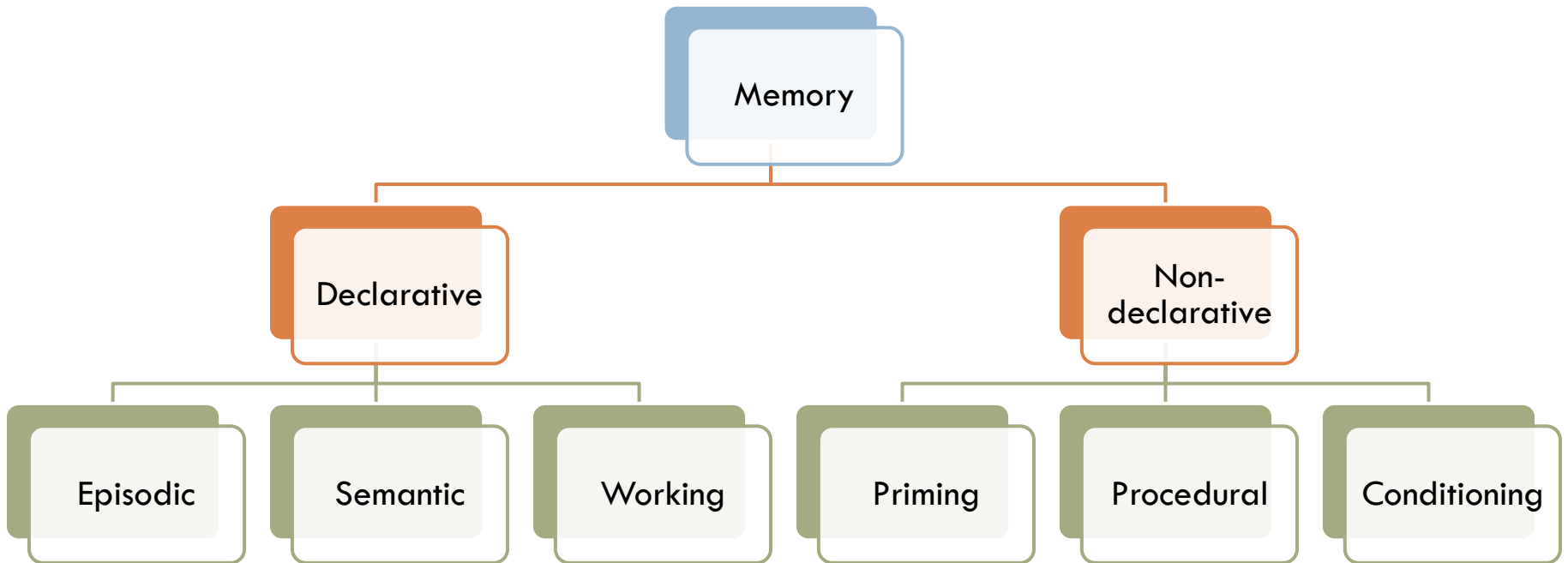


# MEMORY

Kognitívna veda 2012 – Session 4

# Taxonomy of memory

## □ Cohen & Squire, 1980



# Declarative vs. Non-declarative

## □ Declarative:

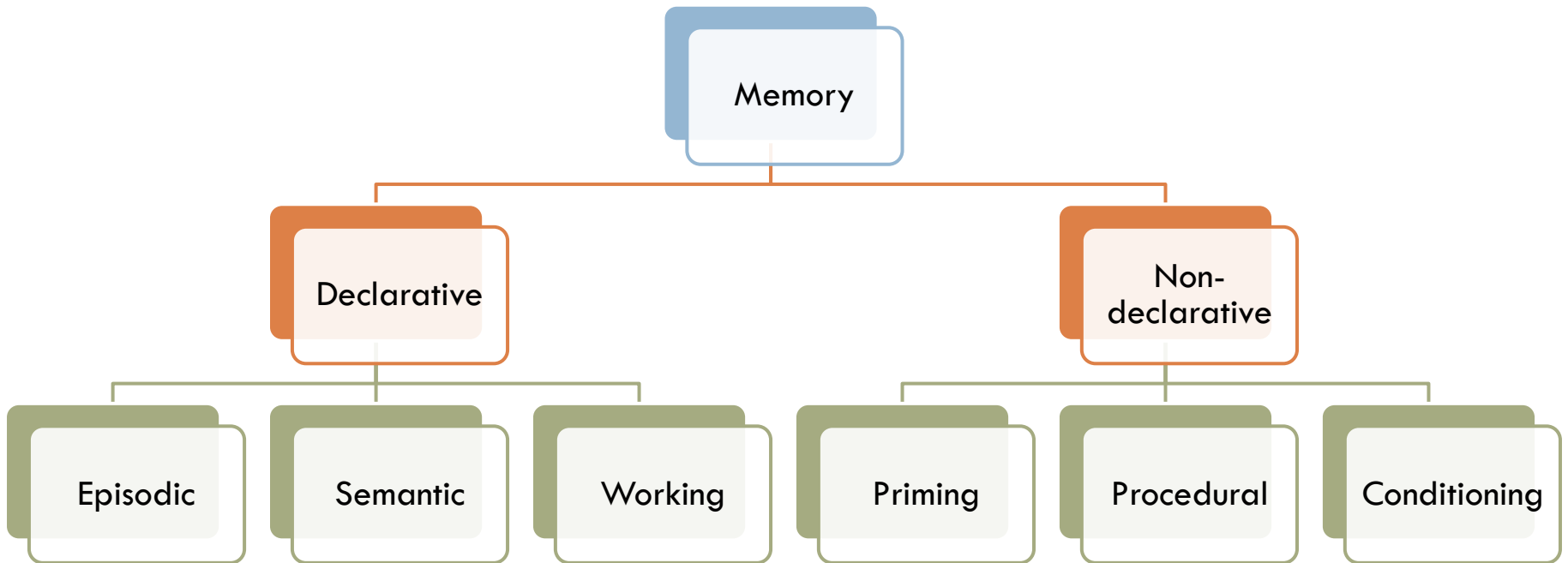
- Available to conscious retrieval
- Can be declared (propositional/implicit)
- Examples:
  - „What did I have for breakfast?“
  - „What is the capital of Spain“

## □ Non-declarative

- Experience-induced change in behaviour
- Cannot be declared (procedural/implicit)
- Examples
  - How to ride a bike
  - Subliminal influence

# Taxonomy of memory

## □ Cohen & Squire, 1980



# Episodic memory

- Memory for personally experienced events that occurred in particular place at a specific time (Tulving, 1972)
- Contextual, spatiotemporal, autobiographical remembering
- Hippocampus
  - Famous case of patient HM
  - Memento
  - <http://www.youtube.com/watch?v=N3fA5uzWDU8>

# Semantic memory

- Memory for facts, general knowledge, word meanings
- Acontextual
  - ▣ Independent of where and when the information was encoded

# Working memory

- The ability to hold information “online” for current task (Baddeley, 1992)
  - ▣ Comprehension, planning, problem-solving

# Otestujeme sa 😊

- Únava
- Vankúš
- Driemať
- Povliečky
- Chrápať
- Sen
- Siesta
- Noc
- Plachta
- Nespavosť
- Inkontinencia
- Posteľ
- Hviezdy
- Pot
- Budík
- Spáľňa



