Grammatical and non-grammatical factors in phonological variation

During the first 25 years of the generative era, variation received very little if any attention in "mainstream" generative phonology. Variation was usually relegated to the domain of phonetic implementation, and hence considered to fall outside the purview of phonology proper. However, since the advent of constraint-based approaches to generative phonology in the 1990's, the prospects of variation have changed drastically. It is now a central theme in mainstream generative phonology, and multiple models of phonological grammar exist that have been developed specifically to account for variation. Nearly all of these existing models, however, are exclusively grammatical, implying that grammar alone is responsible for generating variation.

The reality is, of course, somewhere between these two extremes. Although grammar does contribute to observed phonological variation, there are also many non-grammatical factors that co-determine the properties of observed variation (including things like the social discourse context, processing limitations, memory limitations, word frequency, speech style/register, etc.). This course will focus on how grammar and these non-grammatical factors interact to codetermine the properties of phonological variation. In particular, we will consider several so-called "hybrid" models of phonological grammar that allow grammatical and non-grammatical factors to interact directly.

In addition to presenting students with an overview of the relevant literature, this course will also have a hands-on component, teaching students how to use various software packages to develop accounts of variable phenomena in different models of phonological variation. The specific models that we will cover include the Labovian variable rule approach as well as several hybrid constraint-based models.

We will make extensive use of handouts in this course. In addition to these handouts, we will also read selections from the following list of publications:

Anttila, Arto. (2002) Variation and phonological theory. In J.K. Chambers, Peter Trudgill and Natalie Schilling-Estes, eds. *The Handbook of Language Variation and Change*. Oxford: Blackwell. p. 206-243.

Boersma, Paul and Bruce Hayes. (2001) Empirical tests of the Gradual Learning Algorithm. *Linguistic Inquiry*, 32:45-86. [http://www.linguistics.ucla.edu/people/hayes/GLA/gla.pdf]

Coetzee, Andries W. & Shigeto Kawahara. (2013) Frequency biases in phonological variation. *Natural Language and Linguistic Theory*, 31:47–89. [http://roa.rutgers.edu/files/1098-0810/1098-COETZEE-0-1.PDF]

Coetzee, Andries W. (under review) Speech rate and lexical inhibition in nasal place assimilation: an Harmonic Grammar account.

Coetzee, Andries W. & Joe Pater. (2011) The place of variation in phonological theory. In John Goldsmith, Jason Riggle and Alan Yu, eds. *The Handbook of Phonological Theory*, 2nd edition. Oxford: Blackwell. p. 401-434. [http://roa.rutgers.edu/files/946-0108/946-COETZEE-0-0.PDF]

Guy, Gregory R. (2014) Linking usage and grammar: Generative phonology, exemplar theory, and variable rules. *Lingua*, 142:57-65.

Hinskens, Frans, Ben Hermans & Marc van Oostendorp. (2014) Grammar or lexicon. Or: Grammar and lexicon? Rule-based and usage-based approaches to phonological variation. *Lingua*, 142:1-26.

We will use the following software suites, and students are encouraged to install these on these personal computers before the start of the course:

Praat: www.praat.org
Goldvarb X: Note that there is a newer version of this software available, Goldvarb Lion. We will rely on the older version, however. There is both a PC and Mac version available.
                PC Version: http://www.tarkvara.org/goldvarb/GoldVarb30b3.zip
                Mac Version: http://www.tarkvara.org/goldvarb/GoldVarb30b3.dmg
OTHelp: http://people.umass.edu/othelp/