

Week 6

AP Psychology

Homework bundle for this week

本周作业合集

exercises.lol

Contents 目录

Topic 2 quiz	3
Exercise sheet 2.1	6
Past-paper questions 2.1	10
Exercise sheet 2.2	11
Exercise sheet 2.3	15
Exercise sheet 2.4	19
Exercise sheet 2.5	23
Past-paper questions 2.5	27
Exercise sheet 2.6	29
Past-paper questions 2.6	33
Exercise sheet 2.7	46
Past-paper questions 2.7	50

Exercise sheet 2.8.....	60
Past-paper questions 2.8	64

AP Psychology

Name: _____ Score: _____

1. Reading messy handwriting easily because you know the words relies mainly on...

- ☐ bottom-up processing
- ☐ top-down processing
- ☐ sensory adaptation
- ☐ transduction

2. An algorithm differs from a heuristic in that it...

- ☐ is always faster
- ☐ guarantees a correct answer but is slower
- ☐ never applies to real problems
- ☐ is used only by computers

3. Long-term potentiation refers to...

- ☐ forgetting over long periods
- ☐ synaptic connections strengthening with repeated firing
- ☐ the capacity of short-term memory
- ☐ a model of memory stores

4. Spreading the same study time over several sessions is the _____ effect.

5. Which rehearsal reliably moves material into long-term memory?

- ☐ maintenance rehearsal
- ☐ elaborative rehearsal
- ☐ neither
- ☐ both equally

6. A multiple-choice question tests mainly...

- ☐ recall
- ☐ recognition
- ☐ encoding
- ☐ storage

7. The worldwide rise in IQ scores over time is called the _____ Effect.

8. Select **all** Gestalt principles the CED names.

- ☐ closure
- ☐ figure and ground
- ☐ proximity
- ☐ convergence

Tick every correct option.

9. Continuing a failing course of action because of resources already spent is the _____-cost fallacy.

10. Select **all** that are explicit memories.

- ☐ your first day at school
- ☐ the capital of France
- ☐ a historical date
- ☐ riding a bicycle

Tick every correct option.

AP Psychology

1. **top-down processing**

Prior knowledge filling in unclear input is **top-down** processing.

2. **guarantees a correct answer but is slower**

The trade is certainty against speed: algorithms guarantee, heuristics hurry.

3. **synaptic connections strengthening with repeated firing**

LTP is the biological account of why repeated practice makes a memory stick.

4. **spacing**

The total time is held constant; only the **distribution** changes.

5. **elaborative rehearsal**

Elaborative rehearsal connects new material to what you know; repetition alone only holds.

6. **recognition**

The options act as **cues**, which makes it a recognition task.

7. **Flynn**

The **Flynn Effect** is attributed to societal factors, not to changing biology.

8. **closure; figure and ground; proximity**

Convergence is a **binocular depth cue**, not a Gestalt grouping principle.

9. **sunk**

Only the **remaining** costs and benefits should decide; spent resources are gone either way.

10. **your first day at school; the capital of France; a historical date**

Riding a bicycle is **procedural**, and procedural memories are implicit.

2.1 Perception

Name: _____ Class: _____ Date: _____

Total: 11 marks

KEY WORDS context 情境 • attention 注意 • bottom-up 自下而上 • perception 知觉 • top-down 自上而下

Objective

Build the skills to answer exam questions on **perception** 知觉 and how it differs from sensation.

You must be able to:

- distinguish **bottom-up** 自下而上 from **top-down** 自上而下 processing
- explain how **attention** 注意 selects among available inputs
- describe how **Gestalt** 格式塔 principles organise a scene
- state what a **perceptual constancy** 知觉恒常性 and a **depth cue** 深度线索 do

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Two directions of processing

Bottom-up processing builds a percept from the incoming sensory data. **Top-down** processing uses expectation, context and prior knowledge to interpret it. Ordinary perception uses both at once.

■ Attention selects

We cannot process everything reaching the senses. Selective attention makes some inputs available for full processing; **inattention blindness** shows that an unattended event can go entirely unnoticed even when it is in plain view.

■ Gestalt organisation

The visual system groups elements automatically: **figure and ground**, **proximity**, **similarity**, **closure**. The organisation is imposed by the perceiver, not read off the image.

■ Constancy and depth

Perceptual constancy keeps an object's size, shape or colour stable despite changes in the retinal image. **Binocular** cues (retinal disparity) and **monocular** cues (relative size, interposition, linear perspective) recover depth from a flat image.

2 Practice

2.1 State the difference between bottom-up and top-down processing. [2]

2.2 Explain what inattentional blindness demonstrates about perception. [2]

2.3 A door appears rectangular even when seen at an angle.

(a) Name the phenomenon. [1]

(b) State what the retinal image actually shows. [1]

3 Exam-style questions

3.1 Reading a smudged word correctly because of the sentence around it is mainly [1]

- **A** bottom-up processing
- **B** top-down processing
- **C** sensory adaptation
- **D** transduction

3.2 Judging that a car is far away because it looks small relies on a [1]

- **A** binocular cue
- **B** monocular cue
- **C** Gestalt closure principle
- **D** perceptual constancy

3.3 Viewers counting passes in a video fail to notice an obvious unexpected event.

(a) Name the effect. [1]

(b) Explain what it shows about the role of attention.

[2]

Solutions

2.1 bottom-up builds a percept from incoming sensory data; top-down interprets it using expectation, context and prior knowledge.

2.2 attention is required for conscious perception; an unattended event can be fully visible and still go unnoticed.

2.3 (a) shape constancy. (b) a trapezoid, not a rectangle.

3.1 B. context and expectation supply the interpretation the data alone does not.

3.2 B. relative size is available to one eye, so it is a monocular cue.

3.3 (a) inattentional blindness. (b) perception is selective, not a complete recording, so what is unattended may never reach awareness at all.

PSYCHOLOGY**SECTION II****Time—50 minutes****2 Questions**

Directions: You have 50 minutes to answer BOTH of the following questions. It is not enough to answer a question by merely listing facts. You should present a cogent argument based on your critical analysis of the questions posed, using appropriate psychological terminology. You may plan your answers in this orange booklet, but no credit will be given for anything written in this booklet. **You will only earn credit for what you write in the separate Free Response booklet.**

1. Claire's sports team made it to the championship basketball game. To play the game, the teammates will need to work together to move a ball toward their own goal. They must then aim carefully to throw the ball into a hoop that is elevated about 10 feet off the ground. The winner is the team that gets the ball into the hoop the most times.

Part A

Explain how each of the following might help Claire be successful during the game.

- Retinal disparity
- Intrinsic motivation
- Social facilitation
- Kinesthetic sense

Part B

Claire's team won the championship game. Ten years later, the team got together for a reunion at the gym where the game was originally held. At the reunion, they discussed the championship game.

Explain how each of the following might influence Claire's recollection of the game.

- Context-dependent memory
- Self-serving bias
- Retroactive interference

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

2.2 Thinking, Problem-Solving, Judgments, and Decision-Making

Name: _____ Class: _____ Date: _____

Total: 11 marks

KEY WORDS heuristic 启发法 • algorithm 算法 • confirmation bias 确认偏差 • functional fixedness 功能固着
• availability 可得性

Objective

Build the skills to answer exam questions on **problem-solving** 问题解决 and **judgment** 判断.

You must be able to:

- contrast an **algorithm** 算法 with a **heuristic** 启发法
- explain the **availability** 可得性 and **representativeness** 代表性 heuristics
- describe **confirmation bias** 确认偏差 and **framing** 框架效应
- state what **functional fixedness** 功能固着 and a **mental set** 心向 block

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Algorithm against heuristic

An **algorithm** is a step-by-step procedure guaranteed to find the answer if one exists, but often slow. A **heuristic** is a shortcut that is fast and usually right, at the cost of predictable errors.

■ Two heuristics

Availability: judging how likely something is by how easily an example comes to mind — so vivid, recent or reported events are overestimated. **Representativeness:** judging by resemblance to a typical case, which ignores how common the category actually is.

