PROGRAMME

The Final Oral Examination
for the Degree of

DOCTOR OF PHILOSOPHY
(Department of Linguistics)

Scott Reid Moisik
2008  University of Victoria MA (Linguistics)
2006  University of Calgary BA

“The Epilarynx in Speech”

Thursday, June 13th, 2013
2:00 PM
Harry Hickman Building Room 110

Supervisory Committee:
Dr. John H. Esling, Department of Linguistics, UVic (Supervisor)
Dr. Ewa Czaykowska-Higgins, Department of Linguistics, UVic (Co-
Supervisor)
Dr. Sonya Bird, Department of Linguistics, UVic (Member)
Dr. Bryan Gick Department of Linguistics, UBC (Outside Member)

External Examiner:
Dr. John J. Ohala, Department of Linguistics, UC Berkeley

Chair of Oral Examination:
Dr. Adam Krawitz, Department of Psychology
University of Victoria
Abstract

This dissertation examines the phonetic and phonological function of the supraglottal part of the larynx – the epilarynx – from an articulatory-physiological perspective. The central thesis is that, through constriction, the epilarynx physically couples the vocal folds to the supralaryngeal vocal tract. This basic principle is important in explaining a wide range of speech phenomena, such as the mechanism of glottal stop, creaky and harsh (“constricted”) phonation, interaction between vocal fold state and lingual state, and the coordination of phonatory and vowel quality as voice quality, which underlies many register-like patterns. Furthermore, co-oscillation of the epilarynx and vocal folds below is the basis for “growl”, which is demonstrated to have numerous expressions in speech, both phonetically and phonologically.

The thesis is explored by detailed examination of three functions of the epilarynx: (1) epilaryngeal vibration, (2) epilaryngeal interaction with the vocal folds, and (3) epilaryngeal interaction with the supralaryngeal vocal tract. Phonetic evaluations of these functions include physiological, theoretical, and taxonomic considerations, imaging data (obtained with laryngeal and lingual ultrasound, simultaneous laryngoscopy and laryngeal ultrasound, and videofluoroscopy), and computational modeling.

These phonetic evaluations are then taken as the basis for a model of lower vocal tract phonology. Traditional models of such sounds do not accommodate the epilarynx. Rather than positing new distinctive features, an alternative approach is taken. A new model is proposed that is framed in terms of phonological potentials, which are the biases associated with physical principles that underlie the formation of phonological systems and patterns. In the context of epilaryngeal function, the potentials are expressed in terms of synergistic relations amongst gross physiological states that either support or hinder epilaryngeal constriction.

Awards, Scholarships, Fellowships

2010  Alexander & Helen Stafford MacCarthy Muir GS
2010  Donald Wagg Graduate Scholarship
2010  Henry & Michiko Warkentyne GS in Linguistics
2010  Best Student Presentation, The 9th Phonetics Conference of China
2009  Best Poster Prize, Int. Workshop on Pharyngeals & Pharyngealisation
2008  Peter Ladefoged Prize for Best Presentation, BAAP
2008  Joseph-Armand Bombardier CGS Doctoral Scholarship (3 years)
2007  University of Victoria Fellowship
2006  CGS Master’s Scholarship (1 year)
2006  Department of Linguistics Silver Medallion, UofC
2004  Verbatim Undergraduate Linguistics Award
Presentations


Publications


