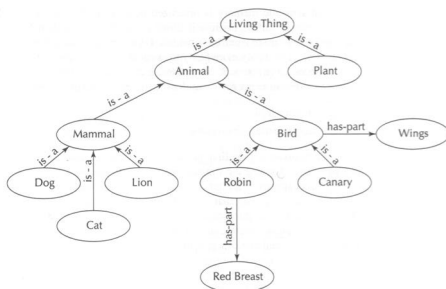


Memory Systems and Knowledge

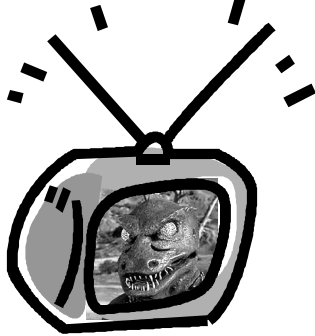
Semantic Memory



Evaluation

- Hierarchical effect
- Typicality effect
- Reverse hierarchical effect

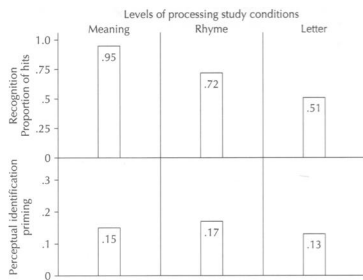
Episodic Memory



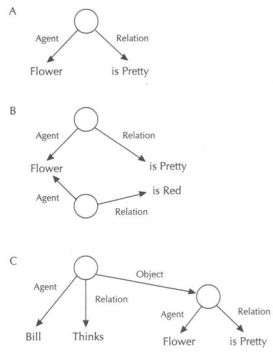
Declarative vs. Procedural Memory

- Procedural memories are difficult to verbalize
- Skills take practice
- Physiological differences

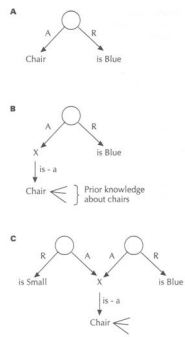
Implicit vs. Explicit Memory



ACT-R



Type-Token Distinction

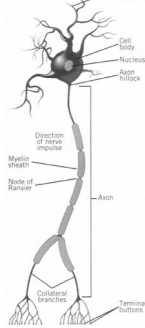


Properties & Evaluation

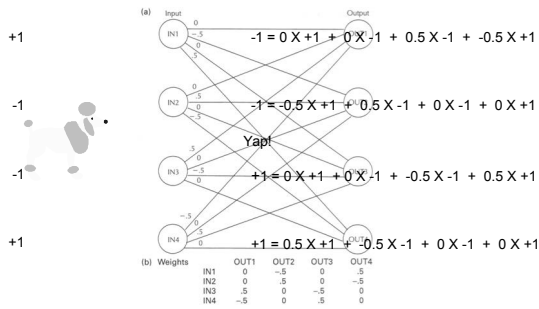
- Typicality effect
- Fan effect

Parallel Distributed Processing

AKA Neural Nets
AKA Connectionism



PDP



<http://academic.udayton.edu/gregelvers/psy522/pdp.html>

Adjusting Link Weights: Hebb's Rule

$$?W_{ij} = e * a_i * a_j$$

? W_{ij} – Change in link weight between output i and input j

e – learning rate (between 0 and 1)

a_i – activation of output i

a_j – activation of input j

Adjusting Link Weights: ? Rule

AKA Widrow-Hoff training rule

$$\Delta W_{ij} = e * (t_i - a_i) * a_j$$

ΔW_{ij} – Change in link weight between input i and output j

e – learning rate (between 0 and 1)

t_i – training or desired activation of output i

a_i – activation of output i

a_j – activation of input j

Properties & Evaluation

- Remembering
- Generalization
- Interference effects
