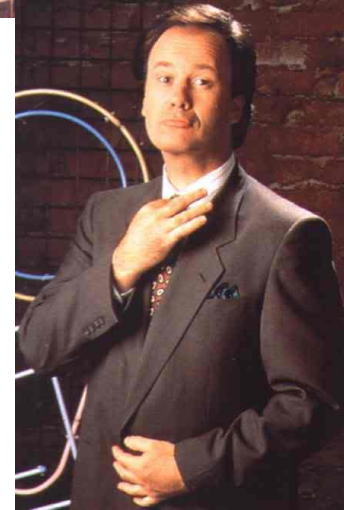
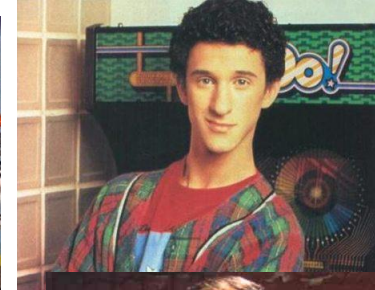
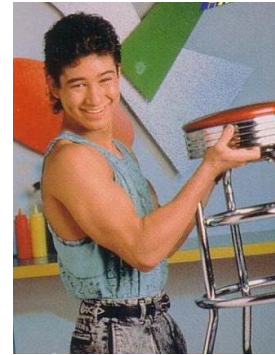
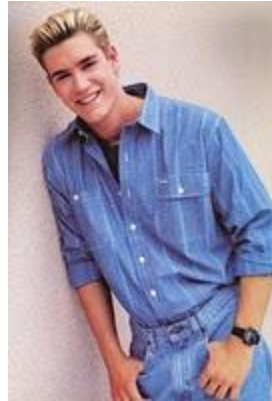


Thinking



# What is thought?

- There are basically two types of thought...
  1. **Concepts** (schemas)...usually based on *prototypes*.
  2. **Images**

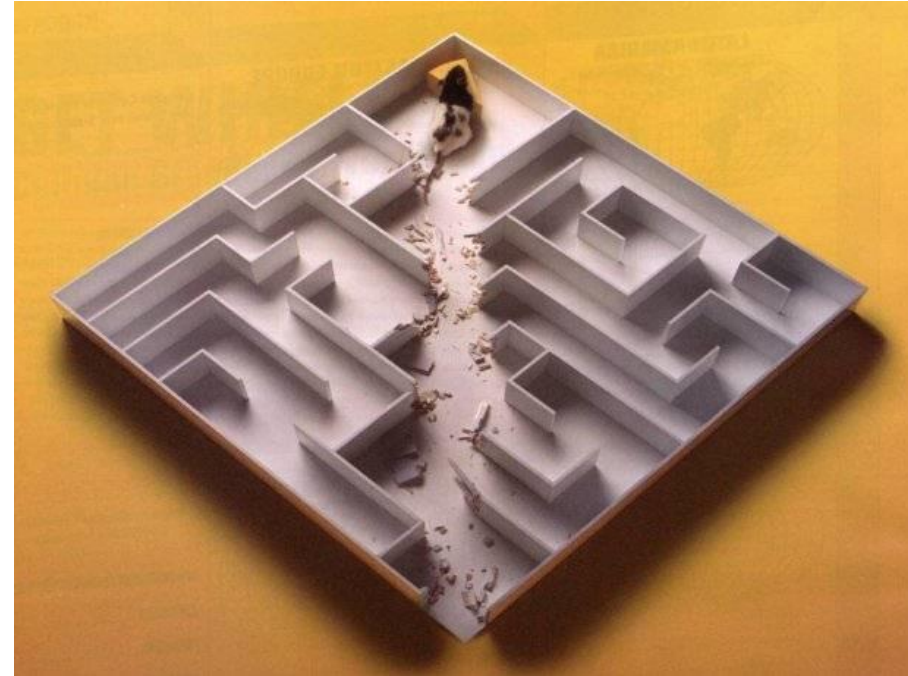


Our concept of men may include all of the following guys....