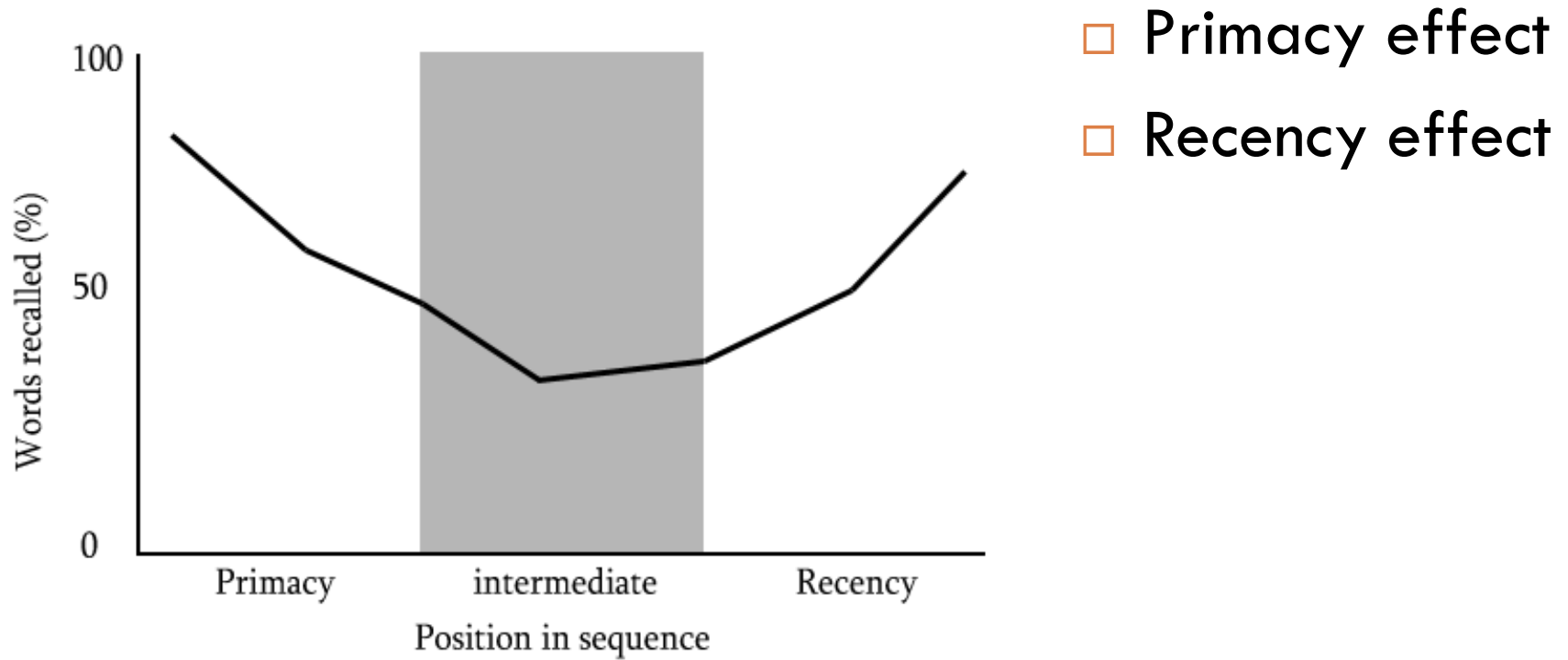
Otestujeme sa 😊