■ Two biases

Confirmation bias is searching for and weighting evidence that supports what you already believe. **Framing** is the finding that the same information described differently — “90% survive” against “10% die” — produces different decisions.

■ Two blocks

Functional fixedness is being unable to see an object used in a new way. A **mental set** is persisting with a strategy that worked before but does not fit the present problem.

2 Practice

2.1 State one advantage of an algorithm and one of a heuristic. [2]

2.2 Explain the availability heuristic and give one consequence. [2]

2.3 A patient is told a treatment has “a 90% survival rate” rather than “a 10% death rate.”

(a) Name the effect being used. [1]

(b) State what it shows about how decisions are made. [1]

3 Exam-style questions

3.1 Overestimating the risk of plane crashes after seeing news coverage illustrates [1]

- **A** the representativeness heuristic
 - **B** the availability heuristic
 - **C** functional fixedness
 - **D** a mental set
-

3.2 Failing to use a coin as a screwdriver is an example of [1]

- **A** confirmation bias
 - **B** framing
 - **C** functional fixedness
-

- Design an algorithm
-

3.3 A researcher only cites studies agreeing with her hypothesis.

(a) Name the bias. [1]

(b) Explain why it is hard to detect in oneself. [2]

Solutions

2.1 algorithm: guaranteed to find the answer if one exists; heuristic: fast and usually good enough.

2.2 judging likelihood by how easily an example comes to mind; so vivid or heavily reported events are systematically overestimated.

2.3 (a) framing. (b) decisions depend on how information is described, not only on the information itself.

3.1 B. coverage makes examples easy to recall, inflating the estimate.

3.2 C. the coin's usual function blocks the new use.

3.3 (a) confirmation bias. (b) the search feels like ordinary evidence-gathering, and disconfirming material is never encountered, so nothing signals that anything was missed.

2.3 Introduction to Memory

Name: _____ Class: _____ Date: _____

Total: 12 marks

KEY WORDS working memory 工作记忆 • explicit 外显 • short-term 短时 • short-term memory 短时记忆
• implicit 内隐

Objective

Build the skills to answer exam questions on the **three-stage model** 三阶段模型 of memory.

You must be able to:

- name the three stages and state what each does
- distinguish **sensory** 感觉, **short-term** 短时 and **long-term** 长时 memory by capacity and duration
- explain what **working memory** 工作记忆 adds to the model
- distinguish **explicit** 外显 from **implicit** 内隐 memory

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Three processes

Encoding gets information in, **storage** holds it, **retrieval** gets it back out. A failure at any one of the three looks like forgetting, and telling them apart is most of the work.

■ Three stores

Sensory memory holds a large amount for under a second. **Short-term memory** holds about seven items for about twenty seconds without rehearsal. **Long-term memory** has no known practical limit and can last a lifetime.

■ Working memory

Working memory is short-term memory treated as an active workspace: it holds information **and manipulates it**, with separate handling of verbal and visual material under a central control.

■ Explicit and implicit

Explicit memory is consciously recalled — facts and events. **Implicit** memory shows up in performance without conscious recall — skills, conditioned responses.

2 Practice

2.1 Name the three memory processes and state what each does. [3]

2.2 State the approximate capacity and duration of short-term memory. [2]

2.3 A person rides a bicycle after ten years without being able to describe how.

(a) Name the type of memory involved. [1]

(b) State how it differs from explicit memory. [1]

3 Exam-style questions

3.1 Working memory differs from short-term memory mainly because it [1]

- **A** lasts longer
- **B** manipulates information as well as holding it
- **C** has unlimited capacity
- **D** is unconscious

3.2 Sensory memory is best described as [1]

- **A** small capacity, long duration
- **B** large capacity, very brief duration
- **C** unlimited capacity, unlimited duration
- **D** conscious and effortful

3.3 A student can recognise a correct answer but cannot produce it unaided.

(a) State which process has failed. [1]

(b) Explain how the test format changes the difficulty.

[2]

Solutions

2.1 encoding — getting information in; storage — holding it; retrieval — getting it back out.

2.2 about seven items; about twenty seconds without rehearsal.

2.3 (a) implicit (procedural) memory. (b) it appears in performance without conscious recall, whereas explicit memory is consciously retrieved.

3.1 B. working memory is an active workspace, not only a store.

3.2 B. sensory memory holds a great deal for under a second.

3.3 (a) retrieval. (b) recognition supplies the cue directly, while recall requires generating it, which needs a stronger retrieval path.

2.4 Encoding Memories

Name: _____ Class: _____ Date: _____

Total: 11 marks**KEY WORDS** encoding 编码 • automatic 自动 • chunking 组块 • effortful 有意 • spacing effect 间隔效应

Objective

Build the skills to answer exam questions on **encoding** 编码 and what makes it effective.

You must be able to:

- distinguish **effortful** 有意 from **automatic** 自动 encoding
- explain **levels of processing** 加工水平 and why deeper is better
- describe **chunking** 组块 and **mnemonics** 记忆术
- explain the **spacing effect** 间隔效应 and the **testing effect** 测试效应

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Effortful and automatic

Some information is encoded without intention — space, time, frequency. Most academic material requires **effortful** encoding: deliberate attention and rehearsal.

■ Levels of processing

Processing by **meaning** (semantic) produces better retention than processing by sound or appearance. Asking “does this fit what I know?” encodes more deeply than asking “how is it spelled?”.

■ Chunking and mnemonics

Chunking groups items into larger meaningful units, so a seven-item limit holds far more than seven letters. **Mnemonics** impose an existing structure — a rhyme, a route, an acronym — on unstructured material.

■ Spacing and testing

Study **distributed** over days beats the same total time massed into one session. And **retrieving** material — self-testing — strengthens memory more than re-reading it.

2 Practice

2.1 State the difference between effortful and automatic encoding. [2]

2.2 Explain why semantic processing produces better retention than rehearsing sounds. [2]

2.3 A student rewrites her notes as a set of questions and answers them from memory.

(a) Name the effect she is using. [1]

(b) State why it beats re-reading. [1]

3 Exam-style questions

3.1 Remembering a phone number as three groups rather than ten digits uses [1]

- **A** chunking
- **B** the spacing effect
- **C** automatic encoding
- **D** sensory memory

3.2 Two students study for six hours. One does six one-hour sessions across a week; the other does one six-hour session. The first is likely to remember more because of [1]

- **A** the testing effect
- **B** the spacing effect
- **C** chunking
- **D** shallow processing

3.3 A student highlights a textbook and feels confident about the material.

(a) State one reason this confidence may be misleading. [1]

(b) State one better strategy and justify it.

[2]

Solutions

2.1 effortful encoding requires deliberate attention and rehearsal; automatic encoding happens without intention, e.g. for space, time or frequency.

2.2 semantic processing connects material to existing knowledge, creating more retrieval routes than a surface feature such as sound.

2.3 (a) the testing effect. (b) retrieval practice strengthens the memory itself, whereas re-reading mainly increases familiarity.

3.1 A. grouping creates larger meaningful units within the capacity limit.

3.2 B. distributed study outperforms the same total time massed.

3.3 (a) familiarity from re-reading feels like knowing, but is not the same as being able to retrieve. (b) self-testing or spaced retrieval, because retrieval strengthens the memory and reveals what is actually missing.

2.5 Storing Memories

Name: _____ Class: _____ Date: _____

Total: 11 marks

KEY WORDS episodic 情景 • semantic 语义 • consolidation 巩固 • long-term potentiation 长时程增强
• cerebellum 小脑

Objective

Build the skills to answer exam questions on how memories are **stored** 储存.

You must be able to:

- distinguish **episodic** 情景 from **semantic** 语义 memory
- describe the role of the **hippocampus** 海马 and of the **cerebellum** 小脑
- explain **long-term potentiation** 长时程增强 in outline
- state what **consolidation** 巩固 is and when it happens

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Episodic and semantic

Episodic memory stores personally experienced events, with a time and place. **Semantic** memory stores facts and general knowledge, usually without any memory of learning them.

