

Optimality Theory

Linguistics 471

The last decade has seen new approaches to the basic research questions of generative grammar: What is universal and what can vary between languages? How can Universal Grammar both admit variation and limit its range precisely? How can the abstract patterns of grammar be learned from the concrete data of speech? What is the relationship between the mechanisms of phonology and those of syntax? In this course, we will explore *Optimality Theory*, which proposes answers to all these questions.

Prerequisites: Linguistics 201(Introduction to Linguistic Theory), one of Linguistics 305, 315, 325 (Syntax, Phonology, Semantics), or permission of the instructor.

Requirements: Readings, homework, class presentations, mid-term, final.

Course Outline. The course falls into three major sections. In the first, we examine the fundamental issues addressed by the theory and lay out its formal foundations, working from universals of syllable structure and related phonology. The next section will be devoted to detailed study of other central phenomena in phonology and prosodic morphology; the goal is to identify the basic patterns, see how they emerge under Optimality Theory, and locate problems that are exposed but not resolved by the theory as currently understood. The third section will focus on syntax, showing how complex structural and word-order patterns are controlled by constraints that are formally quite similar to those discovered in phonology. We will also look at recent ideas about how syntactic structure influences phonological phrasing. We cap the discussion with a brief forward look at some new ideas extending the theory into problem areas, and conclude with a retrospective summary of the leading ideas and results examined in the course.

Introduction to OT. Weeks 1-3.

Week 1. Motivations: “conspiracy”, “economy”, typology. Output orientation, scope of constraints, markedness and faithfulness.

Readings: Kisseberth 1970; Stampe 1973; Prince & Smolensky 1997; Tesar, Grimshaw & Prince; Ch.1 Prince & Smolensky 1993. McCarthy 1997.

Week 2. Formal structure of the theory. Conflict, ranking, RCD, use of software to aid OT calculations.

Readings: Ch. 6 Prince & Smolensky 1993, Prince 1998, Samek-Lodovici & Prince 1999.

Week 3. Learning and constraint ranking. The learning problem for grammars, RCD, BCD, role of markedness/faithfulness.

Readings: Tesar & Smolensky 1998, Prince & Tesar 1999.

Phonology under OT. Weeks 4-8.

Stress and metrical structure: generalized alignment. Basic distributional and alternation patterns as constructed by markedness/faithfulness relations. Scales and hierarchies. Prosodic morphology: generalized template theory, over/under-application. Positional faithfulness & positional markedness.

Readings. McCarthy & Prince 1993b, McCarthy 1997, Prince & Smolensky 1993 Ch. 8, McCarthy & Prince 1999. Alderete et al. *to appear*. Beckman (1998).

-Midterm Exam-

Syntax under OT. Weeks 9-12.

Headedness of phrases: do-support, verb-raising; alignment in clitic systems; grammatical hierarchies; matrix/subordinate differences. Syntax-phonology mapping; relations between constraint-types in syntax & in phonology.

Readings: Aissen *to appear*, Grimshaw 1998, 1999; Legendre 1996, Truckenbrodt 1998, Woolford 1999.

Extensions of the core theory. Week 13. Topics chosen from among those related to: sympathy and opaque interactions; constraint conjunction; lexical phonology under OT.

Readings: McCarthy. 1998. Ito & Mester *To appear*, Prince 1999, Kiparsky 1999.

Retrospective overview. Week 14.

-Final Exam-

Bibliography

Background

Ito, J. 1989. A Prosodic Theory of Epenthesis. *Natural Language & Linguistic Theory* 7, 217-260.
Kisseberth, C. 1970. On the functional unity of phonological rules. *Linguistic Inquiry* 1, 291-306.
Stampe, D. 1973/79. *A Dissertation in Natural Phonology*. New York: Garland.

Basic OT Literature

McCarthy, J. & A. Prince. 1993a. Prosodic Morphology I. RuCCS-TR-3. To appear, MIT Press.
Prince, A. 1998. A proposal for the reformation of tableaux. ROA-288. <http://ruccs.rutgers.edu/roa.html>.
Prince, A. & P. Smolensky. 1993. *Optimality Theory: Constraint interaction in generative grammar*. Technical report, TR-2, Rutgers University Center for Cognitive Science. To appear, MIT Press.
Prince, Alan and Paul Smolensky. 1997. Optimality: From Neural Networks to Universal Grammar, *SCIENCE* 275, 1604-1610.
Prince, A. and B. Tesar. 1999. Learning Phonotactic Distributions. Ms. Rutgers University, New Brunswick.
Samek-Lodovici, V. and A. Prince. 1999. Optima. Ms. Rutgers University and University College London.
Tesar, B., J. Grimshaw, and A. Prince. 1999. Introduction to Optimality Theory. To appear in E. Lepore ed., *Frontiers of Cognitive Science*.
Tesar, B. & P. Smolensky. 1998. Learnability in Optimality Theory. *Linguistic Inquiry* 29:2. 229-268.

