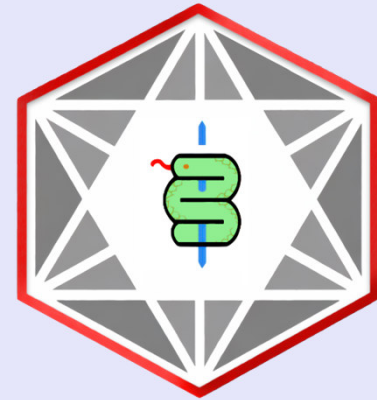




Chula
Chulalongkorn University

Clinical Cognitive Sciences



**CLINICAL
COGNITIVE
SCIENCES
LAB**

Graham Pluck & Kris Ariyabuddhiphongs
Faculty of Psychology, Chulalongkorn University, Thailand

5th International Workshop on Cognition: Interdisciplinary Foundations,
Models and Applications (CIFMA), 7th November 2023

**Why
clinical
cognitive
sciences?**

Endocrinology

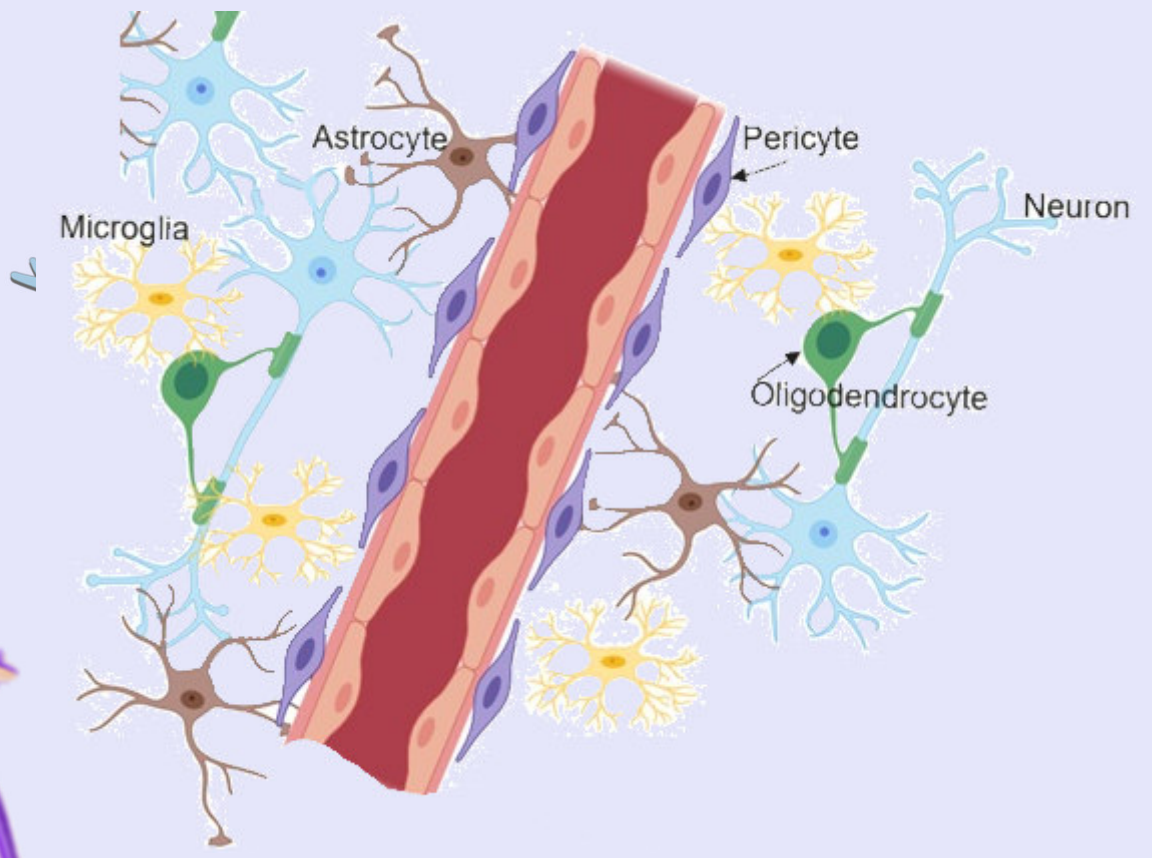
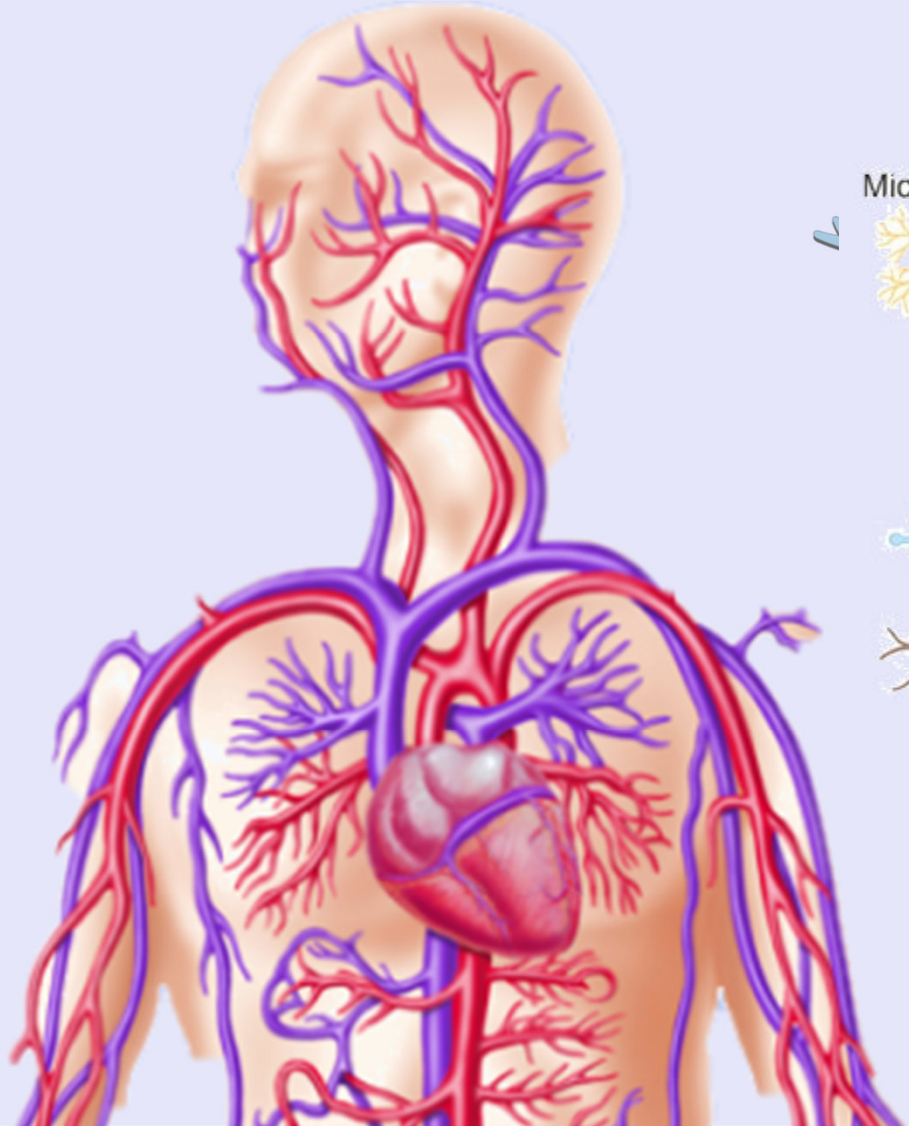
Clinical Psychology



