

Ineffable Computing

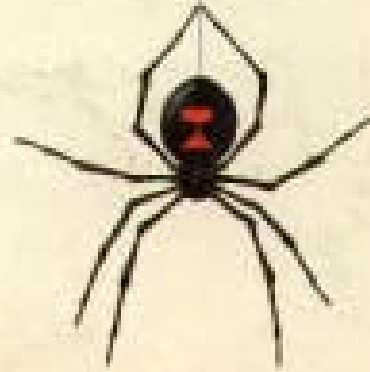
Superb Mysteries By

FAWCETT
BOOKS

100-1011111

ISAAC ASIMOV

TALES OF THE BLACK WIDOWERS



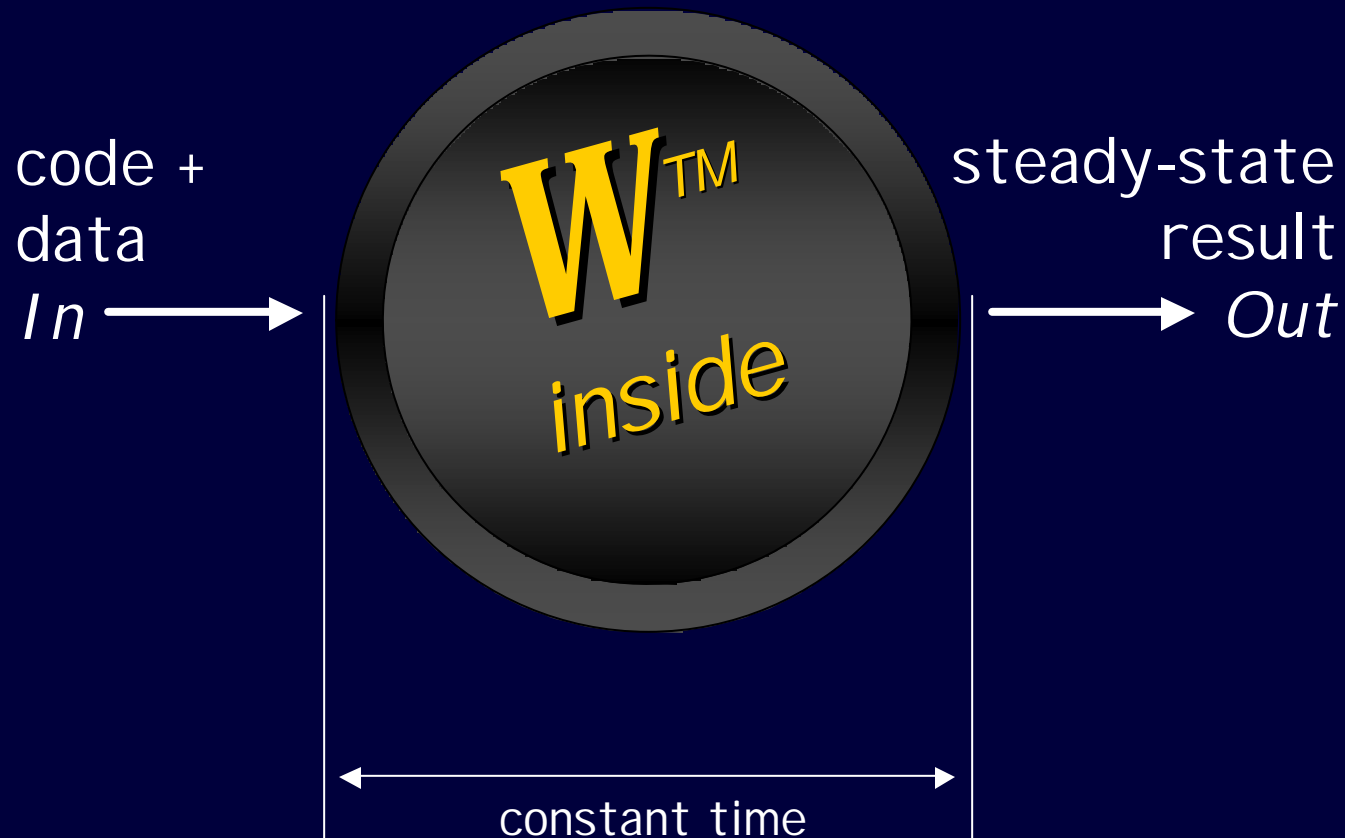
THE MASTER OF SCIENCE
FICTION NOW CREATES
FASCINATING TALES OF MYSTERY

How do you
Justify your Existence?

