Why Study Language?

- Whirs, pops, beeps ideas

When a male octopus spots a female, his normally grayish body suddenly becomes striped. He swims above the female and begins caressing her with seven of his arms. If she allows this, he will quickly reach toward her and slip his 8th arm into her breathing tube. A series of sperm packets move slowly through a groove in his arm, finally to slip into the mantle cavity of the female.

- Pops, beeps ideas

When Dixie opens the door to Tad, she is stunned, because she thought he was dead. She slams it in his face and then tries to escape. However, when Tad says "I love you", she lets him in. Tad comforts her and they become passionate. When Brian interrupts, Dixie tells a stunned Tad that she and Brian were married earlier that day. With much difficulty, Dixie informs Brian that things are nowhere near finished between her and Tad. Then she spills the news that Jamie is Tad's son. "My what?" says a shocked Tad.

Puzzle: How do we process sentences?

Sometimes the context helps: Please pass me the book on the table.

Puzzle: How do we process sentences?

Often the context does not help: Giant lizard-like creatures are descending from spaceships and attacking Boston. A man with below average intelligence will someday become the leader of the most powerful nation in the free world.

The Structure of Language

Sound structure: phonetics and phonology
"cat" = /k/ + /æ/ + /t/
"eat" = /i/ + /t/
"rough" = /r/ + /Ë/ + /f/
 Minimal meaning units: morphemes "cat", "dog", "eat", "go", "-s", "-ing"

The Structure of Language

Words: cat, cats, eat, eating, eats Sentence structure: syntax The cat is eating the mouse.

* mouse cat the is the eating. The dog which the cat scratched ran away.

* scratched the which away dog cat the ran.

The Structure of Language

Discourse structure ok: The cat chased the mouse. Then the cat caught the mouse.
Not good: The cat chased the mouse. The Dow Jones fell 200 points today in heavy trading.

9.98: Language and Mind

This course will address some fundamental questions regarding human language:
 (1) How language is represented in our minds;
 (2) How language is acquired by children;
 (3) How language is processed by adults;
 (4) The relationship between language and thought;
 (5) Exploring how language is represented and processed using brain imaging methods; and
 (6) Computational modeling of human language acquisition and processing.