Fall 9-1-2015

LING 572.01: Generative Syntax and Semantics

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LING 572 GENERATIVE SYNTAX FALL 2015 ROOM 254, Social Sciences

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Course Overview, Co-Convening (see LING 472 syllabus for entire Course Description):

This syllabus, for a graduate course in Generative Syntax (LING 572), supplements the syllabus governing a co-convening undergraduate course (LING 472), under the very same title; that is, graduate and undergraduate students meet together according to an identical course schedule and encounter identical lecture and reading material specified in that schedule of class meetings, but the quantity and, more importantly, the quality of work completed for a final grade in the course designated LING 572 must be of a higher order (see **GRADUATE INCREMENT** on the Moodle shell).

In other words, both groups of students convene during course meetings to try developing skills in methods of linguistic analysis particular to the science of sentence-formation (syntax), but graduate students enrolled in LING 572 apply analytical syntactic methods at a caliber that heightens understanding of human language as "an abstraction of utterances in the form of mathematical objects" (see **COURSE DESCRIPTION** for LING 472 in the UM 2015-2016 Catalog).

Consider the notion *constituent*, one or more words functioning as a single unit, a notion preceding the inception of generative syntax and is representable using formal *bracket* notation:

[[CATS] **[** [CHASE] [MICE] **]**]

The outer brackets represent the sentence constituent, and each WORD also receives its own set of ~~brackets~~; however, another set of brackets (in **bold**) represents the notion that CHASE MICE functions as a constituent independently of the individual words contained therein. This intuition can be tested for this constituency by applying a grammatical operation that is known as clefting (breaking a sentence in two) whereby CHASE MICE is displaced from an alleged `basic` position and relocated at the left-edge position of a realized `derived` sentence that has other words added:

[CHASE MICE **]** is what **[** CATS **]** do

Conversely, this clefting `transformation` changing the basic sentence into a derived one cannot operate on the words *cats chase* because no single set of brackets `exhaustively` contains them:

* [cats chase] is what mice undergo (* means ungrammatical)

While methods of syntactic analysis prior to the advent of generative syntax can conceptualize layers of constituency graphically (e.g., bracketing), no technological counterpart then existed that was based on such formal notation and could operationalize what humans know intuitively about how sentence-formation systems work (grammatical) and why they don't (ungrammatical).

This point (intuitions of what is, respectively, well-formed and ill-formed constituencies) is the lynchpin of a generative syntax, or a sentence-formation system that is sufficiently general, a machine that fabricates every grammatical sentence constituency (an infinite number) but never fabricates ungrammatical ones (intuits ill-formedness). Such a sentence-fabrication machine is an analogy (either apt or false) for a mental faculty that fundamentally characterizes humans. The first to crack a code for generating an infinity was a graduate student called Noam Chomsky, a student of Linguistics at UPenn who devised a programming language prompting the invention of a new automaton (i.e., computer) that modeled (to a degree) humans' capability of infinity.

Incarnations of his work strain towards sufficient generality yet remain computer models, yet the only language computers understand is mathematic: This course covers development of generative syntax from Chomsky's graduate-student years in the early 1950s until the mid 1980s.

1985-1980: the Revised Extended Standard Theory (REST), or Principles & Parameters, aka Government & Binding
1979-1970: the Extended Standard Theory (EST), or the Conditions on Transformations Framework
1969-1964: the Standard Theory, or the Aspects Model, aka Transformational Grammar
1963-1955: an emergent pre-theoretical era; a finite-state automaton is natural, not generative, and a push-down automaton is generative, not natural

As a junior fellow at Harvard during the early 50's (before Syntactic Structures, his dissertation, was published as his first book), Chomsky composed The Logical Structure of Linguistic Theory (from which his dissertation was drawn), an altogether formative manuscript printed in 1975 (Newmeyer 1986 calls the work comparable to the landmark generalizations of the 1981 REST). At some point upon receiving his Master's degree, he made this claim: "A grammar of a language can be considered, in what seems to me a perfectly good sense, to be a complete scientific theory of a particular subject matter." To his dons, a grammar of a language mapped form and function, pronunciation and interpretation, utterance and proposition, or sound and meaning through using STRUCTURE (i.e., distinctive features with binary oppositions) to DESCRIBE what native speakers know when they know how to speak the language natively. Practical applications were descriptions of human languages whose vitality would endure only briefly before their native speakers deceased.

