

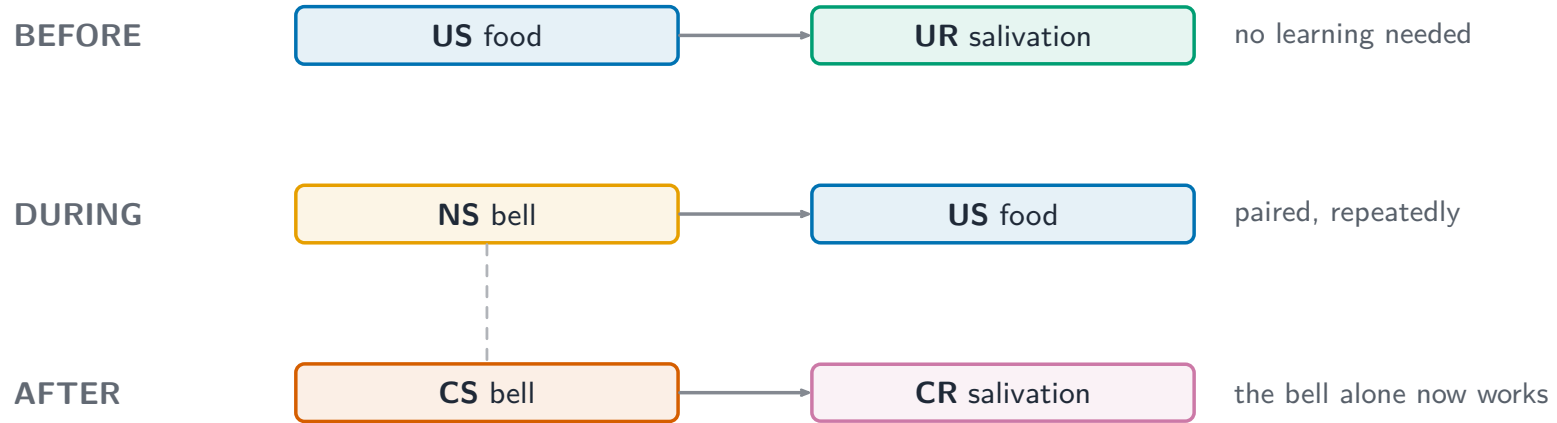
Exercise walk-through

3.7

Classical Conditioning

AP Psychology

Map unlearned and learned stimulus–response relations



The cue changes from neutral to conditioned through learning. UR and CR are defined by what elicits them, not guaranteed identical strength or timing.

The behavioral perspective and acquisition

Association between stimuli

Traditional behaviorism focused on observable behaviour and conditioning. In classical conditioning, a neutral cue is paired with an unconditioned stimulus and comes to elicit a conditioned response.

Order and timing matter for acquisition. This is distinct from learning that a chosen action produces a consequence.

Your turn: map a complete conditioning sequence

Original practice — attempt before the check

A harmless tone repeatedly precedes an air puff that naturally causes blinking. Later the tone alone causes blinking. Identify the UCS, UCR, CS and CR. State the tone's role before learning. This is a hypothetical example, not an experiment to carry out on classmates.

Check: label each stimulus and its elicited response

- 1 Air puff: unconditioned stimulus (UCS); blinking to the air: unconditioned response (UCR).
- 2 Before learning, the tone is neutral with respect to this blinking response.
- 3 After learning, tone: conditioned stimulus (CS); blinking to tone: conditioned response (CR).

The same cue changes its label with learning. Similar responses need not be identical in magnitude or timing.

Extinction differs from spontaneous recovery

Extinction

Present the CS without the UCS repeatedly; conditioned responding decreases.

Spontaneous recovery

After a rest interval, the CS again elicits a reduced or previously extinguished response, without renewed UCS pairing.

Extinction does not necessarily erase the original learning. A new UCS pairing is not required for spontaneous recovery.

Exercises 2.1-2.2

2.1 In a study where a tone precedes a puff of air to the eye, identify the CS and the CR. [2]

2.2 Explain what spontaneous recovery shows about extinction. [2]

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2.1

- CS: the tone; CR: blinking to the tone alone

2.2 Explain what spontaneous recovery shows about extinction. [2]

2.2

- the response returns after a rest without further pairing, so extinction suppresses the response rather than erasing the learning

Exercise 2.3 (a)

2.3 A child bitten by a large dog becomes afraid of all dogs.

(a) Name the process.

[1]

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(a)

- generalisation

Exercise 2.3 (b)

2.3 A child bitten by a large dog becomes afraid of all dogs.

(b) State the process by which the fear could be narrowed to that one dog. [1]

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2.3 A child bitten by a large dog becomes afraid of all dogs.

(b) State the process by which the fear could be narrowed to that one dog. [1]

(b)

- discrimination

Exercises 3.1-3.2

3.1 Presenting the CS repeatedly without the US produces

[1]

☐

A acquisition

B extinction

C generalisation

D spontaneous recovery

3.2 In the tone-and-air-puff example, the air puff is the

[1]

☐

A conditioned stimulus

B unconditioned stimulus

C conditioned response

D neutral stimulus

Exercises 3.1-3.2

3.1 Presenting the CS repeatedly without the US produces

[1]

☐

A acquisition

B extinction

C generalisation

D spontaneous recovery

3.1 B

- unreinforced presentation of the CS produces extinction

3.2 In the tone-and-air-puff example, the air puff is the

[1]

☐

A conditioned stimulus

B unconditioned stimulus

C conditioned response

D neutral stimulus

3.2 B

- the air puff produces blinking naturally

Exercise 3.3 (a)

3.3 A therapist treats a phobia by repeated safe exposure to the feared object.

(a) Name the learning process being used.

[1]

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[1]

(a)

- extinction

Exercise 3.3 (b)

3.3 A therapist treats a phobia by repeated safe exposure to the feared object.

(b) Explain why the fear may briefly return later.

[2]

Exercise 3.3 (b)

3.3 A therapist treats a phobia by repeated safe exposure to the feared object.

(b) Explain why the fear may briefly return later.

[2]

(b)

- extinction suppresses rather than erases the association, so spontaneous recovery can return the response after time