$$2^n$$

2M

The Philosopher's Stone

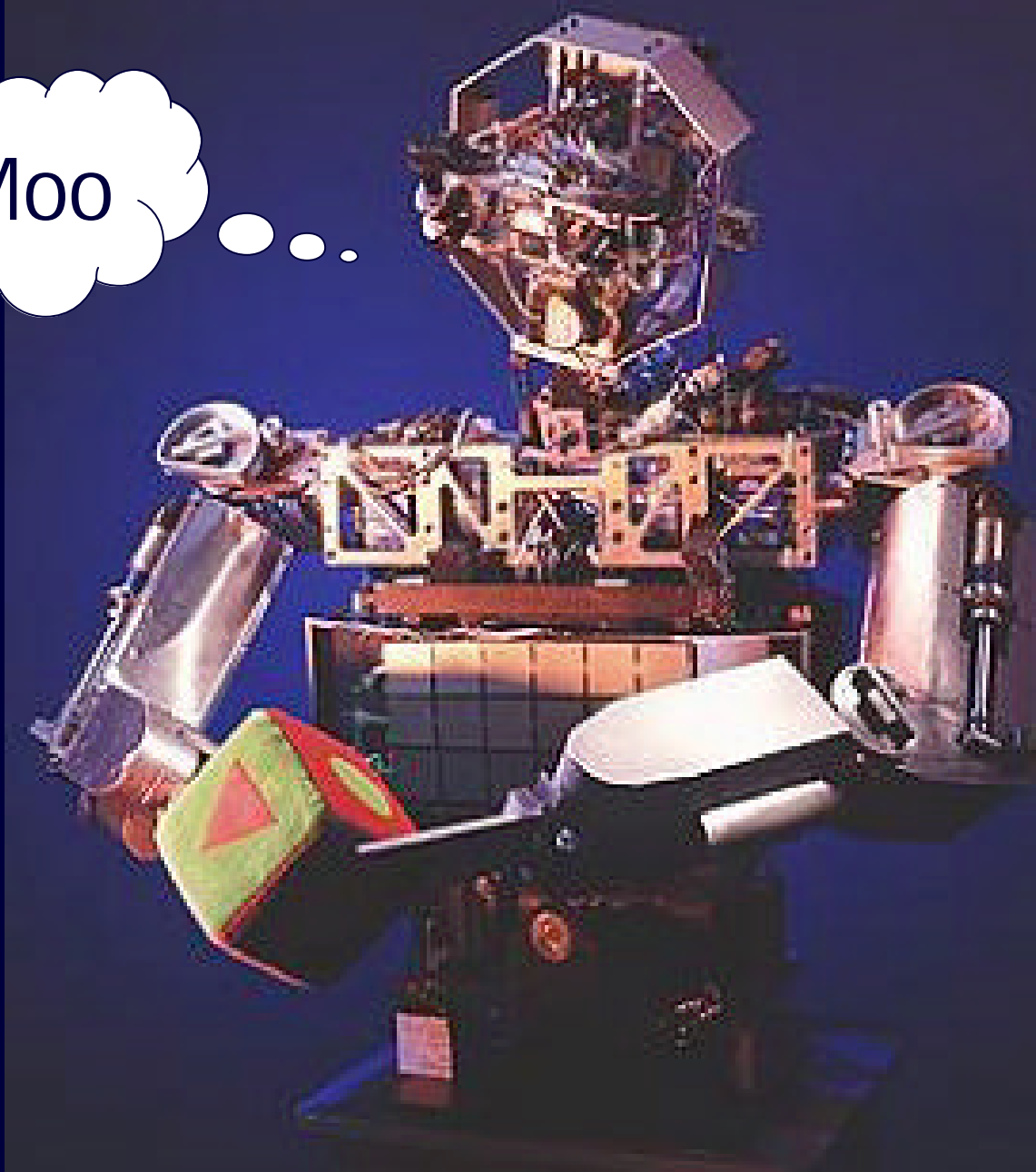




Moo



Moo...



Fighting the Ineffable

- Use minimal descriptions
- Use strategic viewpoints
- Just get better at describing stuff
 - Big complicated perceptual networks

