

Advanced Topics in Cognitive Science: Language (185-415)

Crosslisted as: Topics in Philosophy of Psychology (730-428)

Spring 2021, Prof. Pietroski

Tues/Fri 10:20am-11:40am (Online via Canvas, Synchronous)

<https://rutgers.instructure.com/courses/104453/>

Prerequisite: Introduction to Cognitive Science (01:185:201)

Course Description (may be slightly revised over winter break)

The broad goal is to illustrate central issues in cognitive science via detailed investigation of some questions that arise in the study of language—with special attention to the spoken or signed languages that human children naturally acquire—and to show how these questions can be profitably addressed by viewing them as empirical questions concerning the cognitive capacities of the relevant language-users.

More specifically, we'll begin with Noam Chomsky's classic 1957 text, *Syntactic Structures*. This book was drawn from his lecture notes for an undergraduate class; and the now famous presentation of three kinds of recursive systems (the "[Chomsky Hierarchy](#)") was designed to introduce students, with no prior experience in the study of languages, to the idea that human children naturally generate sentences from words in interesting ways that *differ* from some obvious ways in which a computer might generate complex expressions from a list of atomic expressions. We'll supplement excerpts from Chomsky's text with excerpts from Howard Lasnik's companion, *Syntactic Structures Revisited*, and Mark Baker's *The Atoms of Language*.

With this background in place, we'll turn to the question of what the languages that children acquire *are*. In later work, Chomsky described them as biologically instantiated procedures that generate expressions, in something like the way a calculator displays numerals on a screen given certain inputs. By contrast, David Lewis—a justly famous philosopher who wrote a seminal paper on this topic—described languages as sets of expressions that might be generated in many different ways by the members of a community who can communicate. This set the stage for debates about whether “English” is a language shared by many speakers who may be unacquainted with particular words of their common language, or whether there are many English languages that are similar enough to let speakers of these languages talk with one another.

In the third part of the course, we'll read some of the essays in a recently published volume celebrating the 60th anniversary of *Syntactic Structures*. Each essay in the volume focuses on a particular chapter of Chomsky's text, explaining its relevance to current issues. In class, we'll discuss the essays on language acquisition and meaning. But the other essays will be potential springboards for final paper topics. As time permits—with the details depending on the interests of those enrolled—we'll end the term with some discussion of (non-human) animal communication and possible natural histories of how distinctively human linguistic capacities emerged.

Reading: *The Atoms of Language*, by Mark Baker; other readings via the Canvas site

Requirements: 3-4 short essays/exercises during term (60%);
final project (outline 10%, paper 30%)