frightening stimulus while with each surrogate oe	**M1**
clarifies this allowed comparison of the importance of contact comfort versus food as the basis for attachment oe	**A1**

Answer: Baby rhesus monkeys were reared with two surrogate mothers, a wire one and a cloth-covered one; in critical conditions the wire mother provided milk while the cloth mother provided comfort but no milk. Harlow measured time spent with each and behaviour when frightened to compare contact comfort and feeding as attachment bases.

Question 2

reports that infant monkeys preferred the cloth-covered surrogate to the wire surrogate, even when the wire surrogate provided milk oe	**M1**
states that contact comfort was shown to be more important than feeding in forming an attachment oe	**M1**
states that maternally deprived monkeys later showed social and sexual deficits, such as rock-clinging, poor social skills, and impaired parenting behaviour oe	**M1**
may mention long-term emotional and social problems in adulthood following early maternal deprivation oe	**A1**

Answer: Monkeys consistently preferred the cloth surrogate and used it as a secure base, showing that contact comfort was more important than feeding in attachment. Monkeys reared without a real mother developed social and sexual deficits and poor parenting in adulthood.

Question 3

identifies ethical issue 1: causing psychological harm and distress to infant monkeys oe	**M1**
explains why this is a problem, e.g. monkeys showed signs of long-term emotional harm, which is a welfare concern and would be unacceptable under current standards oe	**A1**
states a modern safeguard addressing this, e.g. harm minimisation, ethics review boards requiring clear justification and prohibiting unnecessary distress oe	**M1**
identifies ethical issue 2: lack of informed consent and use of sentient primates with high cognitive capacity oe	**M1**
explains why this is a problem, e.g. nonhuman primates have complex social needs and cannot consent, raising strong moral obligations to avoid experimentation that impairs welfare oe	**A1**
states a safeguard, e.g. replacement, reduction and refinement (the 3Rs), and stricter rules that limit use of primates and require alternatives where possible oe	**A1**

Answer: Issue 1: causing psychological harm and distress to infant monkeys, which is problematic because it produced long-term welfare damage; modern safeguards include ethics review and harm-minimisation rules that would generally prevent such procedures. Issue 2: using sentient primates without consent, problematic because primates have complex social needs and deserve strong protection; modern safeguards include the 3Rs (replace, reduce, refine) and strict controls on primate research, favouring alternatives.

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Question 4

identifies a problem of generalisation from Lorenz to humans, e.g. species differences in cognition and attachment mechanisms between birds and humans oe	**M1**
explains why this matters, e.g. imprinting in precocial birds is a rapid, innate process that may not map onto the more prolonged, reciprocal human caregiver-infant interactions oe	**A1**
identifies a practical value of Harlow's work, e.g. highlighting the importance of tactile comfort and early caregiving for healthy social development, with implications for childcare and animal rearing oe	**M1**
explains why this matters, e.g. it influenced reforms in institutional care, foster parenting and advice to caregivers about responsive physical contact, improving outcomes for children and animals oe	**A1**
offers a balanced comment or limitation on the practical application, e.g. caution that direct translation from monkeys to humans must account for ethical and contextual differences oe	**M1**
explains the limitation, e.g. human social environments and cognitive factors are more complex, so applications should be adapted and empirically tested rather than assumed to transfer directly oe	**A1**

Answer: Problem of generalising: birds show rapid, innate imprinting that differs from the prolonged, reciprocal attachment processes in humans, so Lorenz's findings may not map directly onto human attachment. Practical value of Harlow: demonstrated the importance of tactile comfort and responsive caregiving for social development, influencing improvements in childcare and animal husbandry; however, application must be cautious because human contexts and ethical standards differ from experimental monkey rearing.

Question 5

identifies one long-term consequence, e.g. impaired social behaviour or inability to form normal social bonds in adulthood oe	**M1**
explains with an example, e.g. deprived monkeys showed social withdrawal, rock-clinging and failure to interact normally with peers, which indicates disrupted social development oe	**A1**
identifies a second long-term consequence, e.g. poor parenting or abnormal sexual behaviour in adulthood oe	**M1**
explains with an example, e.g. maternally deprived females were poor mothers, sometimes neglecting or abusing their offspring, showing transgenerational effects oe	**A1**

Answer: Maternal deprivation produced impaired social behaviour in adulthood, such as social withdrawal and rock-clinging, and disrupted sexual/parenting behaviour, with deprived females often showing poor or abusive maternal care, indicating long-term developmental damage.

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