Neurology

Psychiatry





Cognitive symptoms



Treatments have cognitive side-effects

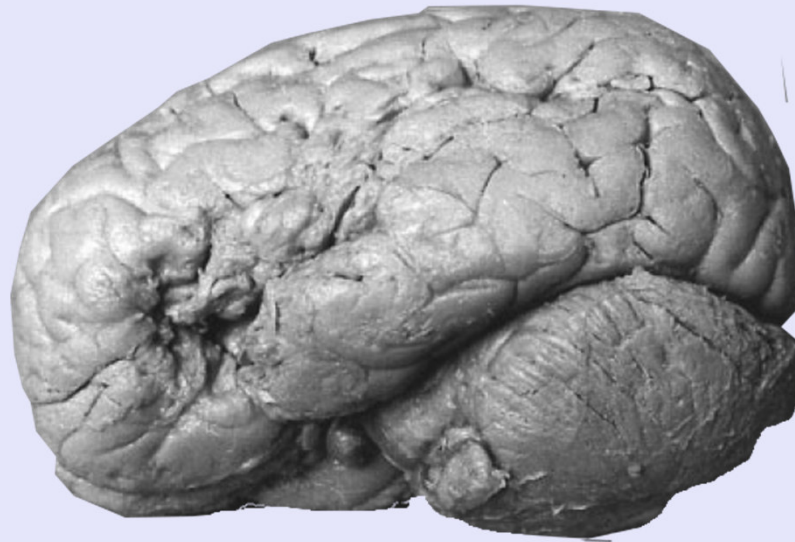


Cognitive risk and protective factors for disorders



**Mutual
symbiosis
between
cognitive
& clinical
sciences**

Clinical science aids cognitive science



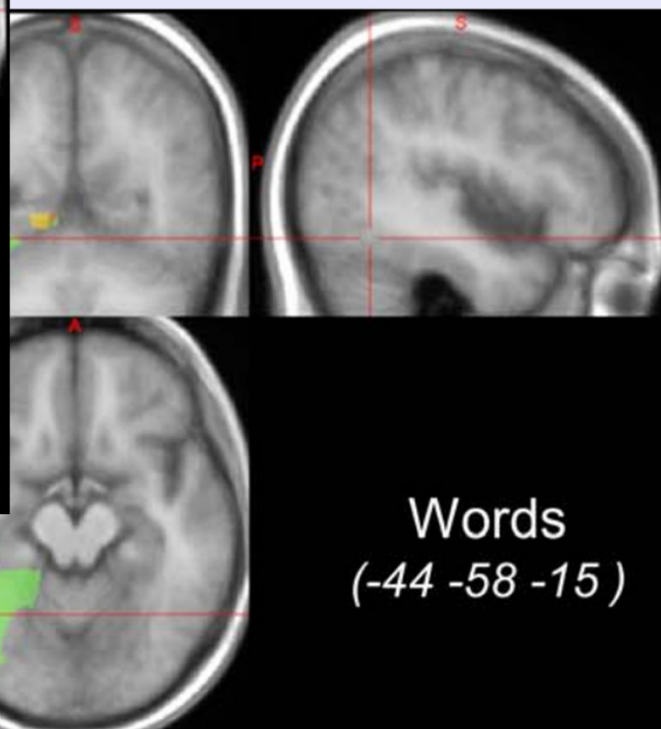
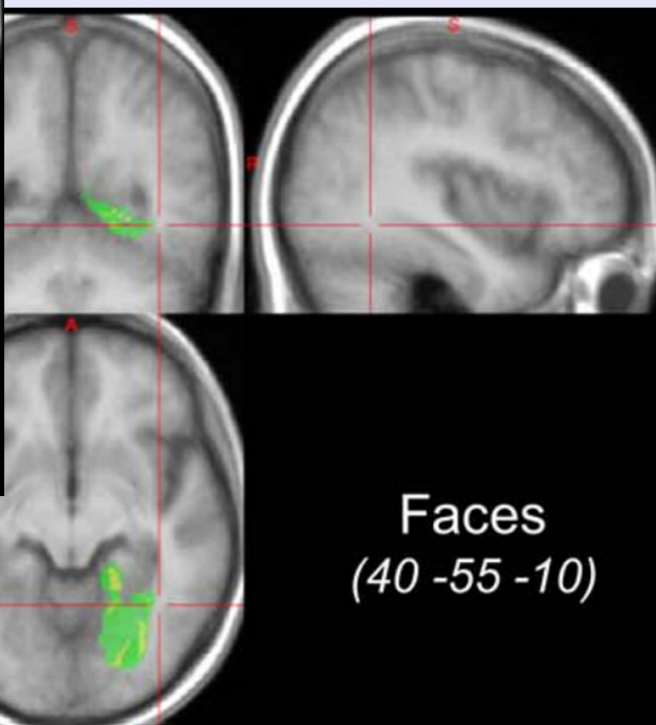
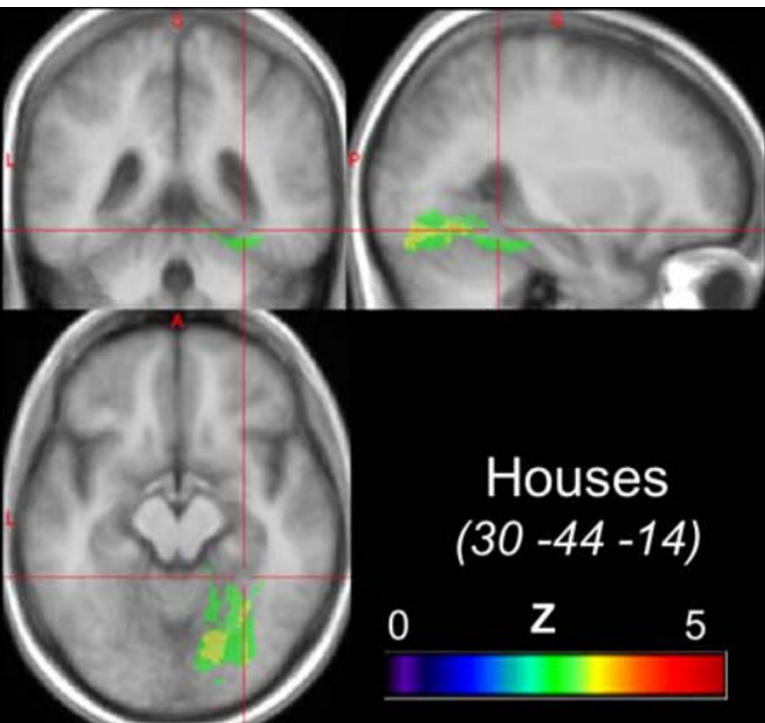
Brain of Broca's patient (1865)