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

# Heuristics

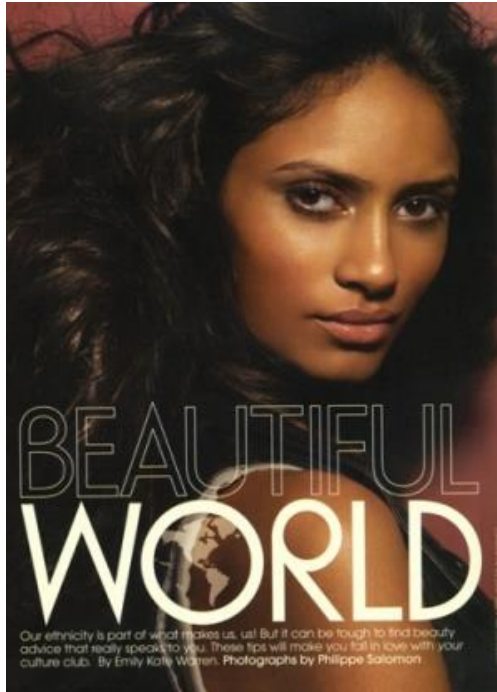
- A rule of thumb that generally, but not always, can be used to make a judgment to solve a problem.
- It is fast, but is...
- Prone to errors
- Two major types of heuristics....



# Representativeness Heuristic

## Who went to Harvard?

Jim Walton founder of Wal-Mart. Bachelor of science from University of Arkansas. Still worth 20.7 billion dollars.



- If I tell you that Sonia Dara is a Sports Illustrated swimsuit model, you would make certain quick judgments (heuristics) about her...like about her interests or intelligence.
- She is an economics major at Harvard University.



- Judging a situation based on how similar the aspects are to the prototypes the person holds in their mind.
- Like thinking someone with glasses is nerdy, or a blonde is not smart.

# Availability Heuristic

- Judging a situation based on examples of similar situations that initially come to mind.
- Vivid examples in the news often cause an availability heuristic.

The crime rate of Gary, Indiana is MUCH higher than the Bronx. But when you think of crime, which town comes to mind?

I realize the Bronx picture is misleading.

Which place would you be more scared of getting mugged or even murdered?



The Bronx, NY



Gary, Indiana

# Heuristics can lead to Overconfidence...



- Our confidence is not a good indicator of how right we are.
- **Belief Perseverance**- maintaining a belief even after it has been proven wrong.
- **Belief Bias**- People will tend to accept any and all conclusions that fit in with their systems of belief, without challenge or any deep consideration of what they are actually agreeing with.

# Mental set

- a.k.a. rigidity
- The tendency to fall into established thought patterns

Example one:

Complete the pattern,

O-t-t-f-\_\_\_-\_\_\_-\_\_\_

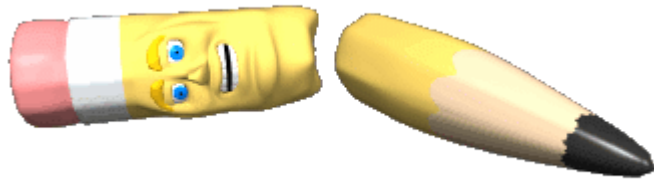
Answer: (f)ive, (s)ix,  
(s)even.

- Now try this one:

J-f-m-a-\_\_\_-\_\_\_-\_\_\_

Answer: (m)ay, (j)une,  
(j)uly

# Functional Fixedness



Think of as many  
uses as you can for  
a ..... quarter



- The inability to see a new use for an object.



**MACGYVER**

All he needed was a ball-point pen and a paper clip.



