

22.1 Attention limits and non-associative learning: evidence and transfer

Name: _____ Class: _____ Date: _____

Total: 8 marks

KEY WORDS habituation • divided attention

Objective

Explain divided-attention costs with capacity and multimode accounts; Distinguish habituation and dishabituation from conditioning; Predict attention failures from task demands and load. Original practice and authored marking guidance.

1 Key knowledge and worked examples

habituation : Non-associative decline in response to a repeated stimulus, reversed by stimulus change. **divided attention** : Sharing limited central capacity across concurrent tasks, with costs set by load.

Attention models specify where and under what demands selection occurs. Perceptual load and working-memory control demands can make different predictions; a blanket claim that distraction always rises with load is inadequate. Habituation is a declining response after repeated exposure; renewed response to a change supports discrimination. Distinguish it from receptor adaptation, fatigue and conditioning extinction through the stimulus history and a suitable comparison.

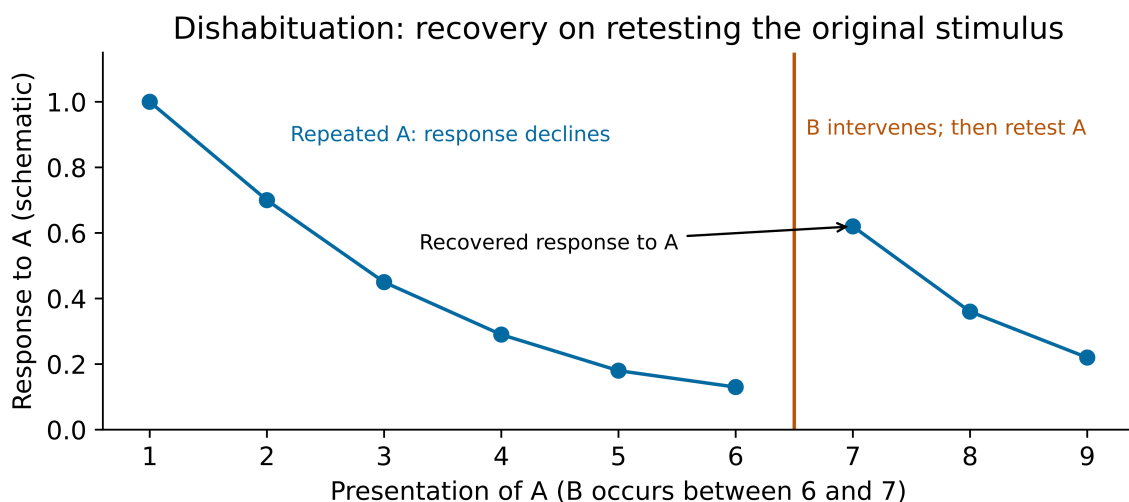


Illustration only; matched controls help rule out recovery due to rest.

Worked case. Looking time falls across repeated displays and rises after the colour changes. What is supported, and what is not established?

The recovery is consistent with discrimination of the change after habituation. It does not show adult-like colour concepts or prove exactly how the display is represented. Control simple salience differences and compare suitable novel and familiar displays.

2 Practice

2.1 Hands-free phone conversation still impairs driving because:

[1]

A. the hands remain occupied B. central processing capacity is shared C. peripheral vision narrows physically D. habituation blocks the phone signal E. procedural memory takes over

2.2 A baby stops looking at a repeated picture, then looks again when the picture changes. The recovery of looking is:

[1]

A. extinction B. generalisation C. dishabituation D. spontaneous recovery E. imprinting

2.3 Revisit the worked case. State one conclusion its evidence supports and one stronger conclusion it does not support. Explain the difference.

[2]

3 Exam-style questions

3.1 A response falls with repeated sound presentations. Propose a check against fatigue and explain why extinction is not established. Give the interpretation, supporting reasoning, a relevant alternative or limitation, and an appropriate check. [4]

Solutions

2.1 Answer: B. The bottleneck is central capacity, not the hands; multimode theory predicts the cost from combined demands. The other options do not satisfy the stated defining conditions.

2.2 Answer: C. Response decline to repetition is habituation; recovery to a changed stimulus is dishabituation – no conditioning is involved. Compare the exact process, design or evidence, rather than an associated keyword.

2.3 Use the worked case evidence to support a bounded claim and explain why a causal, universal or stronger claim needs additional evidence. The claim must fit the specific design and observed process.

3.1 Test an appropriate changed stimulus and recovery after a rest, with suitable controls. Recovery can make general response fatigue less plausible, although it does not alone settle every mechanism. Extinction requires a previously learned cue/consequence relation that is no longer maintained; repetition alone supplies no such history. Award B1 each (authored) for the interpretation, its reasoning, a relevant limitation/alternative and an appropriate check, up to four points. Accept a different justified answer satisfying these demands.