Clinical science aids cognitive science

Approximately 5,000 years ago, the first known description of aphasia

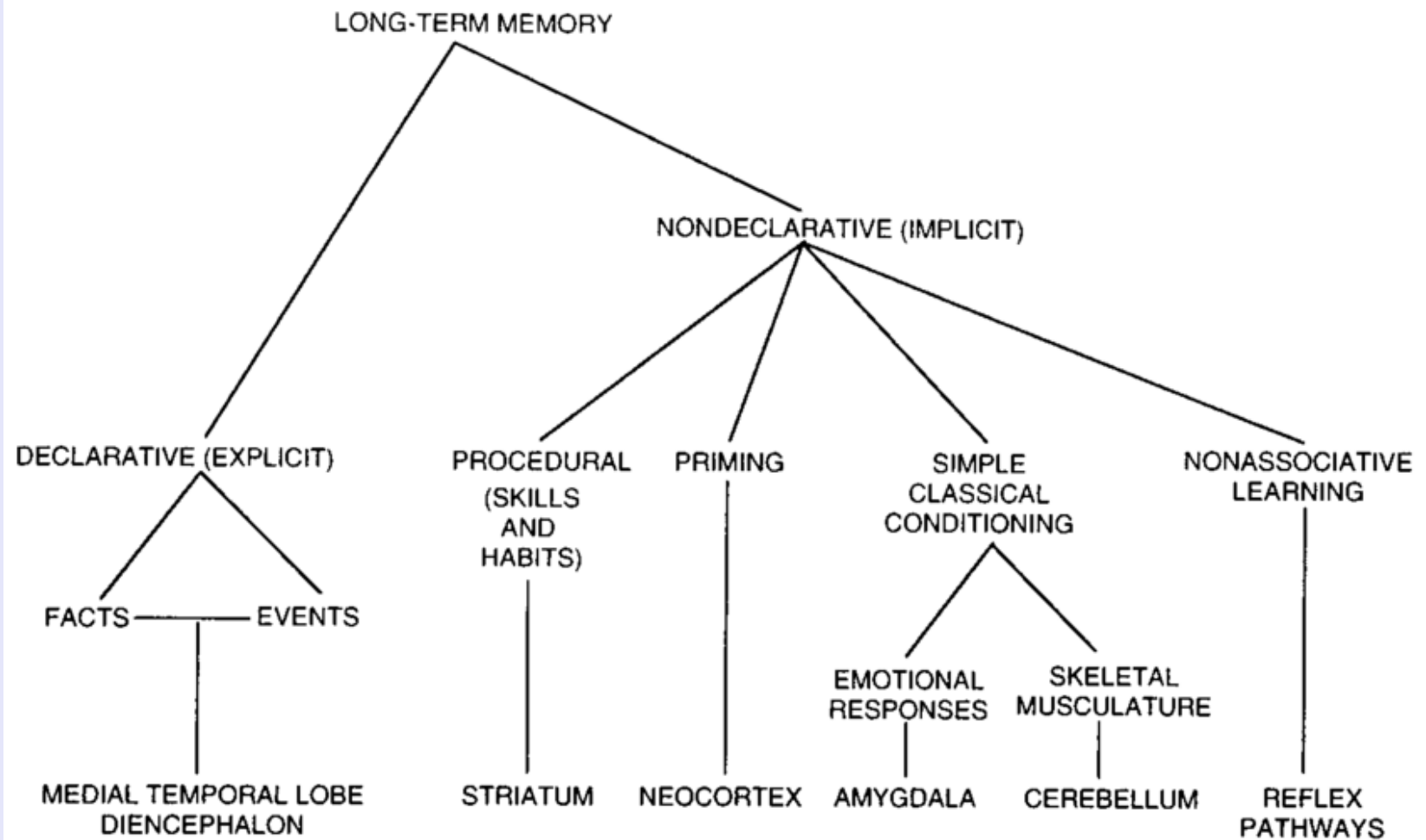


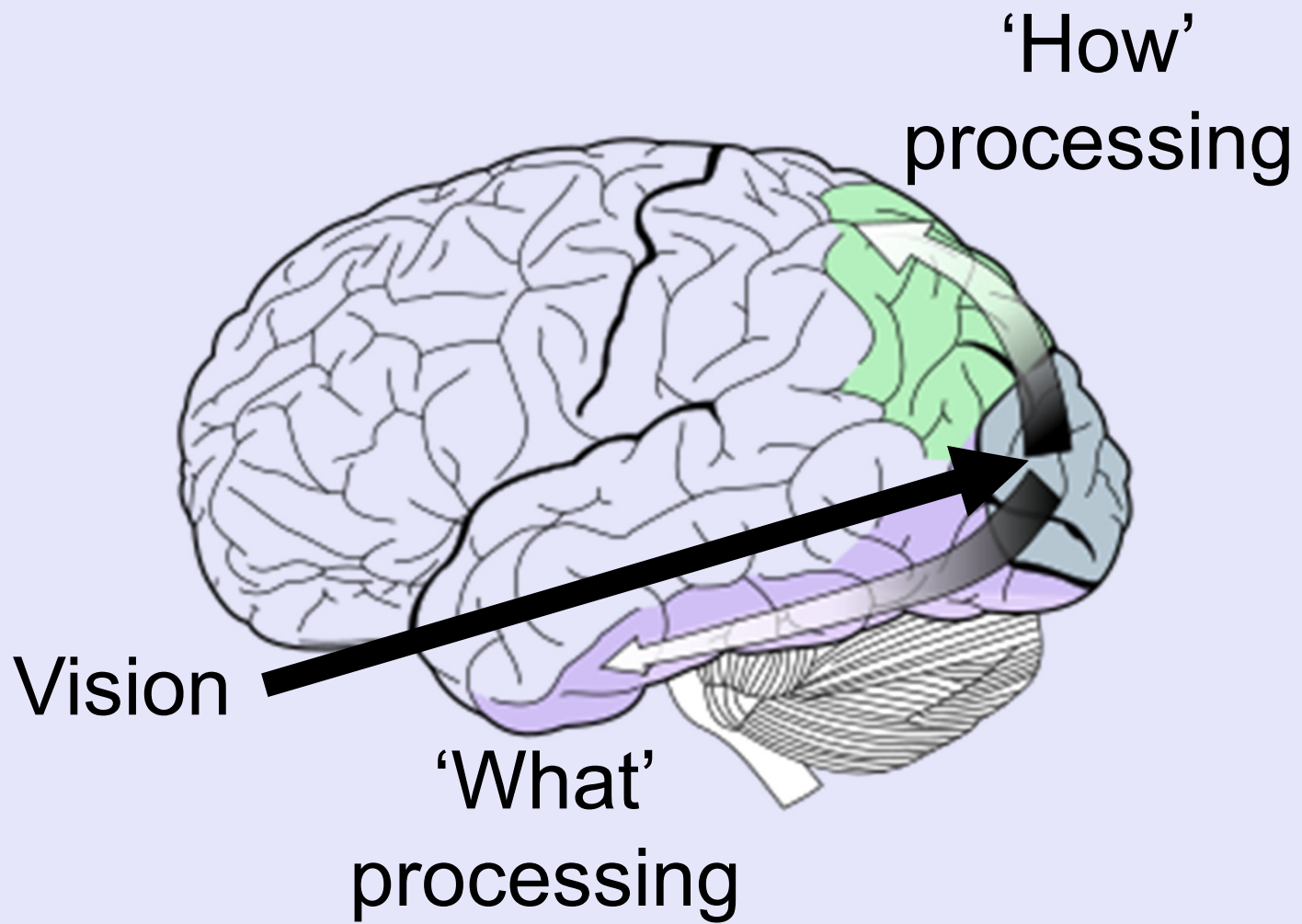
TRANSLATION: One having a wound in his temple, penetrating to the bone (and) perforating his temporal bone: while he discharges blood from both his nostrils, he suffers with stiffness in his neck, and is speechless.



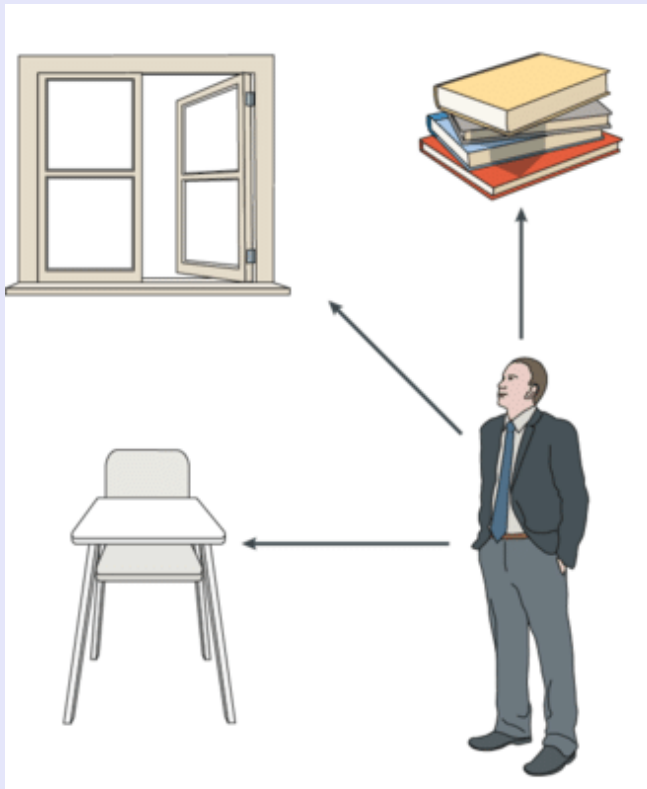
It's not all about impairments...