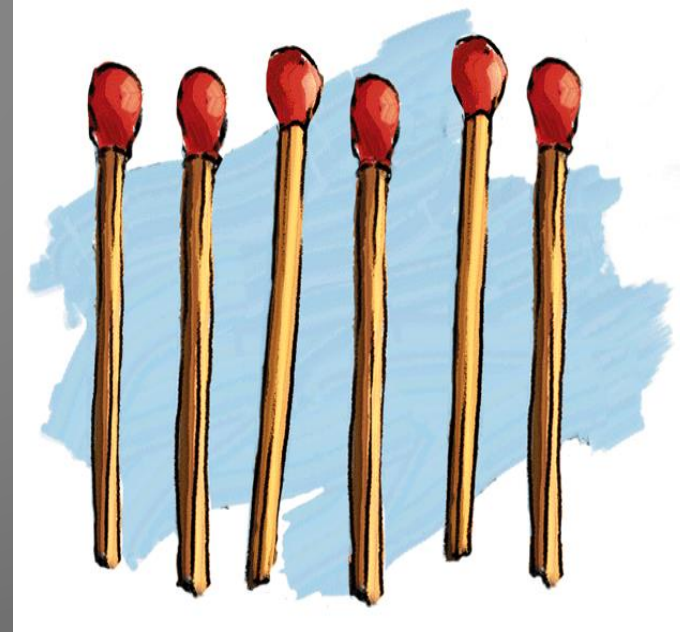
# OBSTACLES IN SOLVING PROBLEMS

Fixation: An inability to see a problem from a fresh perspective. This impedes problem solving. An example of fixation is *functional fixedness*.

The Matchstick Problem:  
How would you arrange  
six matches to form four  
equilateral triangles?

What else can a paper clip  
be used for?

[The Little Mermaid](#)



# Confirmation Bias

- We look for evidence to confirm our beliefs and ignore evidence that contradicts them.
- For example, if one believes that all Italians are in shape and go tanning, then they turn on MTV.



Look...I knew it was true!!!



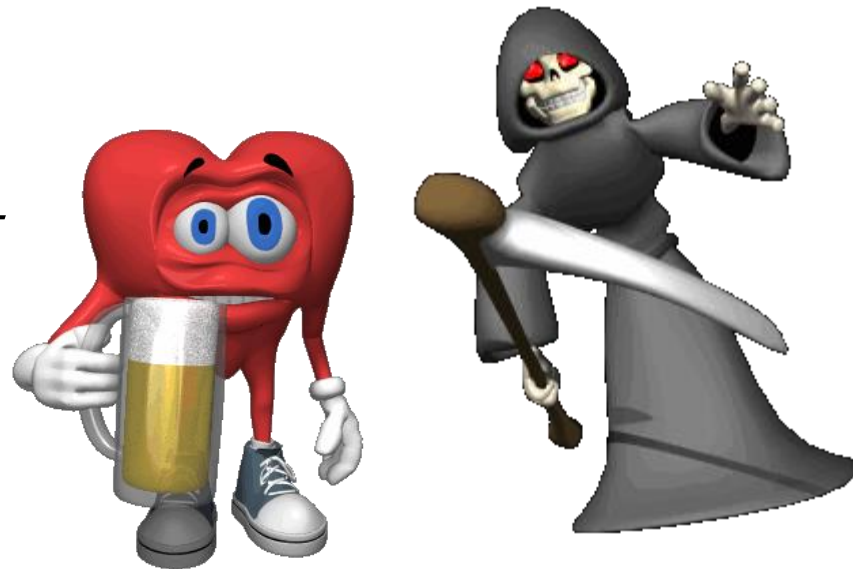
# Framing

- **90% of the population will be saved with this medication.....or**
- *10% of the population will die despite this medication.*
- **You should not drink more than two drinks per day....or**
- *You should not drink more than 730 drinks a year.*

*Look at the following question and think about how the question is worded may effect the way it is answered.*

- How can businesses become more socially responsible?

- The way a problem is presented can drastically effect the way we view it.



# THE BELIEF PERSEVERANCE PHENOMENON

Belief perseverance is the tendency to cling to our beliefs in the face of contrary evidence.

*“Consider the opposite”*

For a student that is known to be “bad,” a teacher is likely to interpret their ambiguous actions as doing something wrong.



# BELIEF BIAS

The tendency of one's preexisting beliefs to distort logical reasoning by making invalid conclusions.

God is love.

Love is blind

Ray Charles is blind.

Ray Charles is God.

Anonymous graffiti

I am no one.

No one is perfect.

I am perfect.

PREMISE 1: UNCLE GREG SMOKES.  
PREMISE 2: THE MEAN BURGLAR AND  
KIDNAPPER IN DENIS THE MENACE  
SMOKES.

CONCLUSION: UNCLE GREG IS A MEAN  
KIDNAPPER.



# CREATIVITY

- Almost impossible to define.
- Little correlation between creativity and intelligence.
- **Convergent Thinking versus Divergent Thinking**



# *Thinking*

- **Convergent Thinking** - the ability to give the "correct" answer to standard questions that do not require significant creativity

- **Divergent Thinking** - refers to a way of solving problems wherein a variety of possible solutions are proposed in an effort to find one that works