

Attention:

Early selection model of attention – very little information is processed before selection (pre-attentively). Only very basic information like voice can be retrieved explicitly.

Late selection model – more information gets through than predicted by the early selection model. Cocktail party effect, word disambiguation effect.

Automaticity:

Some tasks become automatic and no longer require attention to monitor, which allows us to use our attention to other tasks – playing sports, driving cars.

Practice and consistent mapping are the key components of developing automaticity

Attention and modularity:

Attention is module specific – performing an auditory and a visual task is easier than performing two auditory tasks or two visual tasks.

Thought suppression:

It is a poor way to not think of something. Instead, think about something else if you want to suppress some thought.

Internal structure of categories:

Rule-based theory – a category is represented by necessary and sufficient rules
Problems: Not easy to define rules for many categories, rule representation is not useful for tasks other than classification

Prototype theory – a category is represented by an average of category members
Problems: Cannot characterize a category with subcategories, loss of specific information like category variability

Exemplar theory – a category is represented by a number of instances of category members
Problems: Too many instances to store in memory

Hierarchical organization of categories:

The three levels are superordinate, basic, and subordinate.

Basic level is psychologically special (e.g., we tend to use to name objects) because it has shortest names, high within category and low between category similarity, and so on.

Experts can categorize at subordinate level as quickly as basic level, but novices are quickest at the basic level.

Babies seem to acquire superordinate before basic, some memory patients lose their ability to use basic level but not superordinate

Different memory systems:

Iconic, short-term, and long-term

Procedural vs. declarative

Episodic vs. semantic

Implicit vs. explicit

Short-term memory:

Keep track of what is currently relevant and ignore irrelevant information.

Memory span - "Seven, plus or minus two" also called "the magic number"

You need to rehearse to keep information in your working memory

Serial position curve:

U shaped curve in prob recall by order of item plot

Primacy effect – memory advantage of first items because of rehearsal

Recency effect – memory advantage of later items due to STM

Oddball effect – memory advantage of deviant items

Procedural vs. declarative memory:

H.M. and Korsakoff's patients can acquire new procedural memory but not declarative memory.

Procedural knowledge – knowing how, such as swimming

Declarative knowledge – knowing that, such as zebra is an animal

Episodic vs. semantic memory:

A person who has retrograde amnesia tend to show profound episodic memory deficits but only some semantic memory deficits.

Episodic memory – memory for what happened to you, such as your memory of buying a new car

Semantic memory – memory for facts like zebra is an animal

Hierarchical representation of semantic memory:

Sentence verification task – canary is a bird

Lexical decision task – nurse doctor

Different ways of forgetting:

Decay, interference, alteration

Interference:

Proactive interference – previous learning intereferes with later learning of related materials

Retroactive interference – later learning interferes with retrieval of previously learned materials.

Categorical organization of information:

People think San Diego, California is west of Reno, Nevada.

Release from proactive interference – previous learning intereferes with later learning of related materials but presenting unrelated items, or items from a different category can get rid of proactive interference.

Implicit memory:

Savings – relearning is easier than learning for the first time

Influence on decision without explicit recollection

Schema:

Schema – a knowledge structure that provides a set of expectations

Information that is unrelated to a schema tends to be ignored, and information that is consistent with the schema can be falsely recalled.

Schema can help recall previously unrecalled information.

Presenting schemas can improve people's ability to remember the content of a story.

Perceptual memory, such as memory for images, is also affected by schemas.

Gist memory:

Gist for stories, pictures, coins

Memory errors:

False memory such as intrusion errors (false recall of a word) and source confusion (interference) suggest that memories are stored as a set of connections between related information.

Most memory errors are the result of the same memory mechanisms that help us most of the time – constraints that allow us to make reasonable decisions efficiently results in memory failures such as distortions.

Improving memory:

Retrieval practice (i.e., rehearsal) can help

Reinstating context can help

Encoding the meaning of material (i.e., deeper processing) as opposed to superficial characteristics can help.

Spacing as opposed to massing can help.