- Higher crystallized ability linked to self-harm in people with schizophrenia
- Enhanced detection of deception in people with aphasia
- Better face recognition in visual-form agnosia patients
- Better than expected reading skills in people with schizophrenia
- Et cetera

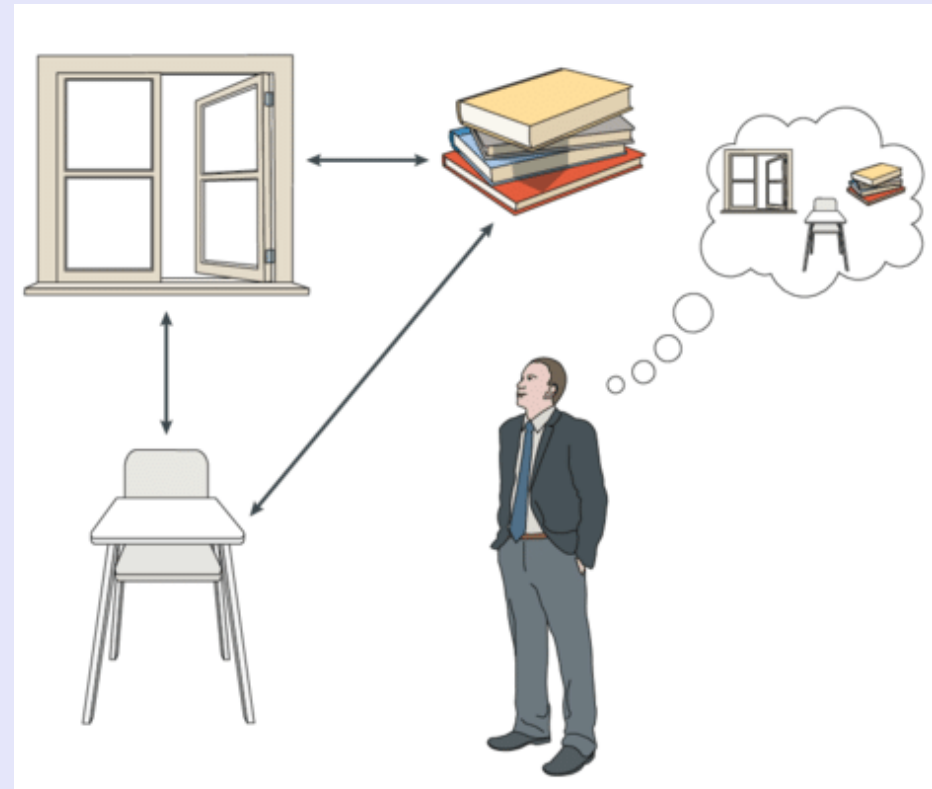




Spatial coding

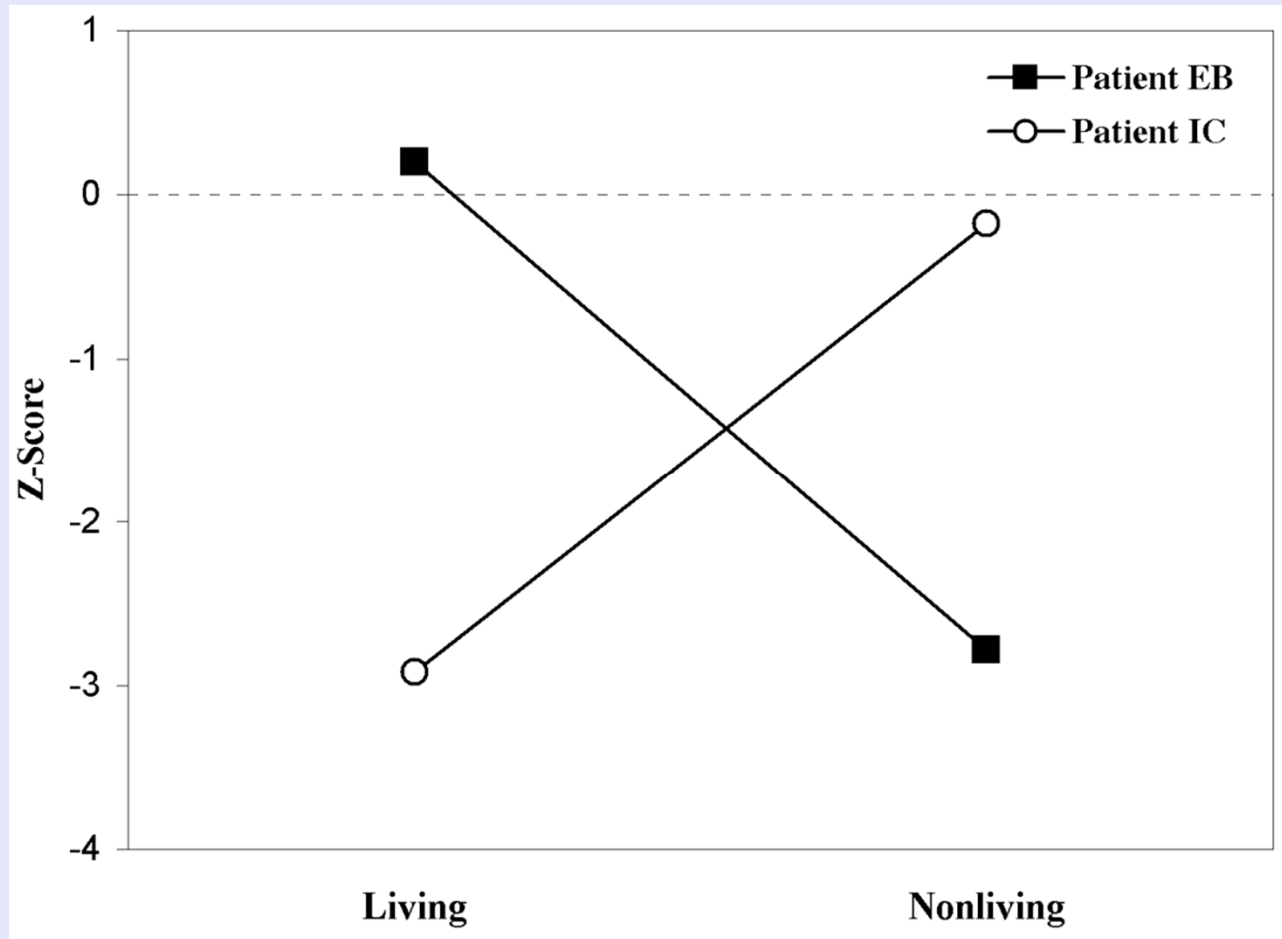


Egocentric



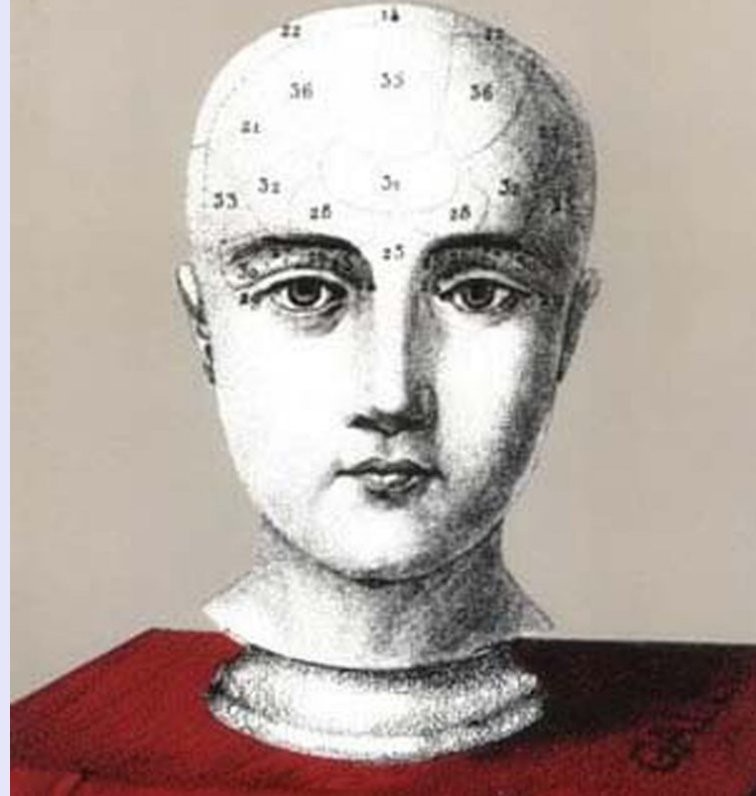
Allocentric

Double dissociation method



THE MODULARITY
OF MIND

Jerry A. Fodor








Cognitive Psychology

Volume 7, Issue 2, April 1975, Pages 268-288



The functional equivalence of problem solving skills ☆

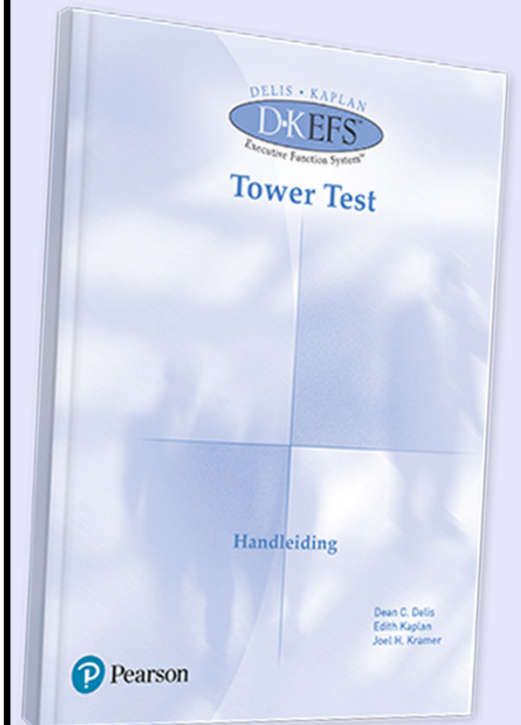
[Herbert A Simon](#) 