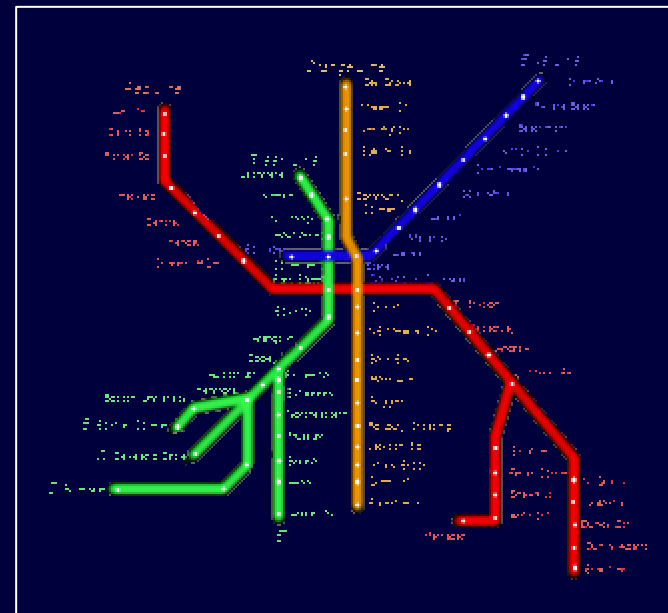
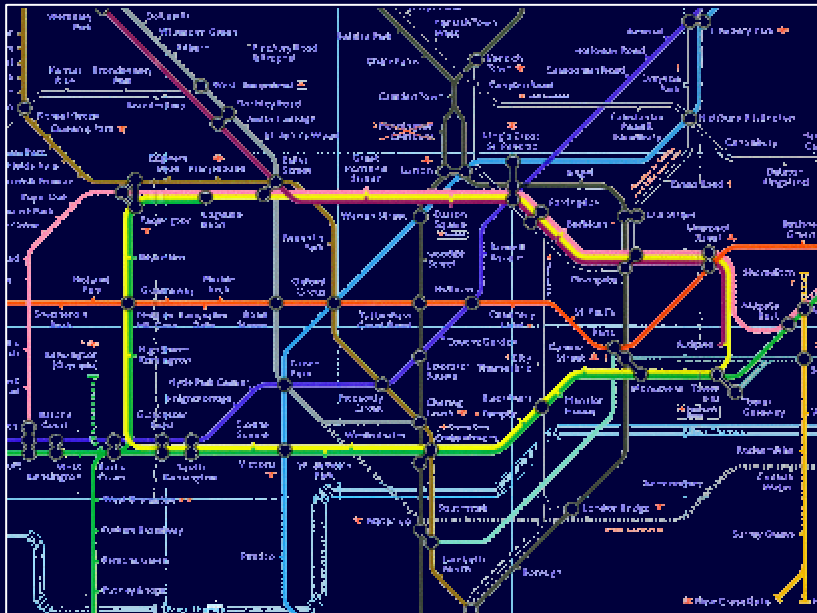
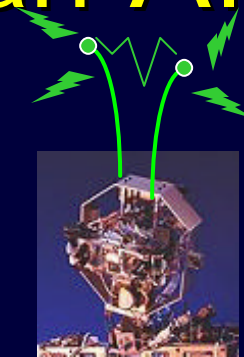


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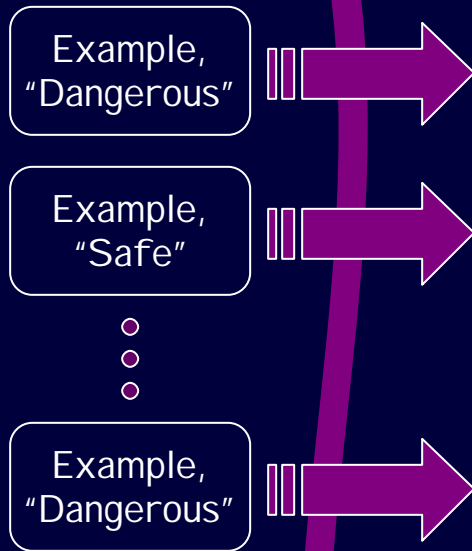
Communicating with an Alien



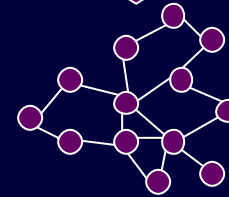
"moo moo-moo
moo moo moo"



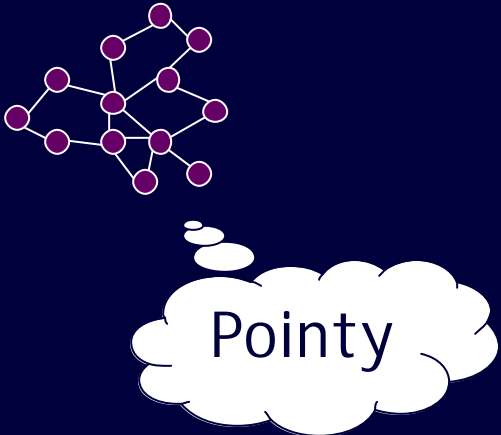
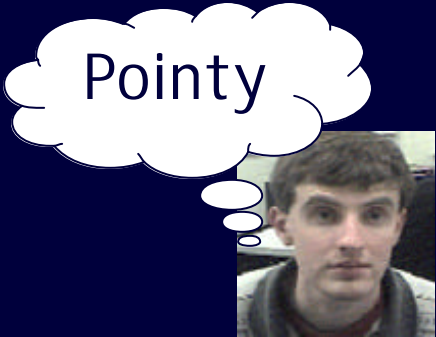
Examples



