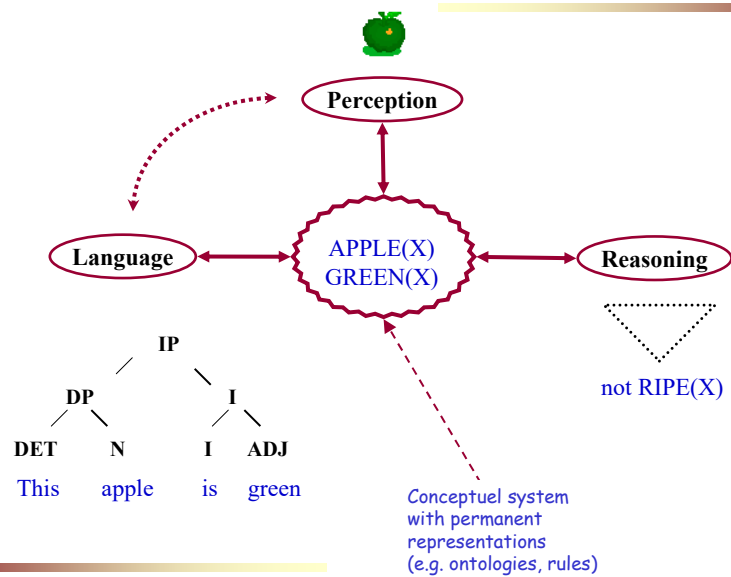
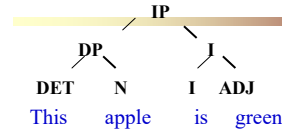


What are predicates?



Interfaces





Dynamical systems

(NN, stat-ML...)
Numbers, metrics, attractors
physical time...

Symbolic systems

(ontologies, rules...)
Symbols, syntax
computational time...

not RIPE(X)

van Gelder, T. (1998).
[The dynamical hypothesis in cognitive science.](#)
BBS, 21 (5), 615-665.

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Dynamical systems

(NN, stat-ML...)
Numbers, metrics, attractors
physical time...

Problems

- ◉ Slow learners (no one-shot learning)
- ◉ Blind to exceptions
- ◉ Blind to relevant structures
- ◉ Hermetic to background knowledge
- ◉ Insensitive to contradictions
- ◉ No (causal) abduction ...

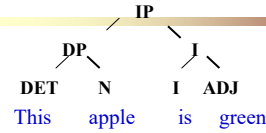
van Gelder, T. (1998).
[The dynamical hypothesis in cognitive science.](#)
BBS, 21 (5), 615-665.

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Problems

- "common sense"
- graduality, typicality, modification
- Correction & completeness; ground concepts; holism & frame pb; . . .
J. Fodor (1981, 1983, 1990, 1998);
F & Lepore (1992); F, Garrett & Walker (1980);
F & Pylyshyn (1988)
- Omnipotence & monotony



Symbolic systems

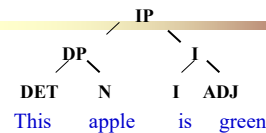
(ontologies, rules...)
Symbols, syntax
computational time...

not RIPE(X)

Ghadakpour, L. (2003).

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Dynamical systems

(NN, stat-ML...)
Numbers, metrics, attractors
physical time...

Symbolic systems

(ontologies, rules...)
Symbols, syntax
computational time...

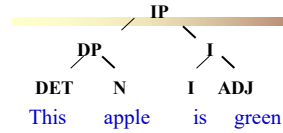
not RIPE(X)

~~Interface ?~~

Ghadakpour, L. (2003).

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Dynamical systems

(NN, stat-ML...)
Numbers, metrics, attractors
physical time...

Symbolic operators

(no permanent representations)

“Why did you . . .”

explanation \leftarrow negation \rightarrow predicates