[Show more](#) 

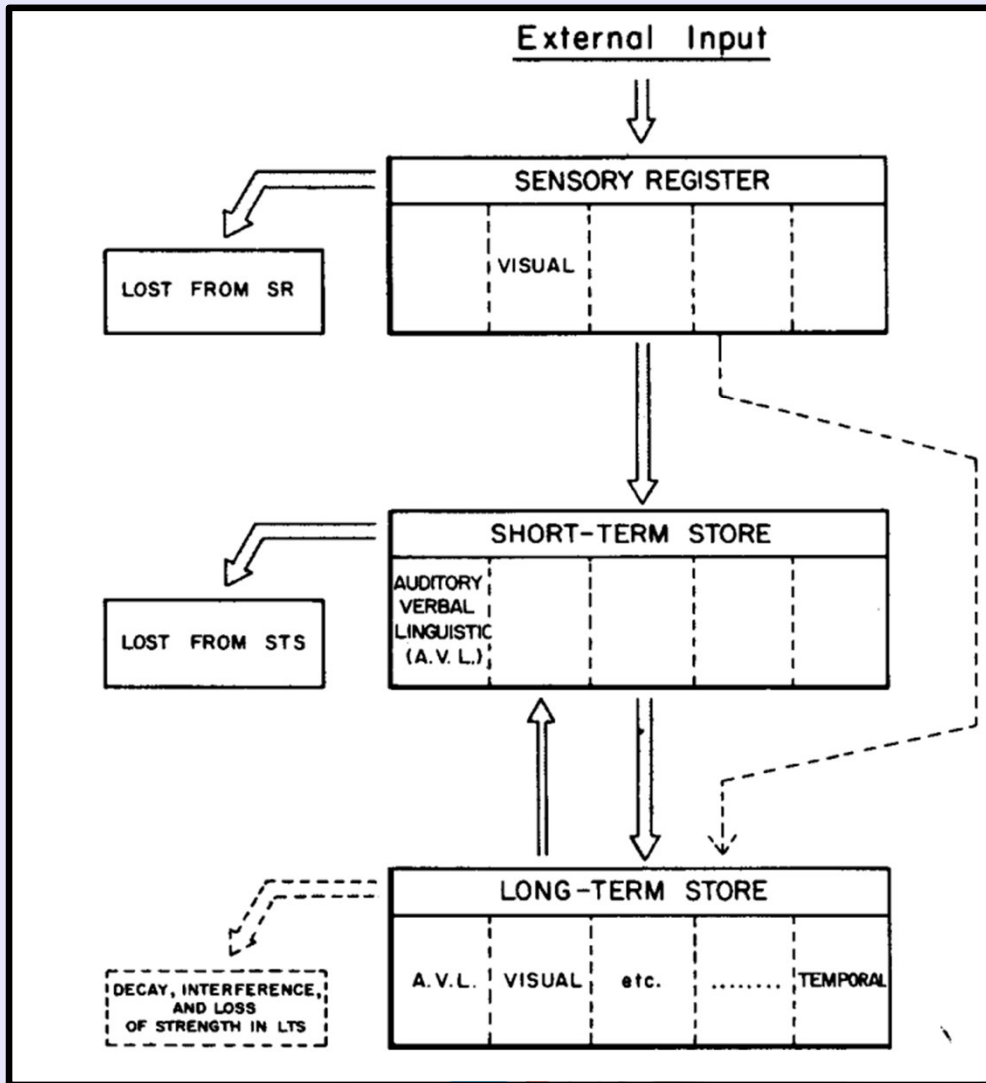
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[https://doi.org/10.1016/0010-0285\(75\)90012-2](https://doi.org/10.1016/0010-0285(75)90012-2) 