■ Where storage depends

The **hippocampus** is essential for forming new explicit memories; damage prevents new learning while leaving old memories and skills intact. Skill memory depends more on the **cerebellum** and basal ganglia.

■ Long-term potentiation

Repeated stimulation of a neural connection makes it fire more readily afterwards. This strengthening of specific synapses is the leading physical account of how a memory is stored.

■ Consolidation

A new memory is initially fragile and becomes stable over hours and days, a process supported by sleep. Interference or injury during this window disrupts the memory more than it would later.

2 Practice

2.1 State the difference between episodic and semantic memory, with an example of each. [2]

2.2 Explain what long-term potentiation describes. [2]

2.3 A patient with hippocampal damage learns a new motor skill but cannot remember practising it.

(a) State which structure supports the skill learning. [1]

(b) State what this dissociation shows. [1]

3 Exam-style questions

3.1 Knowing that Paris is the capital of France without recalling learning it is [1]

- A episodic memory
- B semantic memory
- C implicit memory
- D sensory memory

3.2 A head injury erases memories of the hour before it but not of the previous year. This is best explained by [1]

- A retrieval failure
- B disrupted consolidation
- C the spacing effect
- D proactive interference

3.3 Sleep after study improves recall.

- (a) Name the process this supports. [1]
- (b) Explain why the improvement is greater than for equal time awake. [2]

Solutions

2.1 episodic: a personally experienced event with a time and place, e.g. a birthday;
semantic: a general fact, e.g. that water boils at 100 degrees.

2.2 repeated stimulation strengthens a specific synaptic connection; so it fires more readily afterwards, which is the leading physical account of storage.

2.3 (a) the cerebellum (and basal ganglia). (b) explicit and implicit memory depend on different systems, so one can be lost while the other works.

3.1 B. it is a fact without an accompanying memory of the episode.

3.2 B. recent memories were still consolidating and were therefore vulnerable.

3.3 (a) consolidation. (b) sleep supports consolidation directly and also reduces interference from new incoming material.

PSYCHOLOGY**SECTION II****Time—50 minutes****2 Questions**

Directions: You have 50 minutes to answer BOTH of the following questions. It is not enough to answer a question by merely listing facts. You should present a cogent argument based on your critical analysis of the questions posed, using appropriate psychological terminology. You may plan your answers in this orange booklet, but no credit will be given for anything written in this booklet. **You will only earn credit for what you write in the separate Free Response booklet.**

1. Gavin's parents took him to his favorite science museum, and he explored all of the exhibits. One of the interactive exhibits featured glass marbles. He grabbed a large marble and tried to bounce it on the ground. At one point during the visit, he became separated from his parents, and it took a few minutes for them to find him. Later that night, he drew a colorful picture of the exhibits at the museum. The next day, Gavin brought his picture with him to preschool. While his grandmother drove, Gavin talked to her about the picture.

Part A

- Explain how Jean Piaget's concept of assimilation could relate to Gavin's experience with the glass marble.
- Explain how egocentrism could relate to how Gavin interacted with his grandmother in the car.
- Explain how avoidant attachment could relate to Gavin when he was separated from his parents.

Part B

Explain how each of the following terms could relate to Gavin in this scenario.

- Serial position effect
- Motor cortex
- Cognitive map
- Cones in the retina

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

PSYCHOLOGY**SECTION II****Time—50 minutes****2 Questions**

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1. Part A

Steve is in the kitchen happily making breakfast for his four children, who are all playing together in the living room. After hearing a loud crash, Steve becomes quite upset and rushes into the living room, where he sees a lamp shattered on the floor. The children are watching television, and no one is trying to clean up the lamp.

Explain how each of the following relates to the scenario.

- Soundwave amplitude
- Procedural memory
- Diffusion of responsibility
- Dispositional attribution
- Ghrelin

Part B

Instead of asking the children what happened, Steve immediately turns off the television and sends them all outside to rake the large amount of leaves in the backyard. Steve stays irritable for the rest of the day.

Explain how each of the following relates to the scenario.

- Authoritarian parenting style
- Steve's high level of the Big Five trait of neuroticism

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

2.6 Retrieving Memories

Name: _____ Class: _____ Date: _____

Total: 11 marks

KEY WORDS context-dependent 情境依赖 • context-dependent memory 情境依存记忆 • recall 回忆
• recognition 再认 • retrieval 提取

Objective

Build the skills to answer exam questions on **retrieval** 提取 and what makes it succeed.

You must be able to:

- distinguish **recall** 回忆 from **recognition** 再认
- explain how **retrieval cues** 提取线索 work
- describe **context-dependent** 情境依赖 and **state-dependent** 状态依赖 memory
- explain the **serial position effect** 系列位置效应

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Recall and recognition

Recall requires producing the information unaided; **recognition** requires only identifying it among options. Recognition is easier because the cue is supplied.

■ Retrieval cues

A memory is reached through associations. Any feature encoded with it — a word, a smell, a place — can serve as a route back. More and better cues at encoding means more routes at retrieval.

■ Context and state

Recall is better when the **external context** at retrieval matches encoding (same room, same setting), and when the **internal state** matches (mood, arousal). Both are cue effects.

■ Serial position

In a list, the **first** items are recalled well (rehearsed into long-term memory) and the **last** items are recalled well (still in short-term memory). The middle suffers most.

2 Practice

2.1 State the difference between recall and recognition and say which is easier. [2]

2.2 Explain how a retrieval cue helps. [2]

2.3 A student revises in the room where the exam will be held.

(a) Name the effect being exploited. [1]

(b) State one limitation of relying on it. [1]

3 Exam-style questions

3.1 In a 20-item list, items 9 to 12 are usually recalled [1]

- **A** best of all
- **B** worst of all
- **C** the same as the first items
- **D** the same as the last items

3.2 Remembering an event more easily when in the same mood as when it happened is [1]

- **A** context-dependent memory
- **B** state-dependent memory
- **C** the serial position effect
- **D** recognition

3.3 A multiple-choice test yields higher scores than a short-answer test on the same material.

(a) State the reason in terms of retrieval. [1]

(b) Explain why a high multiple-choice score may overstate what the student can use.[2]

Solutions

2.1 recall requires producing the information unaided; recognition requires identifying it among options; recognition is easier.

2.2 a cue is a feature associated with the memory at encoding, providing a route back to it.

2.3 (a) context-dependent memory. (b) the effect is modest, and material encoded with meaning transfers across contexts anyway.

3.1 B. middle items are neither rehearsed into long-term memory nor still in short-term memory.

3.2 B. the internal state acts as a retrieval cue.

3.3 (a) recognition supplies the retrieval cue directly. (b) real use usually requires recall, so a score that depends on supplied cues may not predict unaided performance.

Using the source provided, respond to all parts of the question.

1. Your response to the question should be provided in six parts: A, B, C, D, E, and F. Write the response to each part of the question in complete sentences. Use appropriate psychological terminology in your response.
- A. Identify the research method used in the study.
 - B. State the operational definition of high misinformation in the study.
 - C. Describe what the mean indicates for the percentage of correct responses between the high misinformation group and the low misinformation group.
 - D. Identify at least one ethical guideline applied by the researchers.
 - E. Explain the extent to which the research findings may or may not be generalizable using specific and relevant evidence from the study.
 - F. Explain how at least one of the research findings supports or refutes the misinformation effect.

Introduction

This research study explores the effect of being presented with varying amounts of misinformation about a specific event on the memory of that event.

Participants

A total of 127 students at a large university were recruited through the university's research participation system. They participated in the study in exchange for course credit. The final sample of participants was 69% women and 31% men. The race/ethnicity of the participants was reported as follows: 65% Hispanic/Latino/a, 15% Black/African American, 11% White/European American, 4% Asian/Asian American, and 5% Other.¹ The participants ranged in age from 18 to 39 years old (mean age = 21.21, standard deviation = 3.28).

Method

After providing consent, participants viewed a 6.5-minute silent video of a mock crime. The video depicted an electrician entering a house to fix items such as an oven and a light fixture. While he was in the house, he stole some of the owners' possessions. After watching the video, participants completed a 12-minute trivia questionnaire as a distractor task.² Participants completed all portions of the study online.

