

# Syntax and Semantics from an Algebraic Perspective

ESSLLI 2009

Keenan, Stabler, 2009-06-12 12:20

## Abstract:

Developing perspectives from Keenan and Stabler (2003), this class will explore algebraic methods for compositionally defining and comparing various languages (syntax and semantics), with particular attention to various constructions with quantification and binding in the world's languages.

## Five lectures:

- (1) **Introduction.** Language structure ( $\neq$ trees) and universals ( $\neq$ fixed constituent orders). A universal of anaphor binding.  
Evans and Levinson (BBS, forthcoming) take Chomskyan linguistics to task for insufficient recognition of the diversity of human languages. This diversity, they claim, renders universal claims few in number and largely trivial in content, whence the monolithic picture of Universal Grammar that generative grammarians present to the CogSci community at large is inaccurate and misleading. Our response to this critique exhibits a novel format of universal generalization that has the mathematical rigor desired (if not always achieved) by a Chomskyan approach, but which incorporates (morpho)syntactic diversity in an essential way. More important than diversity per se is that languages exhibit non-universal structural regularities that speakers must learn. We illustrate this with universal claims concerning anaphora - one of the areas in which E&L criticize the Chomskyan approach.
- (2) **Example 1.** Affixes and structure in Malagasy, without movement.
- (3) **Example 2.** Quantification in 'minimalist grammar', with movement. A 'directly compositional' semantics for a grammar with 'quantifier raising'.
- (4) **Language similarity 1.** Stable automorphisms; perspectives on probabilistic language models.
- (5) **Language similarity 2.** Homomorphic realizations of canonical patterns of predication, modification, and binding.

## Readings:

- Edward Keenan and Edward Stabler (2009) Language variation and linguistic invariants.
- Edward Keenan and Edward Stabler (2005) Linguistic invariants and language variation. A revised version appears in *Logic, Methodology and Philosophy of Science* (Hajek, Valdes-Villanueva, and Westerstahl, eds.)
- Edward Keenan (2008) Voice and relativization without movement in Malagasy. Revised version appears in *Natural Language and Linguistic Theory* 26: 467-497.
- Edward Stabler and Edward Keenan (2007) Universals across Languages. (Revised from Workshop on Model Theoretic Syntax MTS@10, ESSLLI'07.),
- Additional notes and readings will be posted at <http://wintermute.linguistics.ucla.edu/esslli09/>

## Background:

- Edward Keenan and Edward Stabler (2003) *Bare Grammar: Lectures on Invariants*. (CSLI)
- George Grätzer (1968) *Universal Algebra*. (Van Nostrand)