Searle's Argument (1980)

Refutes Strong AI

"The aim of the Chinese room example was to try to show this by showing that as soon as we put something into the system that really does have intentionality (a man), and we program him with the formal program, you can see that the formal program carries no additional intentionality. It adds nothing, for example, to a man's ability to understand Chinese."

Eric Dietrich 1990

Computationalism

- Understanding behavior as a capacity to compute some function from inputs to outputs.
- Function is analyzed as a sequence of sub-functions which interact to give the output.

Intentionality

Computationalism claims that humans as well as 'machines' can have intentionality

Dietrich offers the possibility that consciousness (as opposed to intentionality) is what differentiates humans from machines in Searle's Chinese Room Argument

Empirical Understanding

On Intentionality: Symbol Grounding & Computationalism

Group A

Harnad 1990

Symbol Grounding
His interpretation of Intentionality

Proposed Hybrid Solution

Symbolic AI + Connectionism

Using Neural Nets

Computational model

Symbol grounding   Symbolic Theft vs Sensory motor Toil

Troy D. Kelly '03

Symbolic and Sub-Symbolic Representations

Support for Harnad's hybrid solution by finding analogues though biology understanding.
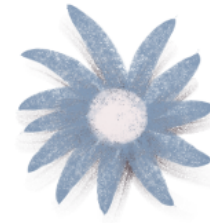
On Intentionality: Symbol Grounding & Computationalism

Group A

Searle's Argument (1980)

Refutes Strong AI

"The aim of the Chinese room example was to try to show this by showing that as soon as we put something into the system that really does have intentionality (a man), and we program him with the formal program, you can see that the formal program carries no additional intentionality. It adds nothing, for example, to a man's ability to understand Chinese. "

# Eric Dietrich 1990

Computationalism

- Understanding behavior as a capacity to compute some function from inputs to outputs.
- Function is analyzed as a sequence of sub-functions which interact to give the output.

Intentionality

Computationalism claims that humans as well as 'machines' can have intentionality

Dietrich offers the possibility that consciousness (as opposed to Intentionality) is what differentiates humans from machines in Searle's Chinese Room Argument

Searle's Argument (1980)
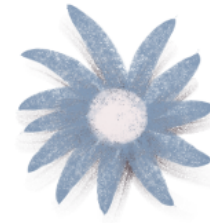
Refutes Strong AI

"The aim of the Chinese room example was to try to show this by showing that as soon as we put something into the system that really does have intentionality (a man), and we program him with the formal program, you can see that the formal program carries no additional intentionality. It adds nothing, for example, to a man's ability to understand Chinese. "

Harnad 1990
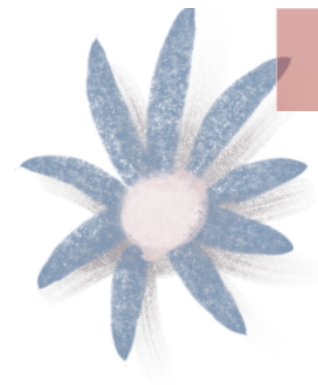
Symbol Grounding
His interpretation of Intentionality

Proposed Hybrid Solution

Symbolic AI + Connectionism

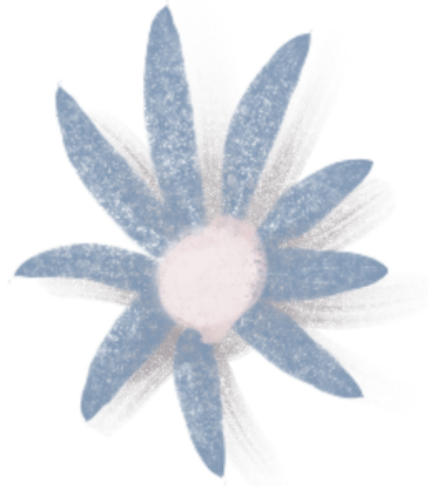## Computational model   Using Neural Nets

Symbol grounding   Symbolic Theft vs Sensory motor Toil

Troy D. Kelly '03

Symbolic and Sub-Symbolic Representations

Support for Harnad's hybrid solution by finding analogues though biology understanding.

Empirical Understanding

References

- [Kelley, Troy D.,2003] "Symbolic and Sub-Symbolic Representations in Computational Models of Human Cognition What Can be Learned from Biology?." Theory & Psychology 13.6 (2003): 847-860.
- [Dietrich, E. 1990] "Computationalism" Social Epistemology 4: 135–54
- [Angelo Cangelosi, Alberto Greco and Stevan Harnad , 2002] "Symbol Grounding and the Symbolic Theft Hypothesis"; In Cangelosi A & Parisi D. Simulating the Evolution of Language. London: Springer
- [Harnad S. , 1990]; "The Symbol Grounding Problem"; Physica D 42: 335-346.
- [Saussure, Ferdinand de , 1916]; "Nature of the Linguistics Sign" ; In Charles Bally & Albert Sechehaye, Cours de linguistique générale, McGraw Hill Education.
- [Pierce C. S., 1932] ; "The icon, index, and symbol" ; Collected papers of Charles Sanders Pierce, 2, 156-173.
- [John R. Searle , 1990]; "Is the Brain's Mind a Computer Program?" ; In Scientific American, pp. 26--31.
- [John R. Searle , 1984]; "Minds Brains and Computers", (Book)