Supervised Learning



Mind-Reading



Bootstrapping

Dangerous



Example,
"Dangerous"

Example,
"Safe"

⋮

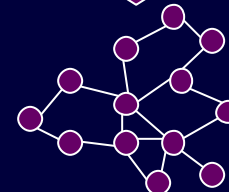
Example,
"Dangerous"

"Pointy"

"Fast"



Supervised Learning



Pointy,
Approaching
rapidly

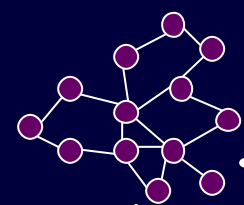
Feature Selection

Bootstrapping

Dangerous



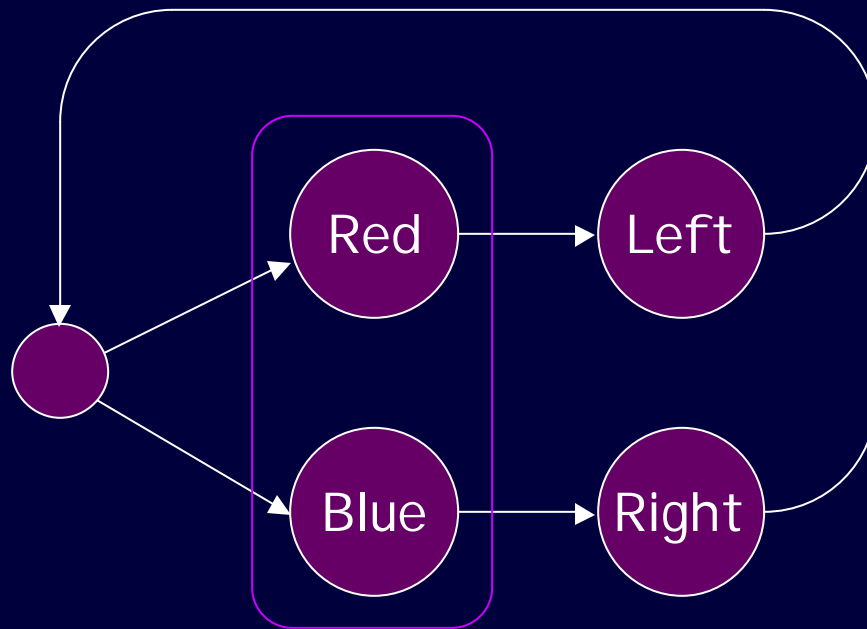
Feature Selection



Pointy...
Fast...

Shared Activity

Sorting



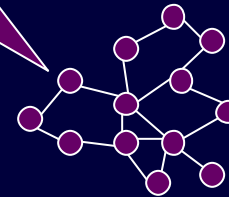
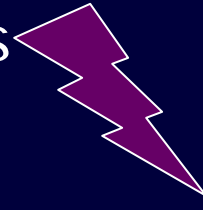
Collapsing Uncertainty



ENOUGH!



Significance
Tests



Training Data

Instructor



Demonstrated Task



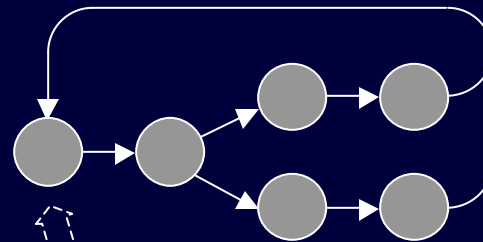
Task Learning Mechanism

Task Modeling

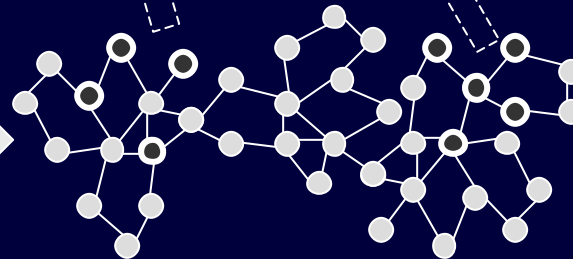
Task Grounding

Perceptual System

Sequencing Model



State Grounding



Perceptual Network

Why Communication?

- Why not just programming?
 - Referential indeterminacy is disruptive
- Why not just learning?
 - How to use what is learned
 - How to pose next learning task
- Hand-holding but not spoon-feeding

Future Directions

- Ineffable Computing
- Unprovoked Computing
- Dysfunctional Computing
- Quantum Dysfunctional Computing

Brief Rants

- Why not imitation?
 - Imitation is a question, not an answer
- Why not naïve users?
 - Humans don't stay naïve for long
- Humanoids, Cog, Kismet, simulation, emotions, faces, scientific pointillism

ENOUGH!