Participants were then told that eight previous participants had written brief summaries of the robbery shown in the video. They were also told that one of those summaries would be presented to them, along with a profile of the previous participant, to refresh their memory. Unknown to the participants, these "previous participants" were not real people. The researchers created the previous participants' profiles based on the demographics of the population of students on the university campus. The goal was to create believable profiles so that the summaries would be more credible to the participants.

Participants were randomly assigned to one of three conditions to receive a summary with a specific amount of misinformation:

- Low misinformation condition: 8 of 40 sentences (20% misleading information)
- Medium misinformation condition: 20 of 40 sentences (50% misleading information)
- High misinformation condition: 32 of 40 sentences (80% misleading information)

The misleading information changed details about items seen in the video. No information was added. The non-misleading sentences were neutral to avoid strengthening the participant's memory of the target items. For example, a misleading item description was, "He noticed the dresser was covered with a brown cloth." In reality, the cloth was navy blue. The neutral description of that item was, "He noticed the dresser was covered with a cloth."

After reading an entire previous participant's summary, each current participant completed a 5-minute math test as a distractor task. Then, all participants were asked an identical set of 40 multiple-choice questions in random order about the mock crime video. Each question had three answer options:

1. Correct: the correct option corresponding to what was shown in the video (e.g., a navy blue cloth);
2. Misled: an incorrect answer that reflected misinformation provided in the summaries (e.g., a brown cloth); and
3. Incorrect: an incorrect answer containing information that was not portrayed in the video or any summary (e.g., a yellow cloth).

Participants then completed a questionnaire asking about the credibility of the previous participant's summary (e.g., "How good was the quality of the summary?" and "How familiar with the video was the participant who wrote this summary?").

Results and Discussion

The researchers analyzed the results of the questionnaire by comparing participants' correct responses with how participants viewed the credibility of the previous participant's summary. The researchers hypothesized that if participants distrusted the summary, they would be less likely to incorporate the information into their memory of the event, leading to their being less likely to choose an incorrect answer. The results are shown in the table.

Mean Percentages of Correct, Misled, and Incorrect Responses for Each Misinformation Condition

Response Type	Misinformation Condition		
	High Misinformation Group	Medium Misinformation Group	Low misinformation Group
Correct	63%	66%	74%
Misled	30%	27%	19%
Incorrect	7%	7%	7%

The researchers found that within each condition, participants performed best if they distrusted the accuracy of the summary. Participants who were presented with higher levels of misinformation were more likely to report being distrustful, and those who reported being distrustful of the summary resisted more misinformation than those who did not.

Pena, M. M., Klemfuss, J. Z., Loftus, E. F., & Mindthoff, A. (2017). The effects of exposure to different amounts of misinformation and source credibility perception on source monitoring and memory accuracy. *Psychology of Consciousness: Theory, Research, and Practice*, 4(4), 337-347.

- 1: Language referencing racial, ethnic, or gender identities may be outdated or fail to reflect the complexities of identity that participants represent. Race/ethnicity categories reflect those reported in the original research article.
- 2: a task that is unrelated to the primary task that participants are asked to complete before they are asked to recall the target information.

This question has three parts: Part A, Part B, and Part C. Use the three sources provided to answer all parts of the question.

For Part B and Part C, you must cite the source that you used to answer the question. You can do this in two different ways:

- Parenthetical Citation:
For example: "...(Source 1)."
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Write the response to each part of the question in complete sentences. Use appropriate psychological terminology.

2. Using the sources provided, develop and justify an argument about whether the presence of others improves performance.
- A. Propose a specific and defensible claim based in psychological science that responds to the question.
- B.
- i. Support your claim using at least one piece of specific and relevant evidence from one of the sources.
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- i. Support your claim using an additional piece of specific and relevant evidence from a different source than the one that was used in Part B (i).
 - ii. Explain how the evidence from Part C (i) supports your claim using a different psychological perspective, theory, concept, or research finding learned in AP Psychology than the one that was used in Part B (ii).

Source 1

Introduction

In this study, researchers attempted to establish whether the presence of others leads people to perform better on a task than when they are doing the task alone.

Participants

Forty-five undergraduate students, all men, received course credit in an introductory psychology course for their participation. Researchers did not report race/ethnicity data for the participants.

Method

As each participant arrived, he was told the following: “In this experiment, you will be part of a group that will perform a task together. It is important that the members of the group have a uniform appearance. To make you as alike as possible, I’d like you to take off your shoes, put these socks over your own socks, and then put on these shoes. They might be a little large, but we need to have a size that fits everyone. Also, put on this lab coat—it ties in the back—over your own clothes.”

Each participant was then given a pair of large athletic socks, a pair of size 12 athletic shoes, and a large, long lab coat. Each participant was led by the researcher to a large waiting room containing tables, chairs, reading material, and some broken equipment.

Each participant was randomly assigned to one of three conditions: alone, audience, or incidental audience.

1. **Alone condition:** The participant was left in the waiting room alone to put on the clothing.
2. **Audience condition:** A confederate of the researcher was already seated in the waiting room as the participant arrived. The confederate sat attentively in the corner and watched the participant put on the clothing.
3. **Incidental audience condition:** A confederate of the researcher sat in a corner of the waiting room facing away from the participant, repairing a broken piece of equipment while the participant put on the clothing.

For all three conditions, the participant was observed by a hidden research assistant who watched him through a narrow opening in the drapes that covered a one-way mirror. The hidden assistant timed the participant as he completed each of the following activities:

1. Taking off his own shoes
2. Putting on the socks given to him
3. Putting on the shoes given to him
4. Putting on the lab coat given to him and tying it in the back

After the participant completed the four tasks, any confederate present left the room, and the participant was left sitting alone. At the end of 10 minutes, the researcher came back into the room. The researcher explained that the other participants had not shown up and that the researcher had called off the experiment because the researchers needed three people to continue.

When the researcher left the room, the participant was again timed by the hidden research assistant while he completed the following actions:

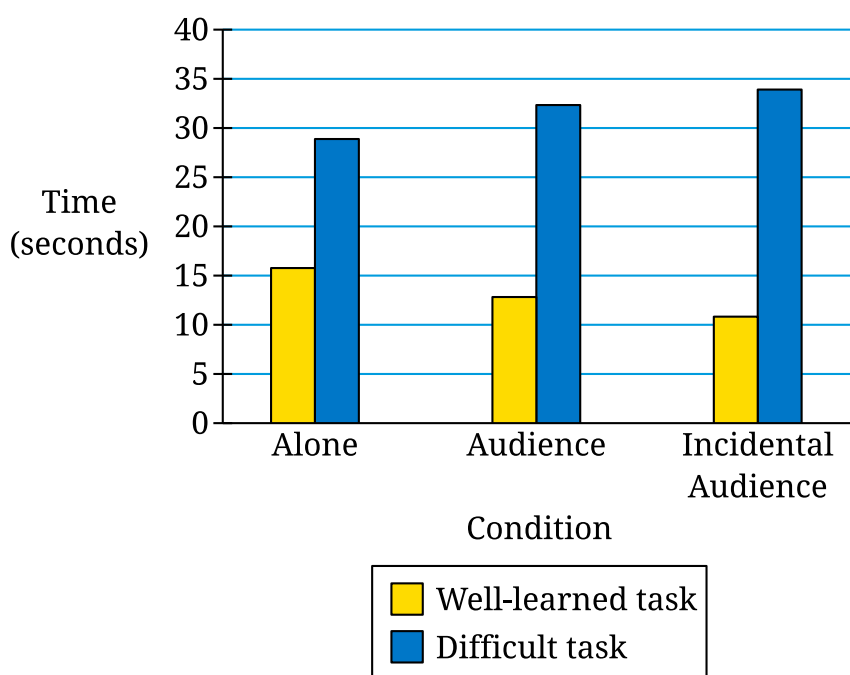
1. Taking off the lab coat
2. Taking off the shoes given to him
3. Taking off the socks given to him
4. Putting on his own shoes

Researchers categorized taking off and putting on their own shoes as simple and well-learned tasks. They categorized putting on and taking off the socks, shoes, and lab coat as difficult and new tasks.

