

**SEMINAR: Phonetic Paths to Sound Change and Sound Patterns**

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**Course description**

At least as early as the 19th century, researchers (e.g., de Courtenay, Passy, Paul) have been interested in explaining why certain sound changes and sound patterns recur in the world's languages while other seemingly possible sound systems do not occur, and they have turned to phonetics for explanations. This seminar builds on this long-standing tradition, but adopts the perspective that these issues are very timely; methodological, technological, and theoretical advances are leading to new questions, new answers, and controversial theoretical developments. For example, current work by Hayes and Steriade (2004), among others, focuses on "phonetically based phonology", an approach based on the hypothesis that phonetic patterns are linguistically expressed as grammatical constraints. Lindblom's (1990) H&H theory, Browman & Goldstein's (1990) Articulatory Phonology, Ohala's (1993) theory of misperceptions, Labov's (1994) principles of linguistic change, Kingston & Diehl's (1994) theory of phonetic knowledge, Hume & Johnson's (2001) model of phonetic explanation in phonology, and Blevins' (2004) Evolutionary Phonology all postulate precise—but often not compatible—roles of phonetics in sound change and sound patterns.

Participants in the seminar will investigate theoretical and experimental studies of phonetic factors in diachronic and, albeit to a lesser extent, synchronic phonology. We'll consider the nature of phonetic variation, its central role in sound change, and its likely but controversial role in linguistic representations. We'll evaluate theoretical proposals concerning the phonetic mechanisms proposed to account for patterns of change, assessing these proposals against various types of evidence. These phonetic mechanisms are often viewed as operative in the transmission of language within and between groups of interacting speakers within a speech community, but we'll consider as well the influence of phonetic factors on an individual's phonological knowledge and the question of whether such factors should be incorporated into formal phonological theory. Other key, related issues include whether phonetic factors are teleological, whether the speakers' and listeners' contributions to the structure of sound systems are complementary or at odds with each other, and whether speaker "difficulties" and listener "mistakes" are as important in sound change as they're often claimed to be.

In the usual style of graduate seminars, some of our weekly discussions will be led by student participants. The extent and nature of the lab component (if any) of the seminar will be determined by participants.

**Course requirements**

- Active participation in weekly seminar meetings that shows you have read and thought about the readings in relation to the study questions.
- Primary responsibility for one week's discussion topic.
- Term paper. Paper topics dealing with the relation between phonetics and some aspect of sound systems (be it from the perspective of phonology, sociolinguistics, or historical linguistics) are appropriate. Students who are already working on such a topic (e.g., for their QRP or dissertation) may submit a portion of that work, although ideally that portion should be able to stand largely on its own. An abstract of the paper is due October 25. Students will also give an oral presentation of their project during the last week of class.

**Readings**

Pdf files of many of the readings will be made available. (Some web links are indicated on the syllabus.) Copies of other readings will be kept in the Linguistics Lounge.

## TENTATIVE SYLLABUS

Note: Readings and topics may change over the course of the term depending on participants' interests, how quickly we progress, and how our thinking evolves.

### September 6: Introduction and overview

#### September 13: Two theoretical approaches to the role of phonetics in sound change

Ohala, J. J. (1981) The listener as a source of sound change. In *Papers from the Parasession on Language and Behavior*, edited by C. S. Masek, R. A. Hendrick, & M. F. Miller (Chicago: Chicago Linguistic Society), pp. 178-203.

<http://trill.berkeley.edu/users/ohala/index3.html>

Lindblom, B. (1990) Explaining phonetic variation: a sketch of the H&H theory. In *Speech Production and Speech Modelling*, edited by W. J. Hardcastle and A. Marchal (The Netherlands: Kluwer Academic), pp. 403-439.

Lindblom, B., Guion, S., Hura, S., Moon, S-J., & Willerman, R. (1995) Is sound change adaptive? *Rivista di Linguistica* 7, 5-36.

Also useful: Ohala, J. J. (1993) The phonetics of sound change. In *Historical Linguistics: Problems and Perspectives*, edited by C. Jones (London: Longman), 237-278.

<http://trill.berkeley.edu/users/ohala/index3.html>

#### September 20: Setting the (complex) experimental stage: perception

Fowler, C. A., Best, C. T., and McRoberts, G. W. (1990) Young infants' perception of liquid coarticulatory influences on following stop consonants. *Perception and Psychophysics* 48, 559-570.

Lotto, A. J. & Kluender, K. R. (1998). General contrast effects of speech perception: effect of preceding liquid on stop consonant identification. *Perception and Psychophysics* 60, 602-619.

Beddor, P. S., Krakow, R. A., & Lindemann, S. (2001) Patterns of perceptual compensation and their phonological consequences. In *The Role of Speech Perception in Phonology*, edited by E. Hume & K. Johnson (New York: Academic Press), pp. 55-78.