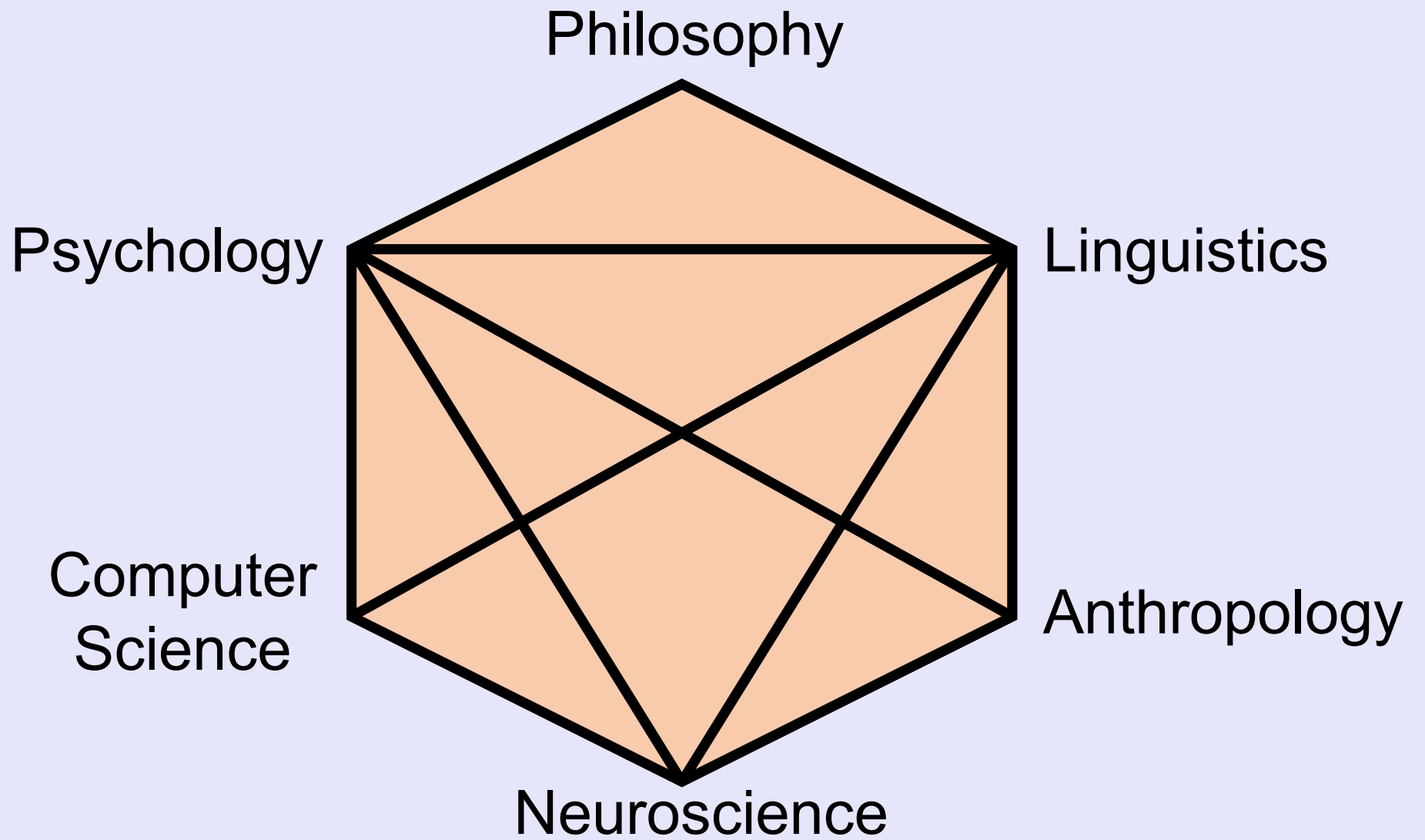
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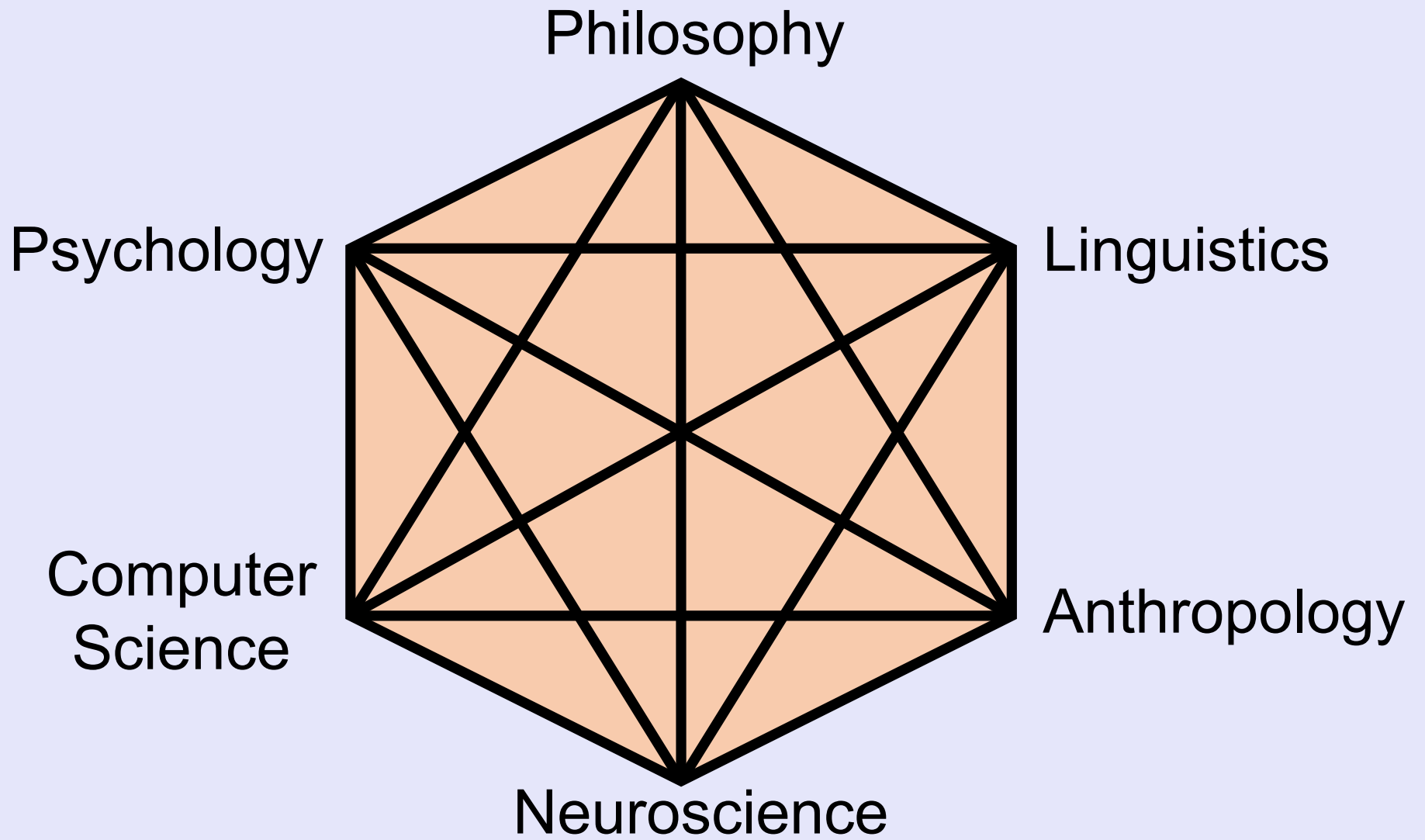


Clinical assessment of memory function



**Clinical
sciences
within
cognitive
science(s)**



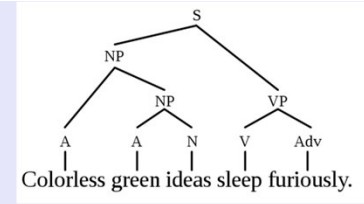


“Cognitive” has become
a popular adjective

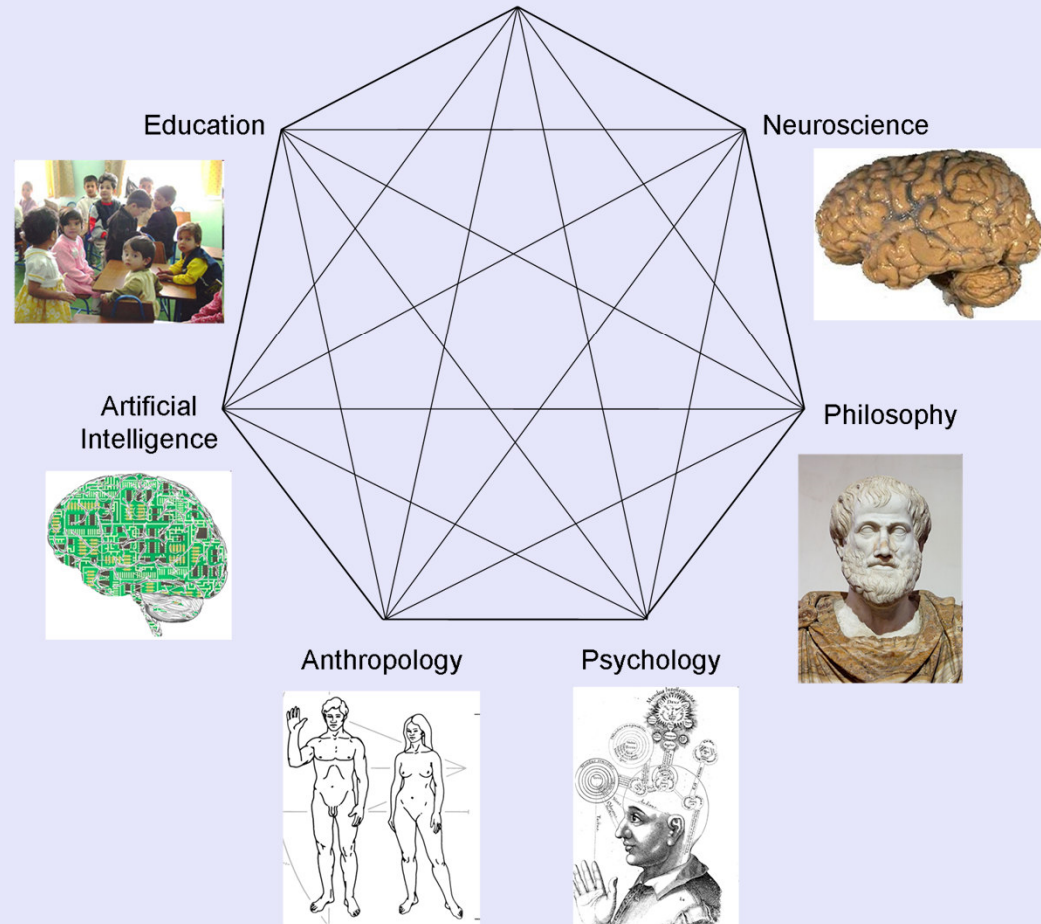


“Cognitive engineering”	>405,000 results
“Cognitive design”	>106,000 results
“Cognitive geography”	>21,100 results
“Cognitive theology”	>10,700 results