Results and Discussion

Researchers found that performance on the well-learned tasks was faster in the presence of an audience. Performance on well-learned tasks improved both when participants were directly observed (audience condition) and when the confederate was present in the room but distracted (incidental audience condition). When an audience was present, it took the participants longer to complete the new, more difficult tasks. The findings are summarized in the graph.

Audience Condition and Completion Time of Task



For the simple and well-learned tasks, researchers found a statistically significant difference in the amount of time participants took to complete the tasks alone compared with the amount of time it took with an attentive audience.

For the new and difficult tasks, researchers found a statistically significant difference when comparing the amount of time participants took when alone with the amount of time they took when they were in the audience condition or incidental audience condition.

They found no significant difference between the alone condition and the incidental audience condition for either type of task.

Markus, H. (1978). The effect of mere presence on social facilitation: An unobtrusive test. *Journal of Experimental Social Psychology*, 14(4), 389–397.

Source 2

Introduction

In this study, researchers explored how the presence of others influenced the ability of baboons to complete an operant conditioning task.

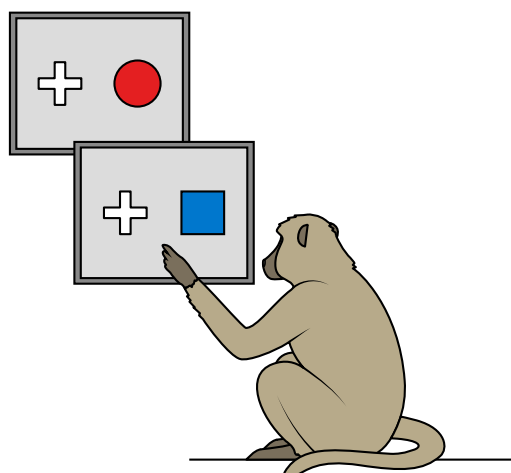
Participants

The study was conducted on 11 baboons (7 male and 4 female; mean age = 5.72 years; standard deviation of age = 1.71; age range = 3–9 years).

Method

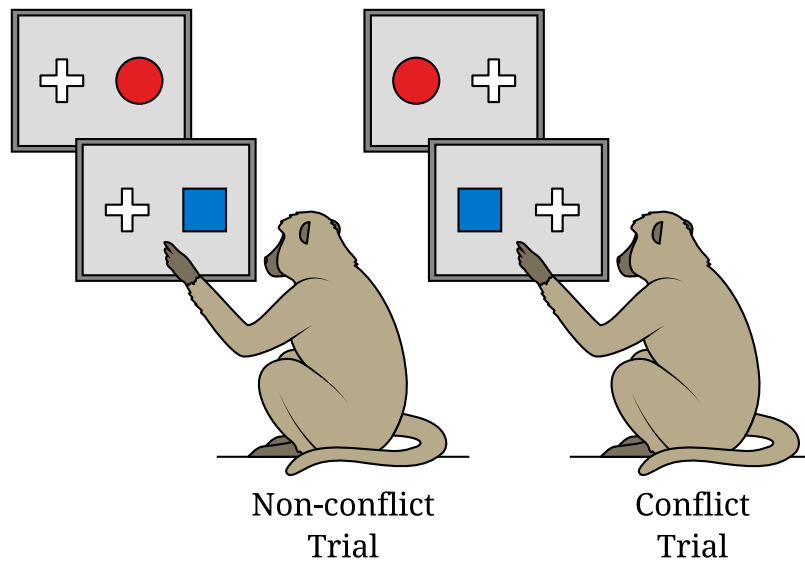
The baboons had access in their enclosure to computers with touch screens, preprogrammed with operant conditioning tasks. When the baboons touched a screen, it triggered the immediate display of a white cross and either a red circle or a blue square. To obtain a food reward, the baboon had to touch the white cross only when the red circle was present. During the non-conflict trials, the white cross was always presented on the left side of the response screen and the red circle or blue square on the right. Incorrect responses produced a three-second time-out.

Figure 1: The Non-Conflict Trial



Baboons performed the task until they correctly demonstrated the rewarded behavior three times in a row.

Once the baboons were trained, researchers increased the difficulty of the task. In 80% of these trials, the baboons were given the setup they were already familiar with, in which the cross was on the left and the circle or square was on the right. But in 20% of the trials, the baboons were presented with an opposite, or a conflicting, setup in which the cross was on the right and the circle or square was on the left. Researchers measured the baboons' response times when presented with the conflicting task versus the nonconflicting task.

Figure 2: The Non-Conflict and the Conflict Trial

During these trials, the baboons were randomly assigned to be either alone or in the presence of other baboons performing the same task. For baboons performing the task in the presence of others, they could see other baboons using a computer, but the design of the test chamber prevented any of the baboons from seeing the touch screens of the other baboons. As a result, the baboons could not see the other baboons' responses to the tests.

Results and Discussion

For the baboons who were in the presence of others during the conflicting trials task, their response time was delayed when compared to baboons who were alone. The researchers found that the delayed reaction time was greatest for male baboons in the presence of older males with a higher social rank.

Huguet, P., Barbet, I., Belletier, C., Monteil, J-M., Fagot, J. (2014). Cognitive control under social influence in baboons. *Journal of Experimental Psychology*, 143(6). 2067-2073.

Source 3

Introduction

Vigilance is the ability to maintain attention for prolonged periods while still being on the lookout for relevant signals in the environment. Vigilance performance involves participants responding to infrequent signals over time. In this study, researchers examined the effect of observers on people's vigilance performance.

Participants

Data were collected from 132 participants (98 women; 34 men).¹ All participants were undergraduate students recruited through the research participation system at a large university in the southeastern United States. All participation was voluntary, and participants received course credit for completing the study. The average age of participants was 18.83 years (standard deviation = 2.23 years; range = 18–39 years). Researchers did not report race/ethnicity data for the participants.

Method

For 24 minutes, participants monitored a computer screen displaying repeated presentations of two numbers. They were instructed to press the space bar when they saw two numbers that differed from one another by zero or ± 1 when subtracted. For example, participants were to hit the space bar when presented with the numbers 43 ($4 - 3 = 1$) or 77 ($7 - 7 = 0$), but not when presented with 73 ($7 - 3 = 4$) or 39 ($3 - 9 = -6$).

Participants were randomly assigned to one of four conditions:

1. Evaluative observer condition (29 women; 4 men): The participant completed the task with a research assistant present and seated behind them. The research assistant was instructed to sporadically take notes on a clipboard to create the appearance of actively evaluating the participant.
2. Merely present observer condition (20 women; 13 men): The participant completed the task in the presence of a research assistant who was seated at an adjacent desk, facing the opposite direction. The observer could not directly watch the participant and was engaged in a secondary task, like reading a book.
3. Electronic observer condition (25 women; 8 men): The participant completed the task in the presence of a webcam that was placed on top of the computer screen. A video recorder was also placed on a tripod in front of the participant. The participant was told that the research assistant used these devices to monitor their performance. These cameras were not actually recording while the participant completed the task, but the participant believed they were.
4. No observer present (control) condition (24 women; 9 men): The participant completed the entire task alone in the room. No social presence, electronic or otherwise, was used during this task.

Results and Discussion

Participants who completed the vigilance task alone detected significantly fewer correct number pairs than those who completed the task in the electronic observer condition or the evaluative observer condition. Interestingly, there was no significant difference in correct detections between those in the no observer present condition and those in the merely present observer condition.

