Berkeley Linguistics Society Workshop

Phonological Representations: At the Crossroad Between Gradience and Categoricity

Feb 7-8, 2020

Conference Program

Friday, February 7		**Room**[†]
11.30 – 1.00	Registration	1203
1.00 – 1.15	Welcome! Opening remarks	370
1.15 – 2.15	**Invited speaker: D. Robert Ladd (University of Edinburgh)** *Eurocentric phonetics: Implications for 'stress'*	370
2.15 – 2.30	Coffee break	
2.30 – 4.00	Oral session I: Categoricity & Gradience **Session chair: Myriam Lapierre** **Geoff Schwartz:** *All gradience is not created equal* **Kathleen Hall:** *On the co-existence of the categorical and the gradient in phonology* **Naiyan Du & Karthik Durvasula:** *Phonetically incomplete neutralization can be phonologically complete*	370
4.10 – 5.40	Oral session II: Contrast & Categorization **Session chair: Meg Cychosz** **Charles Redmon:** *Revisiting the basis of phonological representations: Word form distinction and the articulatory-acoustic structure of the lexicon* **Jason Shaw, Catherine Best, Paul Foulkes, Bronwen Evans, Gerard Docherty & Karen Mulak:** *Finding phonological structure in vowel confusions across English accents* **Jinghua Ou & Alan Yu:** *Individual differences in categorization gradience: Evidence from behavioral, brainstem, and cortical measures of VOT differences*	370
5.45 – 6.30	Wine reception	370

[†] All rooms are located in Dwinelle Hall. Room 1203 is on level A, 370/371 are on level G.

Saturday, February 8		**Room**
8.30 – 9.00	Coffee/Registration	371
9.00 – 10.00	**Invited speaker: Stephanie Shih (University of Southern California)** *Relating gradience in grammar and representation*	370
10.10 – 11.40	Oral session III: Gradient Features & Representation **Session chair: Karee Garvin** **Rachel Walker:** *Gradient feature activity and place assimilation* **Huteng Dai:** *Scalar similarity and gradient representations in Lezgian laryngeal harmony* **Hannah Sande & Madeleine Oakley:** *Representing implosives: Gradient features for ambiguous segments*	370
11.40 – 12.45	Lunch	371
12.45 – 1.45	**Invited speaker: Bruce Hayes (University of California, Los Angeles)** *Assessing grammatical architectures through their quantitative signatures*	370
1.50 – 3.20	Oral session IV: Prosody & Articulation **Session chair: Yevgeniy Melguy** **Hayeun Jang:** *The polarity of gradient featural representations: A case study of coronal palatalization* **Rachel Vogel:** *Phonetic cues of narrow focus are mediated by phonemic contrast in Nepali* **Guilherme Garcia:** *Variable secondary stress and weight-sensitivity in Portuguese*	370
3.30 – 4.45	Poster session	371
5.00 – 6.00	**Invited speaker: Katie Drager (University of Hawai'i at Mānoa)** *From variable rules to exemplar-based models: A sociolinguistic perspective on the mental representations of sounds*	
6.00 – 6.45	Discussion panel **Moderator: Keith Johnson**	370

Posters

#	Author(s)	Title
1	Burgdorf, Dan Cameron; Tilsen, Sam	*Compensation for altered feedback in vowels and glides*
2	Conklin, Jenna	*Gradience in harmony: Evidence from orthographically disharmonic lexemes*
3	Davis, Forrest; Cohn, Abigail C.	*Categorical and gradient dimensions of stress in English compounds*
4	Desmeules-Trudel, Félix	*Different use of fine-grained phonetic cues for word recognition in an L1 and an L2*
5	Duanmu, San	*Articulator-free features and sound classes*
6	Grijzenhout, Janet; Botma, Bert; Puggaard, Rasmus	*Laryngeal timing relationships in Germanic: a Q Theory approach*
7	Harris, John; Neasom, Nick; Tang, Kevin	*Regular does not guarantee categorical*
8	Kukhto, Anton	*Lexical accent in Lithuanian: Are GSRs necessary?*
9	Kim, Hyunsoon	*Atemporal features or temporal gestures in phonological representations?: The case of Korean*
10	Kuo, Jennifer	*Base-driven phonological reanalysis in Tgdaya Seediq*
11	Lunden, Anya	*Phonological vs. acoustic glides*
12	McCollum, Adam	*Modeling gradient morphophonology in Harmonic Grammar*
13	Mellesmoen, Gloria; Cardoso, Amanda	*Contrast in the Comox-Sliammon (ʔayʔaǰuθəm) vowel system*
14	Pycha, Anne	*Categoricity of segment representations depends upon word context*
15	Ransom, Sarah	*Phonological neighborhood architecture*
16	Schwindt, Luiz	*Underlying representation of [w]-final nouns in Brazilian Portuguese*
17	Stern, Michael; Gorman, Kyle; Martohardjono, Gita	*Measuring subcategorical representations of speech sounds*
18	Tseng, Shu-Chuan	*Phonological representation of Chinese disyllabic words*
19	Vaxman, Alexandre	*Addressing exceptionality: Lexical accent systems as scalar weight-sensitive systems*
20	Wulfert, Sophia; Auer, Peter; Hanulíková, Adriana	*Frequency and sonority in phonotactics: Implications for the perception and production of pseudowords*
21	Xu, Chenchen; Lin, Yen-Hwei	*Gradience of vowel deletion in syllable contraction*