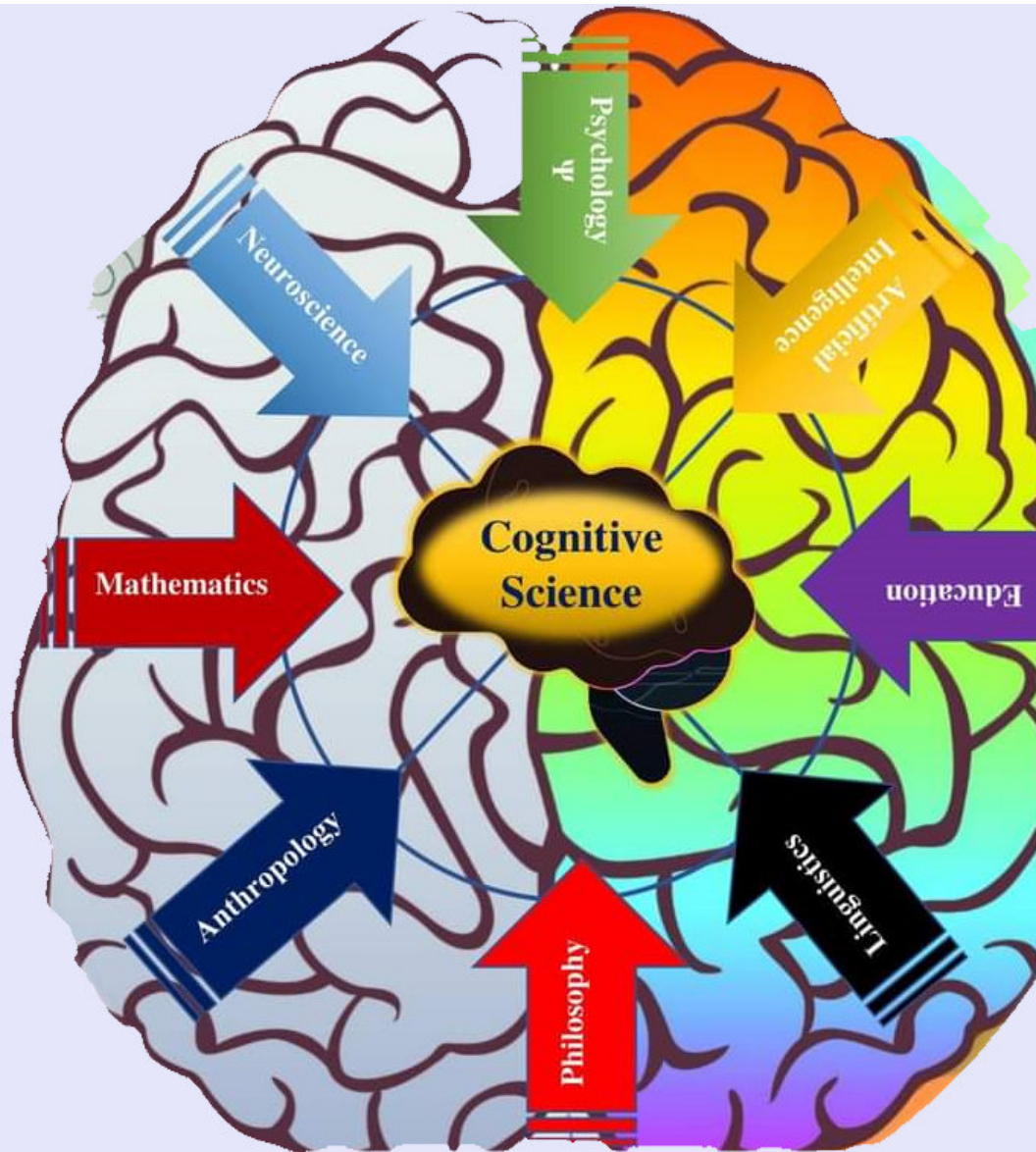
7 Sided, Includes Education



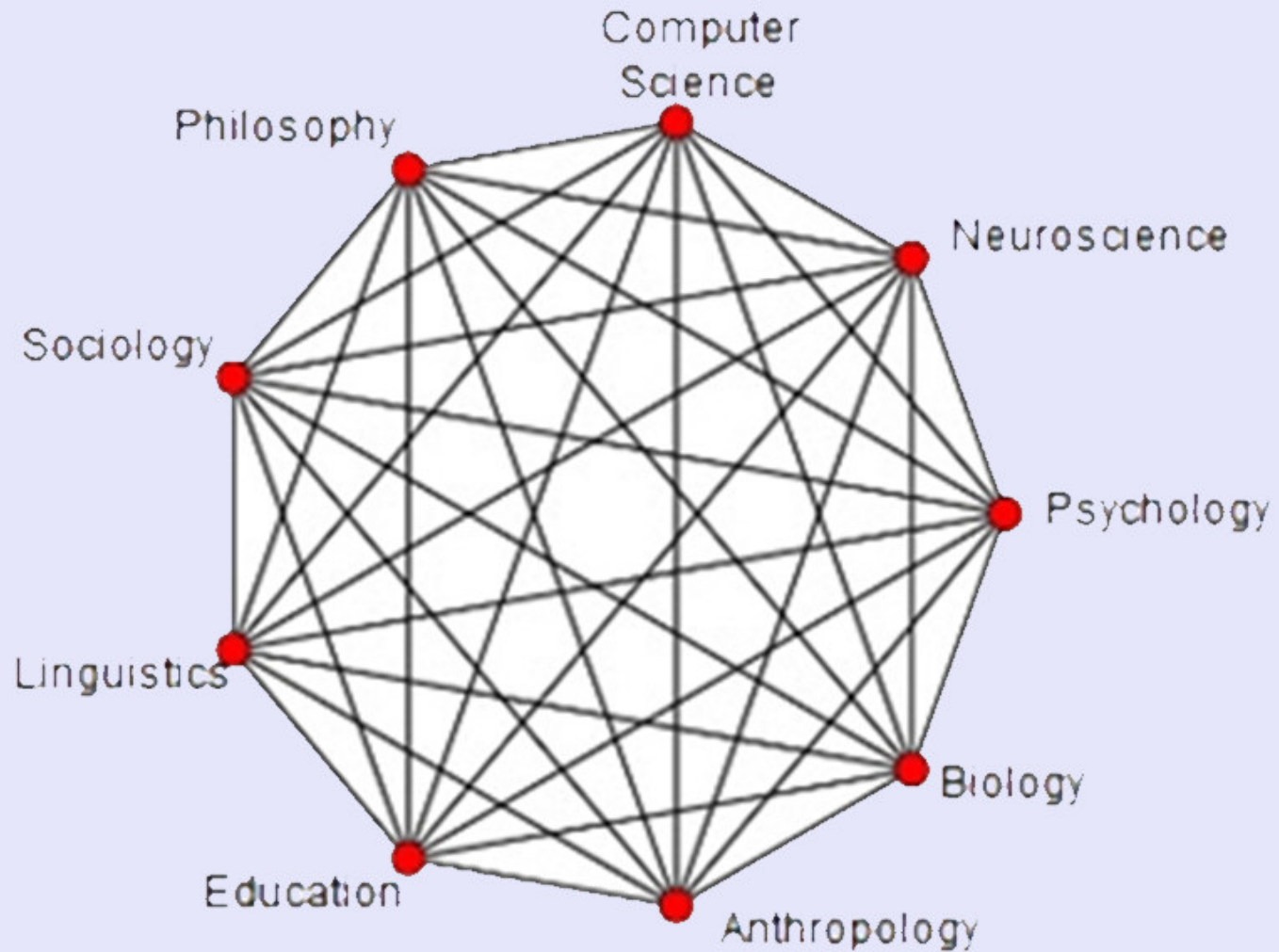
Linguistics



8 Sided,
Includes
Education and
Mathematics



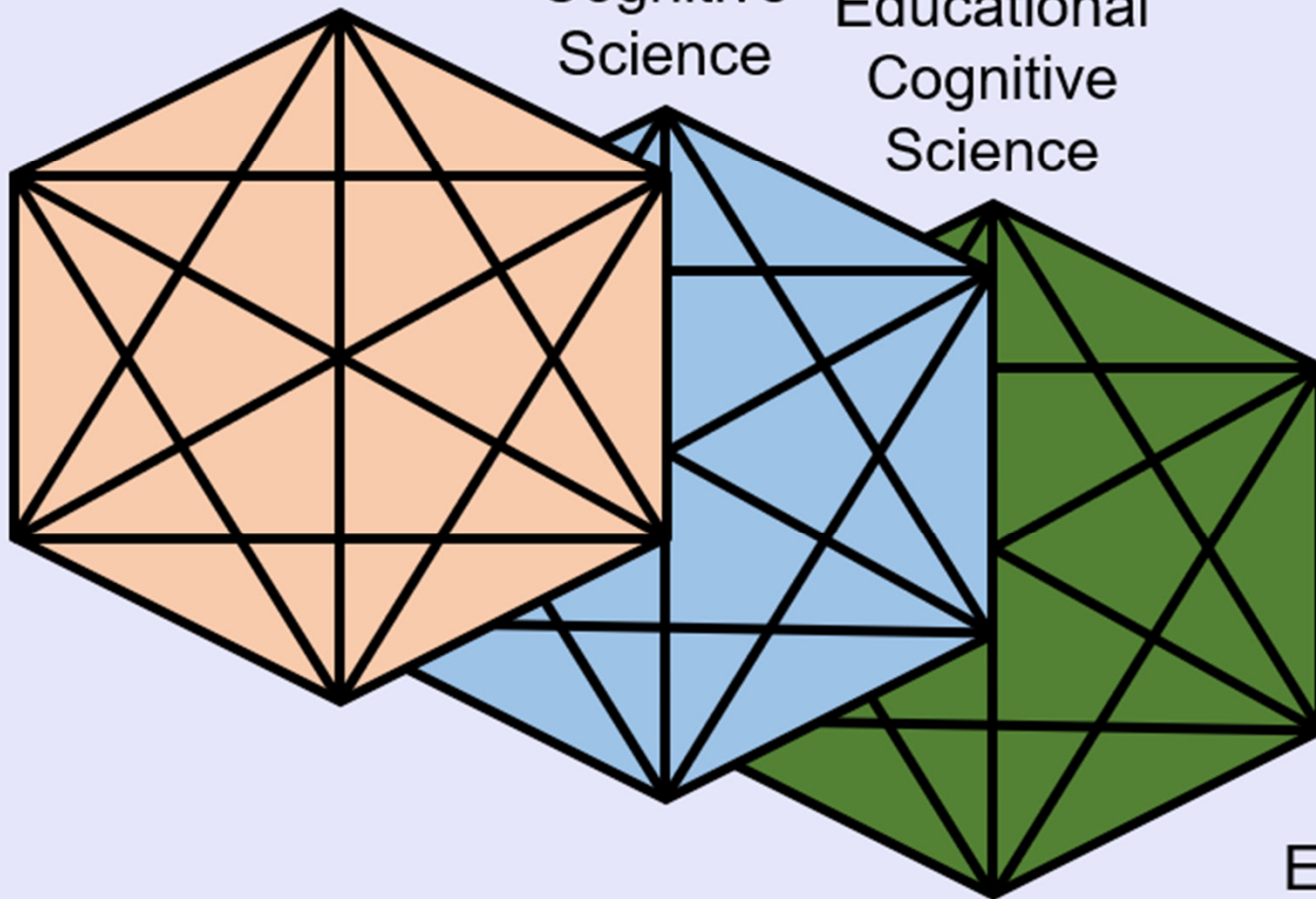
9 Sided,
Includes
Education
Biology, &
Sociology



Core
Cognitive
Science

Clinical
Cognitive
Science

Educational
Cognitive
Science



Et cetera

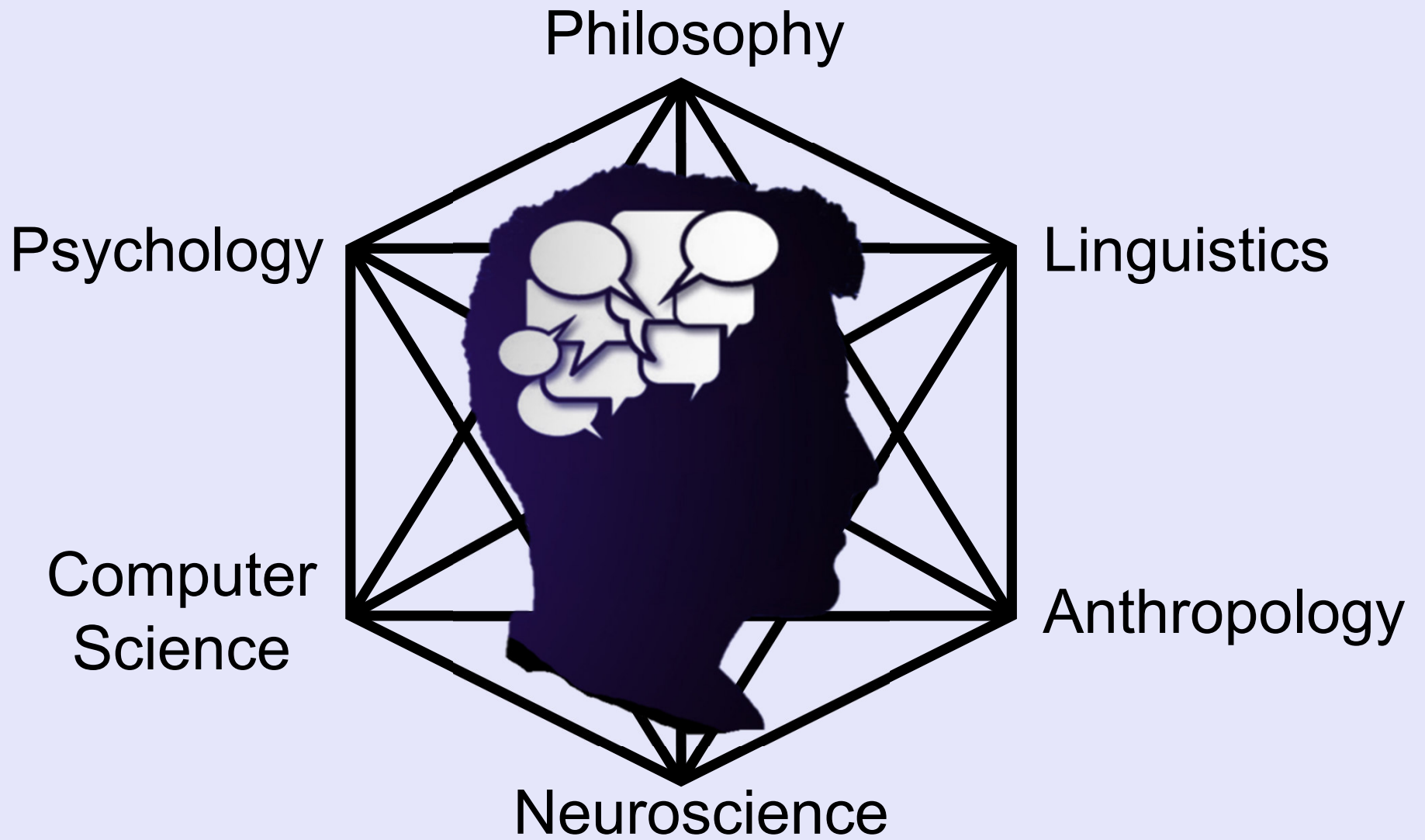
**Cognitive
science
contributions
to a sample
clinical
disorder**



Hearing voices that are not real is a cardinal feature of schizophrenia.