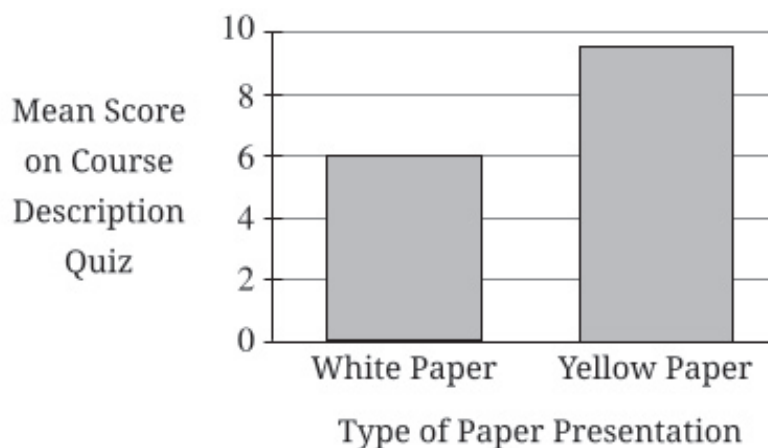
The results suggest that when people feel they are being directly evaluated by either an inperson or electronic observer, they perform better on tasks that require vigilance.

Claypoole, V.L., Neigel, A.R., Waldfogle, G.E., & Szalma, J.L. (2019). Evaluative social presence can improve vigilance performance, but vigilance is still hard work and is stressful. *Journal of Experimental Psychology: Human Perception and Performance*, 45(5), 616-627.

1: Language referencing racial, ethnic, or gender identities may be outdated or fail to reflect the complexities of identity that participants represent.

STOP
END OF EXAM

2. Professor Gonzalez hypothesizes that students will remember more information from his detailed course description if it is printed on yellow paper than if it is printed on standard white paper. To test this hypothesis, he put the names of all his students into a bowl, then drew out names to assign them to two different groups. He gave one group of the students in his class a course description printed on white paper, and gave the other group of students a course description printed on yellow paper. Students were instructed to thoroughly read the description outside of class in preparation for their next class. In the next class, he gave all students a ten-question quiz asking them about the information found on the course description. Professor Gonzalez then compared the number of correct answers for each group of students. The statistically significant results are depicted in the graph.



Part A

- State the operational definition of the dependent variable.
- Identify the experimental group.
- In addition to the manipulation of an independent variable, identify the procedure Professor Gonzalez used to make this study a true experiment.
- Explain how the data as presented in the graph do or do not support Professor Gonzalez's hypothesis.

Part B

Explain how each of the following might relate to a student's performance on any quiz.

- Context-dependent memory
- Yerkes-Dodson law
- Low level of the Big Five trait of conscientiousness

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

STOP

END OF EXAM

PSYCHOLOGY**SECTION II****Time—50 minutes****2 Questions**

Directions: You have 50 minutes to answer BOTH of the following questions. It is not enough to answer a question by merely listing facts. You should present a cogent argument based on your critical analysis of the questions posed, using appropriate psychological terminology. You may plan your answers in this orange booklet, but no credit will be given for anything written in this booklet. **You will only earn credit for what you write in the separate Free Response booklet.**

1. Claire's sports team made it to the championship basketball game. To play the game, the teammates will need to work together to move a ball toward their own goal. They must then aim carefully to throw the ball into a hoop that is elevated about 10 feet off the ground. The winner is the team that gets the ball into the hoop the most times.

Part A

Explain how each of the following might help Claire be successful during the game.

- Retinal disparity
- Intrinsic motivation
- Social facilitation
- Kinesthetic sense

Part B

Claire's team won the championship game. Ten years later, the team got together for a reunion at the gym where the game was originally held. At the reunion, they discussed the championship game.

Explain how each of the following might influence Claire's recollection of the game.

- Context-dependent memory
- Self-serving bias
- Retroactive interference

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

2.7 Forgetting and Other Memory Challenges

Name: _____ Class: _____ Date: _____

Total: 12 marks

KEY WORDS misinformation effect 错误信息效应 • interference 干扰 • encoding failure 编码失败
• proactive 前摄 • retroactive 倒摄

Objective

Build the skills to answer exam questions on **forgetting** 遗忘 and memory error.

You must be able to:

- distinguish **encoding failure**, **storage decay** and **retrieval failure**
- contrast **proactive** 前摄 and **retroactive** 倒摄 interference
- describe the **misinformation effect** 错误信息效应
- explain why **eyewitness** 目击者 confidence is a weak guide to accuracy

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Three kinds of forgetting

Encoding failure: it never entered memory. **Storage decay**: it faded over time.

Retrieval failure: it is there but cannot be reached — the tip-of-the-tongue state proves this happens.

■ Two interferences

Proactive interference: old learning disrupts new (an old password intrudes).

Retroactive interference: new learning disrupts old (this year's timetable replaces last year's).

■ The misinformation effect

Information encountered **after** an event can be incorporated into the memory of it. A leading question — “how fast were the cars going when they smashed?” — changes what witnesses later report seeing.

■ Confidence and accuracy

Repeated retelling and confirming feedback raise confidence without raising accuracy. A confident witness may be wrong, and confidence therefore cannot be used to verify a memory.

2 Practice

2.1 State the three main causes of forgetting. [3]

2.2 Explain the difference between proactive and retroactive interference. [2]

2.3 Witnesses are asked how fast cars were going when they “smashed into” each other.

(a) Name the effect this wording may produce. [1]

(b) State what it shows about memory. [1]

3 Exam-style questions

3.1 The tip-of-the-tongue experience is best evidence for [1]

- A encoding failure
- B storage decay
- C retrieval failure
- D the misinformation effect

3.2 A student’s old locker combination keeps intruding on the new one. This is [1]

- A proactive interference
- B retroactive interference
- C encoding failure

- **D** consolidation
-

3.3 An eyewitness becomes more confident after being told another witness agrees.

(a) State what has changed and what has not. [2]

(b) State one procedural safeguard against this. [1]

Solutions

2.1 encoding failure — it never entered memory; storage decay — it faded over time; retrieval failure — it is stored but cannot be accessed.

2.2 proactive: old learning disrupts new learning; retroactive: new learning disrupts old learning.

2.3 (a) the misinformation effect. (b) memory can be altered by information received after the event.

3.1 C. the information is clearly stored, since it arrives later unprompted.

3.2 A. earlier learning is interfering with later learning.

3.3 (a) confidence has risen; accuracy has not. (b) avoid giving witnesses feedback about other witnesses, and record confidence before any feedback.

Using the source provided, respond to all parts of the question.

1. Your response to the question should be provided in six parts: A, B, C, D, E, and F. Write the response to each part of the question in complete sentences. Use appropriate psychological terminology in your response.
- A. Identify the research method used in the study.
 - B. State the operational definition of high misinformation in the study.
 - C. Describe what the mean indicates for the percentage of correct responses between the high misinformation group and the low misinformation group.
 - D. Identify at least one ethical guideline applied by the researchers.
 - E. Explain the extent to which the research findings may or may not be generalizable using specific and relevant evidence from the study.
 - F. Explain how at least one of the research findings supports or refutes the misinformation effect.

Introduction

This research study explores the effect of being presented with varying amounts of misinformation about a specific event on the memory of that event.

Participants

A total of 127 students at a large university were recruited through the university's research participation system. They participated in the study in exchange for course credit. The final sample of participants was 69% women and 31% men. The race/ethnicity of the participants was reported as follows: 65% Hispanic/Latino/a, 15% Black/African American, 11% White/European American, 4% Asian/Asian American, and 5% Other.¹ The participants ranged in age from 18 to 39 years old (mean age = 21.21, standard deviation = 3.28).

Method

After providing consent, participants viewed a 6.5-minute silent video of a mock crime. The video depicted an electrician entering a house to fix items such as an oven and a light fixture. While he was in the house, he stole some of the owners' possessions. After watching the video, participants completed a 12-minute trivia questionnaire as a distractor task.² Participants completed all portions of the study online.

Participants were then told that eight previous participants had written brief summaries of the robbery shown in the video. They were also told that one of those summaries would be presented to them, along with a profile of the previous participant, to refresh their memory. Unknown to the participants, these "previous participants" were not real people. The researchers created the previous participants' profiles based on the demographics of the population of students on the university campus. The goal was to create believable profiles so that the summaries would be more credible to the participants.