Invited Speakers

D. Robert Ladd (University of Edinburgh)
Eurocentric phonetics: Implications for 'stress'

Modern linguistics has largely stopped assuming the typological characteristics of European languages as a universal framework for describing languages elsewhere in the world. However, much current work on 'stress' still suffers from a Eurocentric perspective, both in its theoretical/typological expectations about how stress fits into phonology as a whole and in its methodological reliance on primary data based heavily on the impressions of listeners who are speakers of European languages. I outline some of the theoretical contradictions in current treatments of stress, and argue that they have been encouraged by (1) the early move in metrical phonology away from tree representations and toward grid representations, and (2) the concomitant elaboration of the notion of the foot. While the rhythmic phenomena that the foot is intended to account for are real, they are not universal and need not involve 'stress' under any phonetically defensible definition. Recognizing that stress is simply not a feature of many languages opens up a range of typological possibilities and provides a basis for empirically sound characterizations of the phonetic correlates of stress in languages that do have it.

Stephanie Shih (University of Southern California)
Relating gradience in grammar and representation

Much of the recent discussion about gradience in phonological representations has focused largely on segmental units and behaviours. In this talk, I explore the nature of gradience in representations at the lexical level. I present evidence from recent sound symbolic research that demonstrates the need for gradient membership in the lexical classes that condition phonological patterns. From these case studies, I propose an implementation of Maximum Entropy Harmonic Grammar with lexically-indexed constraints and gradient symbolic activations over classes that allows us to model differences in phonological patterns over both discrete and gradient class membership. This theo-retical implementation is a natural extension of scales and gradient activations that have been shown to be necessary at the segmental (i.e., featural) level in recent phonological theory. I argue that as our grammatical models and representations develop in lockstep, embracing gradience in the lexical representations is necessary in the overall shift towards capturing probabilistic natural language use evidence.

Bruce Hayes (University of California, Los Angeles)

Assessing grammatical architectures through their quantitative signatures

I assess formal frameworks that can gradient data in phonology, including: (1) wug-test responses that match frequency patterns in the lexicon; (2) well-formedness intuitions; (3) free-variation outputs deriving from the same input. Currently active approaches to these area — specifically, stochastic OT and forms of Harmonic Grammar such as Noisy HG or MaxEnt HG — differ in their "quantitative signatures," that is to say, the probability patterns that they characteristically generate. Empirically-detectible patterns include (a) simple weight-addition (consultant judgments that match a weighted sum of constraint violations); (b) symmetrical sigmoid curves, going from zero to one probability; (c) the "wug shaped curve," which combines two or more sigmoids; (d) the "diagonal banana," arising when violation of a single constraint creates a sagging deviation from the y = x line in a scattergram. I give empirical examples of all four patterns and suggest that the only theory that reliably generates them is MaxEnt HG.

Katie Drager (University of Hawai'i at Mānoa)

From variable rules to exemplar-based models: A sociolinguistic perspective on the mental representations of sounds

Seeking to describe and understand patterns of linguistic variation is a central undertaking of sociolinguistics. In this talk, I discuss two influential models used to understand the patterns of variation produced by language users: variable rules and exemplar-based models. For both, I step through results from a variety of sociophonetic work in order to demonstrate the strengths of the models as well as point to some challenges. For example, variable rules are an elegant tool for describing phonological patterns that are non-categorical and that vary across individuals and speech communities, but they are a less appropriate tool when describing lexically-conditioned variation. Likewise, exemplar-based models can handle some of the effects that arise from contextual probability, but the extent to which they are an appropriate tool for understanding an individual's role in an ongoing sound change is unclear. Ultimately, I aim to make explicit some of the ongoing challenges we face in explaining linguistic variation and change and to highlight the importance of considering socially-conditioned variation in our understanding of phonological representations.