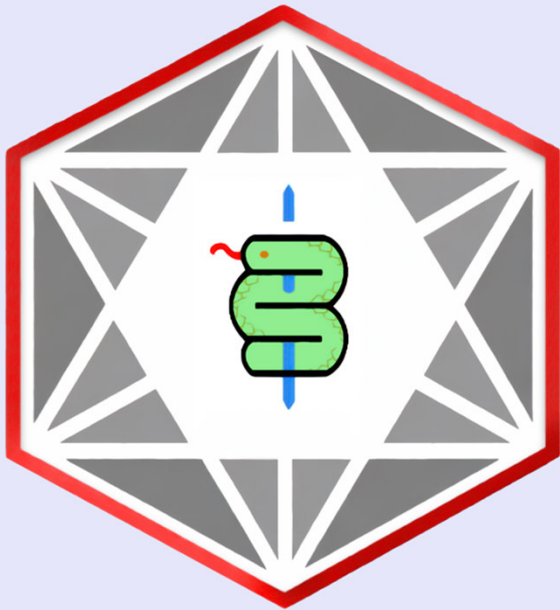
The 'voice' of, course, must be one's own, but is not recognized as such.

A very cognitive symptom.



Conclusions

- ◆ We bring attention to the mutually symbiotic relationship between clinical and cognitive sciences.
- ◆ Greater integration between clinical and cognitive sciences would bring benefits to all sides.
- ◆ We identify clinical cognitive sciences as an important applied parallel to the core academic cognitive sciences.



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