Participants were randomly assigned to one of three conditions to receive a summary with a specific amount of misinformation:

- Low misinformation condition: 8 of 40 sentences (20% misleading information)
- Medium misinformation condition: 20 of 40 sentences (50% misleading information)
- High misinformation condition: 32 of 40 sentences (80% misleading information)

The misleading information changed details about items seen in the video. No information was added. The non-misleading sentences were neutral to avoid strengthening the participant's memory of the target items. For example, a misleading item description was, "He noticed the dresser was covered with a brown cloth." In reality, the cloth was navy blue. The neutral description of that item was, "He noticed the dresser was covered with a cloth."

After reading an entire previous participant's summary, each current participant completed a 5-minute math test as a distractor task. Then, all participants were asked an identical set of 40 multiple-choice questions in random order about the mock crime video. Each question had three answer options:

1. Correct: the correct option corresponding to what was shown in the video (e.g., a navy blue cloth);
2. Misled: an incorrect answer that reflected misinformation provided in the summaries (e.g., a brown cloth); and
3. Incorrect: an incorrect answer containing information that was not portrayed in the video or any summary (e.g., a yellow cloth).

Participants then completed a questionnaire asking about the credibility of the previous participant's summary (e.g., "How good was the quality of the summary?" and "How familiar with the video was the participant who wrote this summary?").

Results and Discussion

The researchers analyzed the results of the questionnaire by comparing participants' correct responses with how participants viewed the credibility of the previous participant's summary. The researchers hypothesized that if participants distrusted the summary, they would be less likely to incorporate the information into their memory of the event, leading to their being less likely to choose an incorrect answer. The results are shown in the table.

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Introduction

In this study, researchers attempted to establish whether the presence of others leads people to perform better on a task than when they are doing the task alone.

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Forty-five undergraduate students, all men, received course credit in an introductory psychology course for their participation. Researchers did not report race/ethnicity data for the participants.

Method

As each participant arrived, he was told the following: “In this experiment, you will be part of a group that will perform a task together. It is important that the members of the group have a uniform appearance. To make you as alike as possible, I’d like you to take off your shoes, put these socks over your own socks, and then put on these shoes. They might be a little large, but we need to have a size that fits everyone. Also, put on this lab coat—it ties in the back—over your own clothes.”

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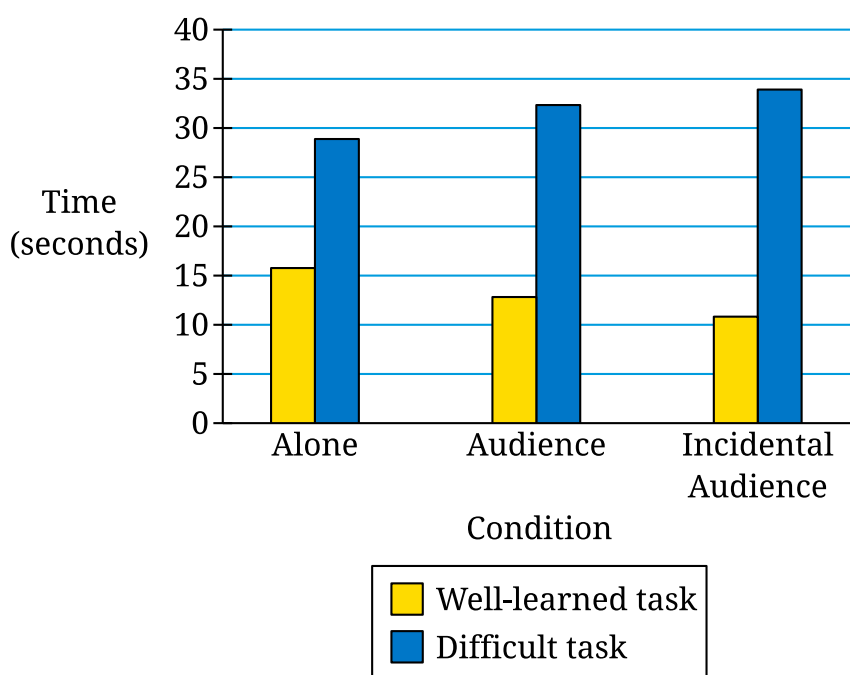
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Researchers found that performance on the well-learned tasks was faster in the presence of an audience. Performance on well-learned tasks improved both when participants were directly observed (audience condition) and when the confederate was present in the room but distracted (incidental audience condition). When an audience was present, it took the participants longer to complete the new, more difficult tasks. The findings are summarized in the graph.

Audience Condition and Completion Time of Task



For the simple and well-learned tasks, researchers found a statistically significant difference in the amount of time participants took to complete the tasks alone compared with the amount of time it took with an attentive audience.

For the new and difficult tasks, researchers found a statistically significant difference when comparing the amount of time participants took when alone with the amount of time they took when they were in the audience condition or incidental audience condition.

They found no significant difference between the alone condition and the incidental audience condition for either type of task.

Markus, H. (1978). The effect of mere presence on social facilitation: An unobtrusive test. *Journal of Experimental Social Psychology*, 14(4), 389–397.

Source 2

Introduction

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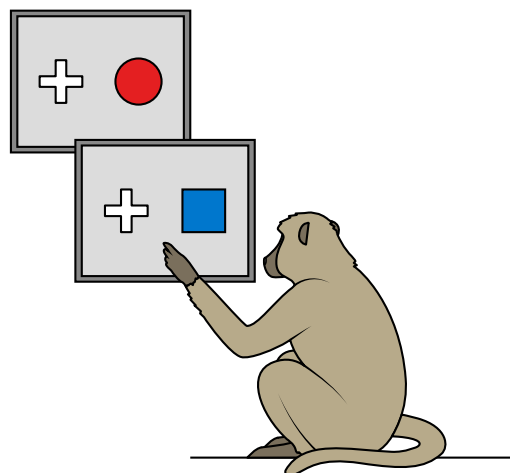
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The baboons had access in their enclosure to computers with touch screens, preprogrammed with operant conditioning tasks. When the baboons touched a screen, it triggered the immediate display of a white cross and either a red circle or a blue square. To obtain a food reward, the baboon had to touch the white cross only when the red circle was present. During the non-conflict trials, the white cross was always presented on the left side of the response screen and the red circle or blue square on the right. Incorrect responses produced a three-second time-out.

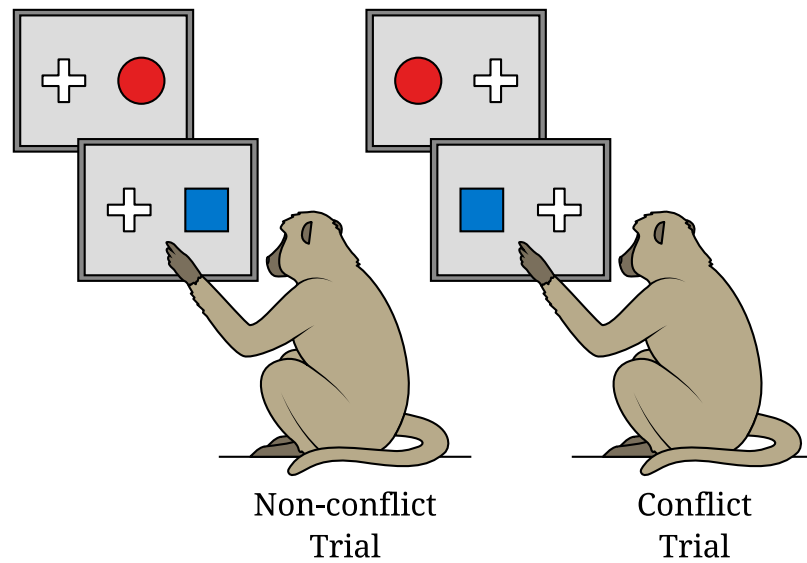
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During these trials, the baboons were randomly assigned to be either alone or in the presence of other baboons performing the same task. For baboons performing the task in the presence of others, they could see other baboons using a computer, but the design of the test chamber prevented any of the baboons from seeing the touch screens of the other baboons. As a result, the baboons could not see the other baboons' responses to the tests.

Results and Discussion

For the baboons who were in the presence of others during the conflicting trials task, their response time was delayed when compared to baboons who were alone. The researchers found that the delayed reaction time was greatest for male baboons in the presence of older males with a higher social rank.

