Use of animals in psychological research

Lesson 1.5.5 | Concepts and methods

1. Why use animals?

Animal behaviour is worth understanding in its own right. Comparative research can investigate whether a pattern requires a specifically human experience. Applied research can improve husbandry and veterinary cooperation. The question must justify the species and method.

Study	Animals	Purpose
Hassett	34 analysed rhesus monkeys: 11 males, 23 females	Wheeled/plush toy preferences.
Fagen	Five female elephants: four juveniles, one adult	Reward-based trunk-wash training.

2. Scientific advantages

Different environmental histories allow some questions to be examined without explicit human teaching. Video and behavioural definitions support direct measurement. Repeated exposure or training can document behaviour across time.

Hassett offered both toy types in a familiar group enclosure. Fagen recorded offers, times and performance while training a useful sequence. These methods addressed different questions: comparative preferences versus practical learning.

3. Scientific limitations

Species differences: similar actions may have different meaning or causes in different species.
Internal experience: animals cannot give the same verbal explanation or rating as humans.
Anthropomorphism: assigning human motives or gender meanings to animal actions can mislead.
Sampling/control: a captive troop or five selected animals may not represent other populations.

4. Generalisation needs evidence

Hassett's findings do not prove that human toy preferences are genetically fixed. Fagen's adult noncompletion does not prove that older elephants cannot learn. Evaluate what the sample and task actually establish before extending to another species or age.

> Behavioural cooperation or approach is not human informed consent. Some ability to avoid a task can still matter for welfare, with its practical limits stated.

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Lesson 1.5.5 | Evidence and interpretation

1. Official animal ethical guidelines

Guideline	Questions to ask
Minimise harm; maximise benefit	Does expected knowledge or practical benefit justify physical and psychological welfare costs?
Replacement	Could existing records, models or another method answer without live animals?
Species	Does the species suit the question, and are its care needs understood?
Numbers	Use enough animals for meaningful evidence without unnecessary use.
Procedures	Consider pain, suffering/distress, housing, rewards, deprivation and aversive stimuli.

2. Procedures need specific evaluation

Pain and distress: monitor injury, fear, discomfort and social stress; use suitable stopping criteria.
Housing: assess space, social contact, temperature, enrichment and handling. Familiar housing may reduce disruption but is not necessarily ideal.
Rewards/deprivation: reward use does not justify restricting normal nutrition or water.
Aversive stimuli: assess necessity and alternatives to unpleasant stimulation.

3. Reinforcement is not punishment

Positive reinforcement adds a consequence to increase behaviour; negative reinforcement removes an aversive event to increase behaviour. Punishment reduces behaviour. A food reward may support cooperation but does not, by itself, resolve all welfare concerns.

4. Balancing numbers and alternatives

An extremely small sample can fail to answer the question, wasting welfare cost; unnecessary large samples also needlessly use animals. Human participants cannot directly reveal whether monkeys show a pattern without human toy teaching. Veterinary feasibility in elephants requires relevant animal evidence, while alternatives should still be considered.

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Lesson 1.5.5 | Evaluation and connections

1. Hassett: care and remaining concerns

Monkeys remained in their established social group with indoor/outdoor housing, continuously available water and normal food. An approved enrichment/management protocol and animal-care guidance were reported. Toy approach was not forced.

Group access and rank could affect interaction. A plush toy tore, and the trial ended early; loose material was a possible hazard, not a documented injury. Temporary indoor holding and safe toy selection still required monitoring. Selective participation and uncertain human transfer limit scientific justification.

2. Fagen: potential benefit and restrictions

Reward-based sessions trained four juveniles for a veterinary sampling sequence without adding aversive training. Some disengagement was possible by turning/moving away. Normal food was not withheld to make rewards work; no extra study-imposed deprivation was reported.

Existing chains limited choice. Normal management restricted water mainly to grazing, with water also offered in training. The study did not create these conditions, but existing housing and care remain relevant to welfare judgement. No comparison directly established improved welfare over another method.

3. Balanced arguments

For carefully justified use: relevant comparative knowledge or direct animal-care benefits can support limited, well-designed research.
Concern: inability to consent and risks of suffering may make some procedures unacceptable, even with potential benefits.
A judgement must weigh the particular species, alternatives, numbers, procedures, evidence quality and expected benefit.

4. Human safeguards do not transfer unchanged

Animals cannot sign informed consent or receive a verbal debriefing. Welfare monitoring and species-appropriate care must address their actual needs. Avoidance opportunities matter but should not be overstated when movement is restricted.

> Hint: Name the guideline → use a reported animal-care or research detail → explain its welfare or scientific consequence. Distinguish a potential hazard from a reported harm.

Connect arguments to exact study evidence rather than treating all animal research as one identical procedure. Ethical evaluation depends on both the animal experience and the quality of knowledge gained.