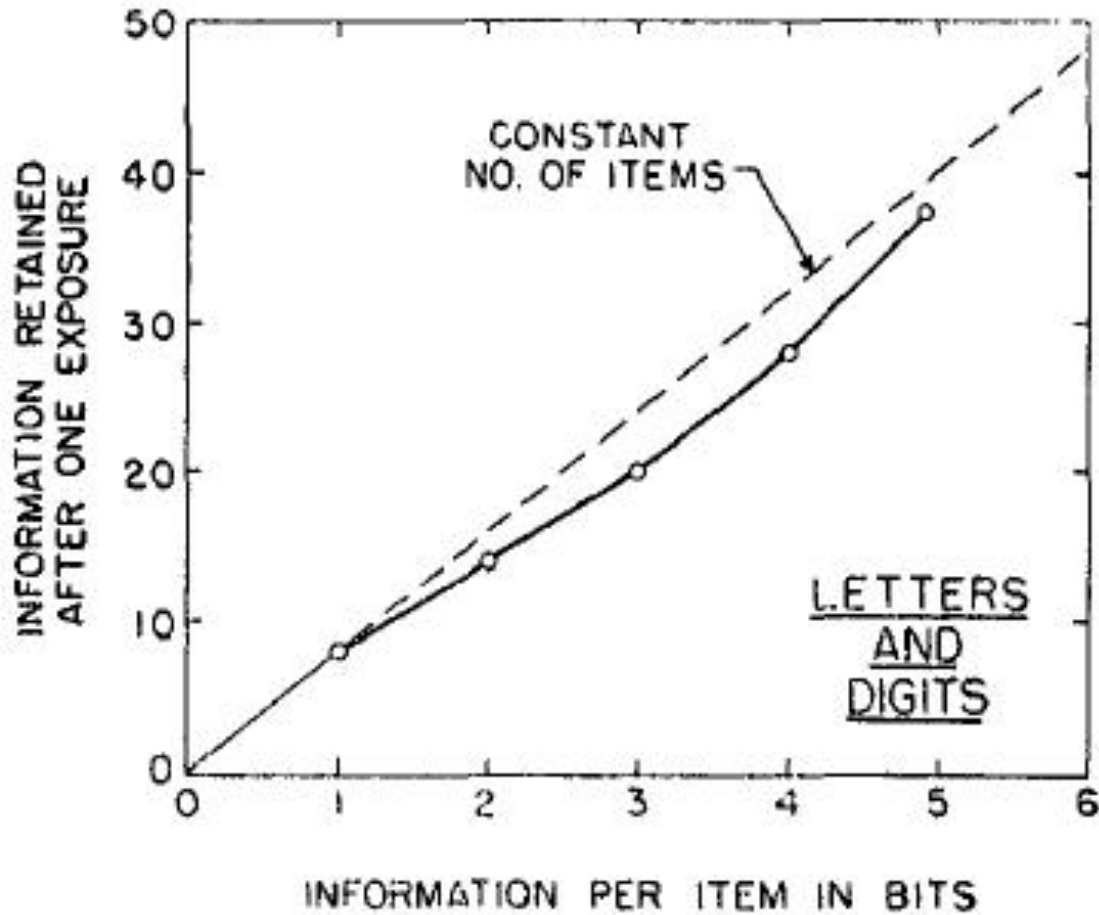
# Otestujme sa 😊

- Čo ste si zapamätali?

