

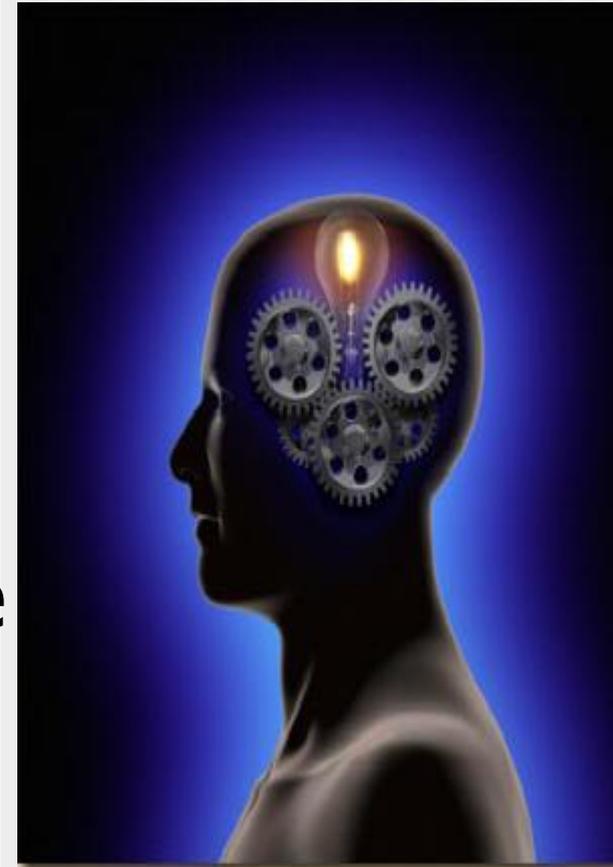


# Introduction to Cognition

# Cognition

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- **Cognition:** The mental activities associated with thinking, knowing, remembering, and communicating
- Includes the way we create concepts, solve problems, make decisions, and form judgments



# Concepts



These animals all look different, but they fall under our concept of “dogs”.

- **Concept:** A mental grouping of similar objects, events, ideas, or people.
  - Enables us to chunk large amounts of information – don’t need to treat every new piece of information as unique.

# Prototypes

**Prototypes:** Mental image or best example of a concept

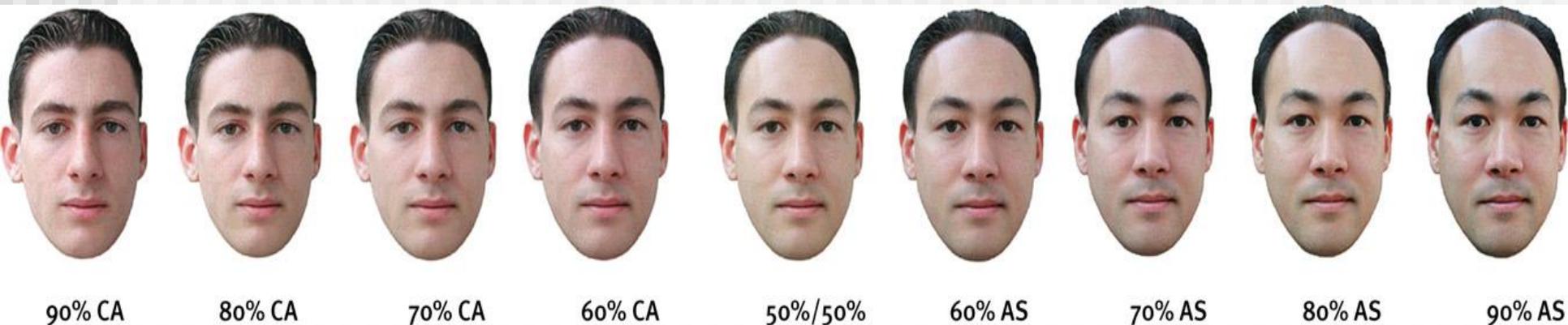
Which of these is closest to your prototype of a bird??



Chair? Vehicle? Transportation?

# Effects of Prototypes on Memory

- Once we place an item in a category, our memory later shifts towards the category prototype
- When shown a face that was 70% CA and 30% AS, people categorize as CA and later recall seeing a more prototypically CA person



TRIAL 1



LING



FARD



RELK



LETH



DILT



MULP

TRIAL 2



RELK



DILT



MULP



LING



FARD



LETH

TRIAL 3



LETH



LING



FARD



DILT



MULP



RELK

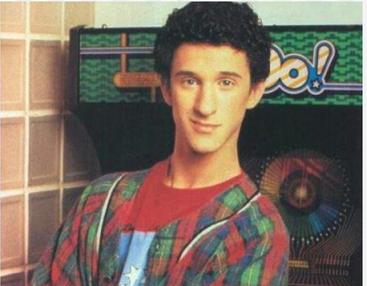
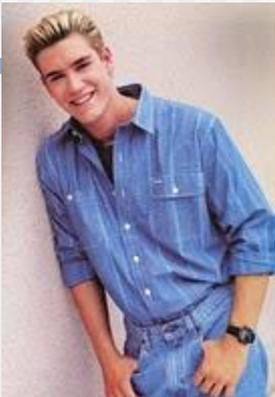
TRIAL 4



# What is thought?

1. Concepts (schemas)...usually based on *prototypes*.

Our concept of men may include all of the following guys....



But they are based on our prototype (ideal) male.....

# Solving Problems



## ■ Algorithm

- A methodical, logical rule or procedure that guarantees solving a particular problem

## ■ Heuristic

- A rule-of-thumb strategy that often allows us to make judgments and solve problems efficiently (speedier but error-prone)



# Algorithm or Heuristic?

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- S P L O Y O C H Y G
  - 907,200 possibilities
- Trial and Error
- Computers
- The quadratic formula
- Competing from home on the *Wheel of Fortune*

# Solving Problems

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- Insight

- A sudden and novel realization of the solution to a problem



# Insight! (The A-Ha Experience)

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- Think of another word that could form a compound word or phrase with each of the following words:
  - PINE
  - CRAB
  - SAUCE

# Insight! (The A-Ha Experience)

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- Sherlock Holmes and Dr. Watson are going camping. They pitch their tent under the stars and go to sleep. Sometime in the middle of the night Holmes wakes Watson up.
- **Holmes:** "Watson, look up at the stars, and tell me what you deduce."
- **Watson:** "I see millions of stars and even if a few of those have planets, it's quite likely there are some planets like Earth out there, there might also be life. What does it tell you, Holmes?"
- **Holmes:** "Watson, you idiot, somebody has stolen our tent!"

# Insight! (The A-Ha Experience)

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- A couple of New Jersey hunters are out in the woods when one of them falls to the ground. He doesn't seem to be breathing, his eyes are rolled back in his head. The other guy whips out his cell phone and calls the emergency services. He gasps to the operator: "My friend is dead! What can I do?" The operator, in a calm, soothing voice says: "Just take it easy. I can help. First, let's make sure he's dead." There is a silence, then a shot is heard. The guy's voice comes back on the line: "OK, now what?"