Textbooks

Archangeli, D. and D. T. Langendoen, eds.. 1997. *Optimality Theory: an Overview*. Explaining Linguistics 1, Blackwell.
Kager, R.. 1999. *Optimality Theory*. Cambridge Textbooks in Linguistics: CUP.
Kenstowicz, M. 1993. *Phonology in Generative Grammar*. Blackwell Textbooks in Linguistics. Blackwell.
McCarthy, J. 1997. *Introductory Phonology*. Extensive lecture notes from Linguistics 603, UMass, Amherst.
Roca, I. and W. Johnson. 1999. *A Course in Phonology*. Blackwell.

Phonology

- Alderete, J. et al. To appear. Reduplication and Fixed segmentism. ROA-226. To appear, *Linguistic Inquiry*.
- Akinlabi, A. 1997. Featural Affixation. ROA-185.
- Beckman, J. 1998. *Positional Faithfulness*. ROA-234.
- Burzio, L. 1997. Cycles, non-derived-environment blocking, and correspondence. Ms. JHU.
<http://www.cog.jhu.edu/~burzio/papers/cycles.ps>
- Kager, R. 1995. Stem Disyllabicity in Guugu Yimidhirr. ROA-70.
- Keer, E. 1999. *OCP, Gemminates, and Faithfulness*. PhD. Dissertation, Rutgers University, New Brunswick.
- Kiparsky, Paul. 1999. *Paradigmatic Effects*. Cambridge University Press.
- Ito, J. & A. Mester. To Appear. The Phonological Lexicon. In N. Tsujimura, ed., *The Handbook of Japanese Linguistics*, Blackwell.
- Lombardi, L. 1996. Why Place and Voice are different. ROA-105.
- Lombardi, L. 1998. Restrictions on direction of voicing assimilation. ROA-246
- McCarthy, J. To Appear. Sympathy and Phonological Opacity. ROA-252. To appear, *Natural Language & Linguistic Theory*.
- McCarthy, J. and A. Prince. 1993b. Generalized Alignment. In *Yearbook of Morphology 1993*, 79-153, ed. Geert Booij and Jaap van Marle. Boston: Kluwer Academic Publishers. ROA-7.
- McCarthy, J. and A. Prince 1994. The emergence of the unmarked. In *NELS 24: Proceedings of the North East Linguistic Society*, Vol. 2, ed. Mercè González, 333-379. GLSA: Amherst. ROA-13.
- McCarthy, J. and A. Prince. 1999. Faithfulness and Identity in Prosodic Morphology. To appear in *The Morphology- Prosody Interface*, eds. René Kager, Harry van der Hulst, and Wim Zonneveld. Cambridge University Press. ROA-216.
- Truckenbrodt, H. 1999. On the relation between syntactic phrases and phonological phrases. *Linguistic Inquiry* 30.2, 219-255.
- Zoll, C. 1998. Positional Asymmetries and Licensing. ROA-282.

Syntax

- Aissen, J. To appear. Subject Choice in Optimality Theory. In Legendre et al., eds.
- Barbosa, Pilar, Danny Fox, Paul Hagstrom, Martha McGinnis, and David Pesetsky, eds. 1998. *Is the Best Good Enough? Optimality and Competition in Syntax*. MIT Press.
- Bresnan, J. 1999. Explaining Morphosyntactic Competition. ROA-299.
- Grimshaw, J. 1998. Projection, Heads, and Optimality. *Linguistic Inquiry* 28.3, 373-422. ROA-68.
- Grimshaw, J. 1999. The Best Clitic: Constraint Conflict in Morphosyntax. ROA-250.
- Legendre, G. 1996. Clitics, verb (non)movement, and optimality in Bulgarian. ROA-165.
- Legendre, G., J. Grimshaw, and S. Vikner, eds..To appear. *Studies in Optimality Theoretic Syntax*.
- Woolford, E. 1999. Case Patterns. ROA-324.