# Serial position

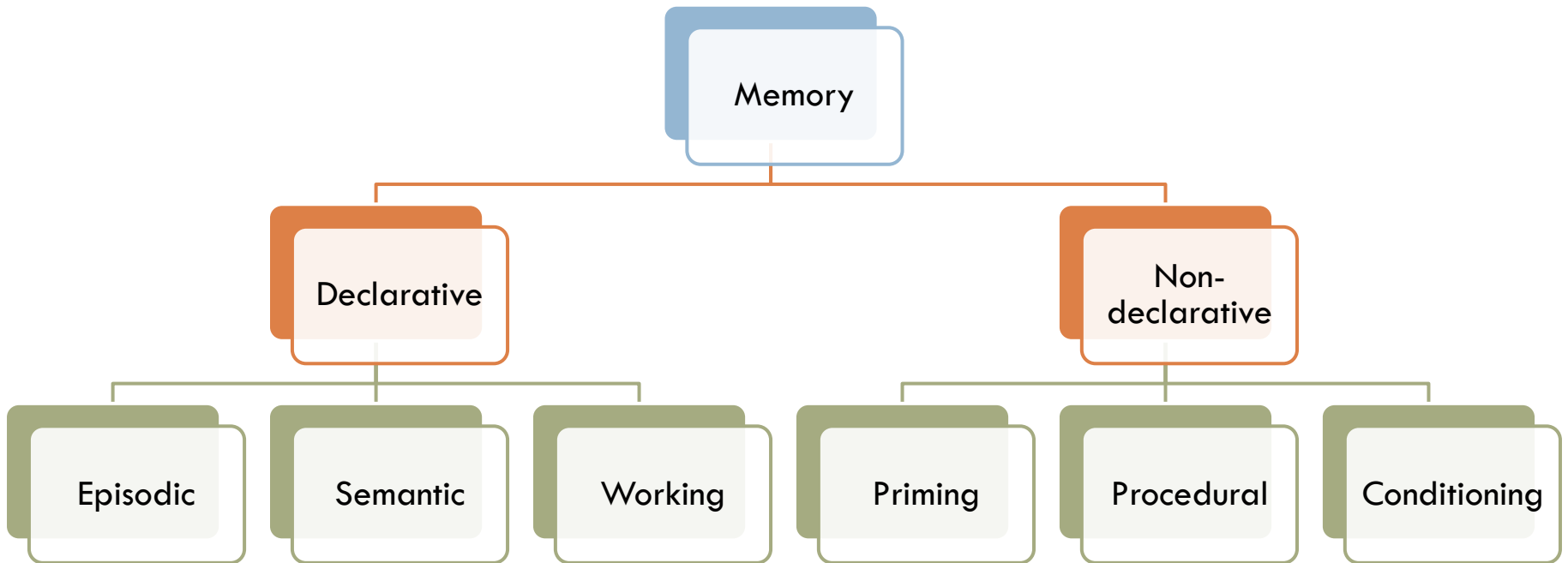


# Magical number 7 +/- 2



# Taxonomy of memory

## □ Cohen & Squire, 1980



# Priming

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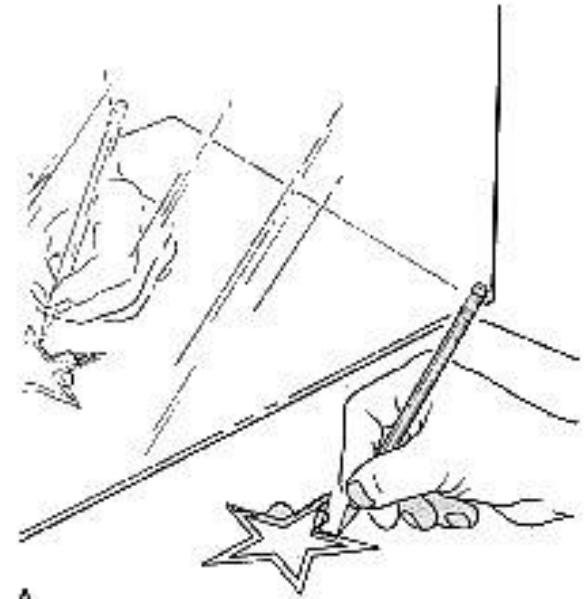
- A change in speed, accuracy or bias of processing a stimulus owing to prior exposure to that stimulus

# Čo vás prvé napadne?

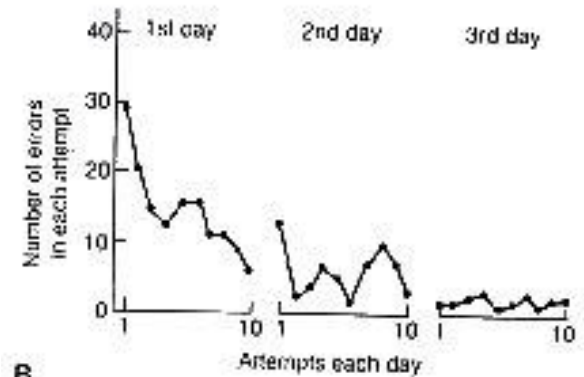
- Hrazda
- Hrebeň
- Klavír
- Jazero
- Vankúš
- Papier
- Čelo
- Auto

# Procedural Memory

- Skill learning
- Requires multiple trials



A



**Mirror Tracing**  
(e.g. Corkin, 1968)



# Classical conditioning

- Changes in response to conditional stimulus after repeated conditioned – unconditioned stimulus pairing
  - Forward
  - Simultaneous
  - Backward
    - conditional response tends to be inhibitory
- Latent inhibition – CS is presented at first without US
  - Inhibited response to learning

# Memory

- Short term memory is limited to  $\sim 7$  items but long term memory is unlimited
- Special cases
  - Hyperthymesia
    - Superior autobiographical memory
  - Eidetic memory
    - Photographic memory
  - Mnemonists
  - Savants

# The truth about the goldfish



**30 SECOND MEMORY**