Huguet, P., Barbet, I., Belletier, C., Monteil, J-M., Fagot, J. (2014). Cognitive control under social influence in baboons. *Journal of Experimental Psychology*, 143(6). 2067-2073.

Source 3

Introduction

Vigilance is the ability to maintain attention for prolonged periods while still being on the lookout for relevant signals in the environment. Vigilance performance involves participants responding to infrequent signals over time. In this study, researchers examined the effect of observers on people's vigilance performance.

Participants

Data were collected from 132 participants (98 women; 34 men).¹ All participants were undergraduate students recruited through the research participation system at a large university in the southeastern United States. All participation was voluntary, and participants received course credit for completing the study. The average age of participants was 18.83 years (standard deviation = 2.23 years; range = 18–39 years). Researchers did not report race/ethnicity data for the participants.

Method

For 24 minutes, participants monitored a computer screen displaying repeated presentations of two numbers. They were instructed to press the space bar when they saw two numbers that differed from one another by zero or ± 1 when subtracted. For example, participants were to hit the space bar when presented with the numbers 43 ($4 - 3 = 1$) or 77 ($7 - 7 = 0$), but not when presented with 73 ($7 - 3 = 4$) or 39 ($3 - 9 = -6$).

Participants were randomly assigned to one of four conditions:

1. Evaluative observer condition (29 women; 4 men): The participant completed the task with a research assistant present and seated behind them. The research assistant was instructed to sporadically take notes on a clipboard to create the appearance of actively evaluating the participant.
2. Merely present observer condition (20 women; 13 men): The participant completed the task in the presence of a research assistant who was seated at an adjacent desk, facing the opposite direction. The observer could not directly watch the participant and was engaged in a secondary task, like reading a book.
3. Electronic observer condition (25 women; 8 men): The participant completed the task in the presence of a webcam that was placed on top of the computer screen. A video recorder was also placed on a tripod in front of the participant. The participant was told that the research assistant used these devices to monitor their performance. These cameras were not actually recording while the participant completed the task, but the participant believed they were.
4. No observer present (control) condition (24 women; 9 men): The participant completed the entire task alone in the room. No social presence, electronic or otherwise, was used during this task.

Results and Discussion

Participants who completed the vigilance task alone detected significantly fewer correct number pairs than those who completed the task in the electronic observer condition or the evaluative observer condition. Interestingly, there was no significant difference in correct detections between those in the no observer present condition and those in the merely present observer condition.

The results suggest that when people feel they are being directly evaluated by either an inperson or electronic observer, they perform better on tasks that require vigilance.

Claypoole, V.L., Neigel, A.R., Waldfogle, G.E., & Szalma, J.L. (2019). Evaluative social presence can improve vigilance performance, but vigilance is still hard work and is stressful. *Journal of Experimental Psychology: Human Perception and Performance*, 45(5), 616-627.

1: Language referencing racial, ethnic, or gender identities may be outdated or fail to reflect the complexities of identity that participants represent.

STOP

END OF EXAM

2.8 Intelligence and Achievement

Name: _____ Class: _____ Date: _____

Total: 11 marks

KEY WORDS intelligence 智力 • reliability 信度 • standardisation 标准化 • validity 效度 • normal distribution 正态分布

Objective

Build the skills to answer exam questions on **intelligence** 智力 and its measurement.

You must be able to:

- state what **general intelligence** 一般智力 claims and one alternative view
- explain **reliability** 信度, **validity** 效度 and **standardisation** 标准化
- describe a **normal distribution** 正态分布 of scores
- discuss **stereotype threat** 刻板印象威胁 and test bias

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ One factor or several

The **general intelligence** view holds that performance across different mental tasks correlates, implying a common factor. Alternative theories propose several relatively independent intelligences or types, and disagree about how much a single score can capture.

■ Three test properties

Reliability: the test gives consistent results. **Validity**: it measures what it claims to measure. **Standardisation**: scores are interpreted against a representative comparison group. A test can be reliable and still invalid.

■ The distribution

Standardised intelligence scores form a **normal distribution**: most people cluster near the average, with symmetrical tails. The mean and standard deviation are set by the standardisation sample.

■ Stereotype threat

When a negative stereotype about one's group is made salient, performance can drop. This is a situational effect on the **score**, not evidence about ability, and it is one reason score gaps require careful interpretation.

2 Practice

2.1 State the difference between reliability and validity. [2]

2.2 Explain what standardisation of a test involves. [2]

2.3 A test gives the same score to the same person on two occasions, but the score does not predict school performance at all.

(a) State which property it has. [1]

(b) State which it lacks. [1]

3 Exam-style questions

3.1 In a normal distribution of test scores, most people score [1]

- **A** near the extremes
- **B** near the mean
- **C** identically
- **D** above the mean

3.2 Reminding candidates of a negative stereotype before a test can lower their scores. This is [1]

- **A** evidence of lower ability
- **B** stereotype threat
- **C** test-retest unreliability
- **D** standardisation

3.3 A test is standardised on one national group and used with another.

(a) State one problem this may create. [1]

(b) Explain why a score difference between the groups would be hard to interpret. [2]

Solutions

2.1 reliability is consistency of results; validity is whether the test measures what it claims to.

2.2 administering the test to a representative sample so that later scores can be interpreted against that comparison group.

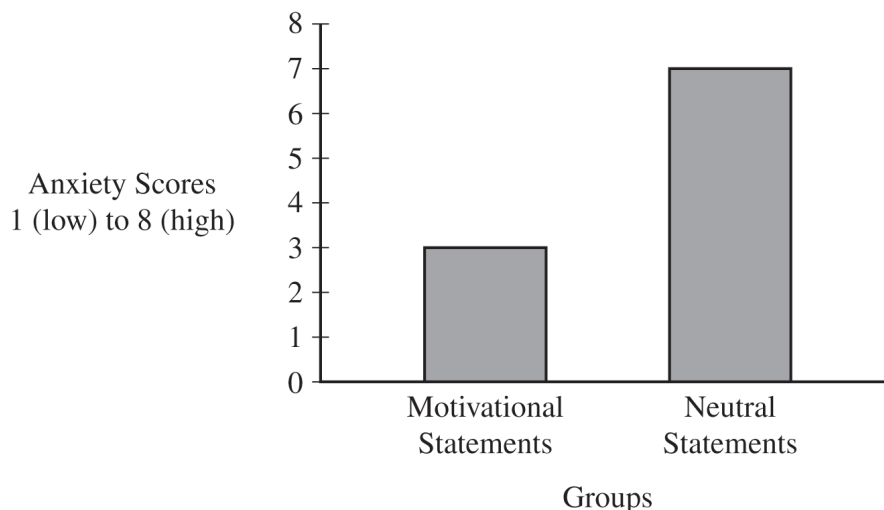
2.3 (a) reliability. (b) validity.

3.1 B. a normal distribution clusters around the mean with symmetrical tails.

3.2 B. the situation, not the ability, has changed.

3.3 (a) the comparison group may not represent the people being tested. (b) the difference could reflect test content, language, familiarity or stereotype threat rather than ability, so the score alone cannot identify a cause.

2. Dr. Dawson is a psychologist who believes that students who read motivational statements before a test will experience lower levels of anxiety as compared with students who read neutral statements. To examine this belief, he conducted a study. In the study, he randomly assigned half of the participants to read motivational statements and the other half to read neutral statements. Immediately after reading the statements, all of the students completed a survey about their current level of anxiety (1 = low; 8 = high) and then took the test. Dr. Dawson found statistically significant results that are depicted in the graph.



Part A

- State a valid operational definition of the dependent variable in this study.
- Identify the control group in this study.
- Explain why the study would be considered an experiment.
- Explain how the results of the study do or do not support Dr. Dawson's hypothesis.

Part B

The test Dr. Dawson gave was a vocabulary test. Explain how the following terms might relate to the students who performed poorly on the test in this study.

- External locus of control
- Stage one of Selye's general adaptation syndrome
- Crystallized intelligence

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

STOP

END OF EXAM

