

Analogue

- Use of analogies
 - find similarities between two things
 - use knowledge of one thing to predict knowledge of other thing
- E.g. *modal model of memory*
 - like a digital computer
 - input -> RAM <-> hard disk; sensation -> WM <-> LTM
- Analogy not the same as superficial similarity
- No analogy is perfect.

Common uses of analogies

- In science:
 - Practicing scientists use analogies frequently to explain new results.
 - Science students can use analogies to understand systems.
- In politics and society:
 - If al-Qaeda is Japan and Bush is FDR, will Iraq be like Germany under the Marshall Plan?
 - Extra credit opportunity:
 - For Friday, bring in *descriptions* of newspaper or TV news reports that use analogies.
 - What was the analogy?

Inductive reasoning

- Reasoning from specific instances to general principles
 - making educated guesses; possibly wrong
 - e.g. elaborative encoding helps memory
- Systematic biases in reasoning
 - not "sloppy" reasoning from fatigue, etc.
 - sometimes misleading
 - often helpful

Availability bias

- ActivePsych demo
- Used in making subjective judgments
 - "How likely ... / how many ...?"
 - Rely on availability of information in memory (how easily it comes to mind), rather than statistical evidence
 - Vividness of evidence
- Can lead to misjudgments, but why might it generally be a useful strategy?

Confirmation bias

- Part of testing hypotheses: tendency to try to confirm current hypothesis
- E.g. Is Jack a good student?
 - pay more attention to time spent in the library, than to time spent playing *World of Warcraft*
- Utility of confirmation bias
 - "nice to be right" (about hypothesis)
 - "if it ain't broke, don't fix it"

Predictable-world bias

- Tendency to find order even when there is none
- "Gambler's fallacy": on a roulette wheel after 7 reds in a row, which is more likely: red or black
- *Probability matching*
 - red squares (75%) and yellow squares (25%), randomly ordered
 - predict what each square will be (red or yellow)