#### September 27: Setting the experimental stage: "ease of articulation"

Moon, S-J. & Lindblom, B. (1994) Interaction between duration, context and speaking style in English stressed vowels. *Journal of the Acoustical Society of America* 96, 40-55.

Lindblom, B. & Moon, S-J. (2000) Can the energy costs of speech movements be measured? A preliminary feasibility study. *Journal of the Acoustical Society of Korea* 19.3E, 25-32.

Pouplier, M. (2003) The dynamics of error. In *Proceedings of the 15th International Congress of Phonetic Sciences*, eds. M. J. Solé, D. Recasens, & J. Romero (Universitat Autònoma de Barcelona).

#### October 4: Setting the experimental stage: canonical speech, coarticulation, & listeners

Scarborough, R. A. (2004) *Coarticulation and the Structure of the Lexicon*. Doctoral dissertation, UCLA. [Skip Chapter 5.]

<http://www.humnet.ucla.edu/humnet/linguistics/faciliti/research/research.html#Dissertations>

#### October 11: Diachrony vs. synchrony: \*NC

Hayes, B. & Stivers, T. (2000) Postnasal voicing. Ms.

<http://www.linguistics.ucla.edu/people/hayes/phonet.htm>

Hyman, L. (2001) The limits of phonetic determinism in phonology: \*NC revisited. In *The Role of Speech Perception in Phonology*, edited by E. Hume & K. Johnson (New York: Academic Press), pp. 141-185.

Pater, J. (2004) Austronesian nasal substitution and other NC effects. In *Optimality Theory in Phonology: a Reader*, edited by J. McCarthy (Oxford and Malden, MA: Blackwell).

**October 25: A recent theoretical proposal: Blevins' Evolutionary Phonology**

Blevins, J. (2004) *Evolutionary Phonology* (Cambridge: CUP)., pp. 3-85.

**November 1: More on Evolutionary Phonology**

Blevins' *Evolutionary Phonology*, pp. 91-92; 217-299.

**November 8: Diachrony vs. synchrony; teleology: Place assimilation**

Ohala, J. J. (1990) The phonetics and phonology of aspects of assimilation. In *Papers in Laboratory Phonology I: Between the Grammar and the Physics of Speech*, edited by J. Kingston & M. Beckman (Cambridge: CUP), pp. 258-275.

<http://trill.berkeley.edu/users/ohala/index3.html>

Steriade, D. (2001) Directional asymmetries in place assimilation. In *The Role of Speech Perception in Phonology*, edited by E. Hume & K. Johnson (New York: Academic Press), pp. 219-250.

Hura, S., Lindblom, B., & Diehl, R. (1992) On the role of perception in shaping phonological assimilation rules. *Language and Speech* 35, 59-72.

**November 15: Phonetic variation, phonetic knowledge, and phonological knowledge**

Hale, M. & Reiss, C. (2000) "Substance abuse" and "dysfunctionalism": current trends in phonology. *Linguistic Inquiry* 31, 157-169. [Downloadable through MIRLYN]

Pierrehumbert, J. B. (2001). Stochastic phonology. *GLoT* 5, no. 6, 1-13.

[http://www.linguistlistplus.com/glot/html/GI5601/GI5601\\_SOA.htm](http://www.linguistlistplus.com/glot/html/GI5601/GI5601_SOA.htm)

[Hayes, B. & Steriade, D. (2004) Introduction: the phonetic bases of phonological Markedness. In *Phonetically Based Phonology*, edited by B. Hayes, R. Kirchner, & D. Steriade (Cambridge: CUP), pp. 1-33 OR Johnson, K. (2005 draft) Decisions and mechanisms in exemplar-based phonology. To appear in *Experimental Approaches to Phonology*, edited by P. S. Beddor, M. Ohala, and M-J. Solé (Oxford: OUP).]

**November 22: Phonetic variation, phonetic knowledge, and sound change**

Harrington, J., Palethorpe, S. & Watson, C.I. (2000) Does the Queen speak the Queen's English? *Nature* 408, 927-928.

Guy, G. (2003) Variationist approaches to phonological change. In *The Handbook of Historical Linguistics*, edited by B. D. Joseph & R. D. Janda (Oxford and Malden, MA: Blackwell), pp. 369-400.

Docherty, G. J., Foulkes, P., Milroy, J., Milroy, L., Walshaw, D. (1997) Descriptive adequacy in phonology: a variationist perspective. *Journal of Linguistics* 33, 275-310.

**November 29: Phonetic variation and acquisition**

Lindblom, B. (2000) Developmental origins of adult phonology: the interplay between phonetic emergents and the evolutionary adaptations of sound patterns. *Phonetica* 57, 297-314.

Port, R. & Leary, A. (2005) Against formal phonology. To appear in *Language*.

**December 6: Pulling it all together**

(possible reading TBA)

**December 13: Presentations**