In a recent textbook, Grammar as Science, Larson elaborates how a human language grammar becomes "a complete scientific theory":

> A set of hypotheses about a certain domain constitutes a **theory of that domain**. Our set of rules thus constitutes a theory of what speakers of a language know about the syntax of their language. We call such a collection of rules a **grammar**. From this perspective, a grammar becomes a scientific theory, and grammar building becomes an exercise in scientific theorizing (pp. 81-82).

Refer to student leaning outcomes on the LING 472 syllabus to understand the procedure of how to build a grammar as a theory of language knowledge, a mental faculty bequeathed biologically.

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The Graduate Increment

Your Generative Syntax course is in fact a co-convened course: one for graduate students earning a Linguistics MA (LING 572), one for undergraduate students earning a bachelor's degree and also pursuing a Linguistics minor and/or option and, occasionally, a Certificate of Arts in ESL as a post baccalaureate students (LING 472). Students in both courses must satisfy slightly differing coursework obligations as per the status of their programs of study (CA, BA minor/option, MA). While these responsibilities may vary, student learning outcomes remain virtually common to both co-convening courses.

Student Learning Outcomes (see LING 472 syllabus)

LING 472/572 coursework encourages students of syntax to overtly display a skill-set including (but not limited to) these objectives below.

a) master notions of categoriality (i.e., parts-of-speech from traditional grammar studies, word-/morpheme classes in pre-generative *structural* linguistic analysis) by means of capably identifying (i) categories, (ii) types of gradience exhibited by categories, and (iii) forms from human languages permitting more reliable distinctions among varieties of gradient categories
b) grasp methods, pre-generative (structural, linear organization) but mostly generative (hierarchical organization), of translating (or mapping) categories into computable representations in formal notation, predominantly at the level of sentence-formation systems, and then apply some of these methods in analyses of various human languages
c) proficiently and operationally draw distinctions between human language categories (described as form-classes) and constituencies (described as function-classes) in analyzing sentence-level data into their individual segments, classically a principle of organization whereby form (noun phrase) functions as sentential subject or verbal object
d) recognize the progression of syntactic theory as a series of missed generalizations, or statements that make data appear complex (e.g., this set of sentences follows three different rules) when a single statement accounts for all of it (this set of sentences follows this one single rule)
e) mark transitions among syntactic theories using the analytical methods that characterize each one as it becomes more general than formerly, starting at graduate-student Chomsky to early versions of Government & Binding (a.k.a. Principles and Parameters), roughly three decades from 1951 to 1981 (not including Barriers model of 1986)

Graduate Student Learning Outcomes

Student learning outcomes and coursework for LING 572, though coinciding with those for LING 472, prompt wider coverage of and inquire more deeply into those versions of syntactic theories presented on the previous page, so graduate students ought to be encouraged to furnish greater reflection (closer reading of assigned texts and attentive listening to lecture material for use as a basis for expressing informed inferences in speaking and writing).

Graduate student learning outcomes include but are not limited to the following imperatives:

1. explain data-sets involving well-formed structures in both English and other languages with regards to pre-1980/post-1980 and also pre-1985/post-1985 generative theory
2. explain data-sets involving ill-formed English structures with regards to pre-1980/post-1980 and also pre-1985/post-1985 theoretical constraints which prevent such a generation
3. resolve how the post-1980 and post-1985 theory offers advantages of simplicity yet fails to simplify other complications of the previous theory

Extra problem sets in weekly assignments as well as the midterm and final examinations evaluate accomplishment of these additional objectives, specifically the weekly data-analysis problem-sets assigned to undergraduates plus additional exercises extending several particular methods of analysis and thus exploring the margins of generative-syntactic theory: This extension and exploration also includes one extra item on the midterm and final exams that complicates the version of the theory being investigated, henceforward provoking the necessity for graduates to provide their observations of how these data confound the theory and to furnish plausible revisions to a theory of generative syntax as construed at that point during the course of the term.