

Syllabus, Articulatory Phonology

SPCH 81800/LING 79200

Fall, 2020

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The main texts will be various articles and Hayes (2009). The articles will be sent via email. You may want to buy the book, but the relevant pages will be included in the homework assignments. Exercises that come from Hayes will have course-specific instructions. You will have to follow those instructions. If you turn in the problems with only the solution expected by Hayes, you will not have completed the exercise for this class. Homework listed in a particular week is due the next class. Thus, Week 2 (WEDNESDAY, Sept. 5) lists Ch. 2's exercise 2; it is due Sept. 17th.

Starting in week 3, one page summaries of one or two articles (depending on the presence of homework; if yes, one, if no, two) will be required every week. Summaries should be about half summary and half evaluation; if more than one page is submitted, no credit will be given. The week before the summaries are due, each paper will be assigned a "Pro" and a "Con" commentator; the "Con" will present first, pointing out flaws, lapses and inconsistencies in the paper, after which the "Pro" will rebut.

Late assignments will receive a grade one lower than would have been earned on time.

Homework and summaries will count for half the grade. Final papers, including oral presentations thereof, will count for the other half. Oral presentations include not only the student's own presentation and answers to questions but also the questions asked of other presenters. Final paper topics must be approved by the instructor, and can include AP descriptions of phonological patterns based on recordings and/or transcriptions, contrast of AP with other approaches to a particular problem, a proposed articulatory or TaDA experiment, or evaluation of a range of papers.

Notes on questions during student presentations: Each student will ask a question of each presenter. Both question and answer should be short so that we can get through all the presentations. The order of questioners will be random and determined by the instructor. If the question has been asked already, it will be asked again; this will simulate the experience of presenting a poster, where the answer will be refined with repetition.

Course Learning Goals and Outcomes: After completing this course students will be able to:

- Understand the major aspects of the theory of Articulatory Phonology.
- Be able to evaluate the literature on phonology by relating Articulatory Phonology concepts to other theories.
- Recognize the kind of evidence that bears on issues in Articulatory Phonology.
- Have experience with evaluating evidence from physiological experiments reported in the literature.
- Write concise yet informative evaluations of Articulatory Phonology's successes and failures and how they relate to treatment of these issues in other theories.

Detailed assignments by week:

1: (Aug. 31) Intro.

Iskarous (2017).

If you need a refresher on phonetics, read Chapter 1 of Hayes (2006), Ladefoged (1982) or another book.

2: (Sept. 14) Gestures and distinctiveness.

Browman & Goldstein, (1995a).

Browman & Goldstein (draft), Chapter 1.

Optional readings:

Goldstein & Fowler (2003).

Hayes, Chapter 2.

Homework 1: Hayes, exercise 2, chapter 2, pp. 44-45. (See instruction handout; due 21 Sept.)

3: (Sept. 21) Gestural scores.

Browman & Goldstein (draft), Chapter 2.

Nam et al. (2012)

Gafos & Goldstein (2011).

4: (TUESDAY, Sept. 29) Phasing, magnitude, presence.

Browman & Goldstein (1989).

Browman & Goldstein (1990).

Munhall & Löfqvist (1992).

Optional readings:

Whalen (1990).

Hayes, Chapter 3.

Homework 2: Hayes, exercise 3, chapter 3, p. 67. (See instruction handout; due 5 Oct.)

5: (Oct. 5) Task Dynamics. Oscillators.

Browman & Goldstein (draft), Chapter 6.

Saltzman & Munhall (1989).

Nam, Goldstein & Saltzman (2009).

Homework 3: Japanese transcription (instructions and sound files to be mailed; due 14 Oct.)

6: (WEDNESDAY, Oct. 14) Guest Lecturer: Kevin Roon. Timing and Stiffness.

Roon and Gafos (submitted).

Gafos, Hoole, Roon & Zeroual (2010).

Nam (2007).

Byrd (1995).

Optional readings:

Browman & Goldstein (1988).

Tilsen (2013).

Hayes, Chapter 4.

Homework 4: Hayes, Chapter 6, Exercise 1, p. 137. (See instruction handout; due 19 Oct.)

7: (Oct. 19) Guest Lecturer: Jaekoo Kang. Tutorial on TADA.

NOTE: no summaries needed.

TADA manual; Nam & Goldstein (2011).

Saltzman & Munhall (1989).

8: (Oct. 26) Syllable position, /l/.

Sproat & Fujimura (1993).

Browman & Goldstein (1995b).

Gick, Campbell, Oh & Tamburri-Watt (2006).

Pastätter & Pouplier (2014).

Homework 5: Hayes, data, p. 25. (See instruction handout; due 2 Nov.)

Approval of paper topic.

9: (Nov. 2) Articulatory Organ Hypothesis; CV combinations in babbling.

Studdert-Kennedy & Goldstein (2003).

Best, Goldstein, Nam & Tyler (2016).

Giulivi, Whalen, Goldstein, Nam & Levitt (2011).

10: (Nov. 9) Guest Lecturer: Jason Shaw. Tone, prosody, and temporal intervals.

Gao (2010).

Katsika, Krivokapić, Mooshammer, Tiede & Goldstein (2014).

Smith (1995).

Shaw & Kawahara (2018).

Optional readings:

Gao (2008)

Goldstein and Pouplier (2014)

Discussion of progress on paper.

11: (Nov. 16) Second language and disordered speech.

Zsiga (2011).

Shaw & Davidson (2011).

van Lieshout & Goldstein (2008).

Hodson & Jardine (2009).

12: (Nov. 23) Speech errors. English past tense.

Goldstein, Pouplier, Chen, Saltzman & Byrd (2007).

Pouplier & Goldstein (2010).

Goldstein (2011).

Goldrick & Chu (2014)

Discussion of progress on paper.

13: (Nov. 30) Student presentations.

14: (Dec. 7) Student presentations.

Readings:

- Best, C. T., Goldstein, L. M., Nam, H., & Tyler, M. D. (2016). Articulating what infants attune to in native speech. *Ecological Psychology*, 28, 216-261.
- Browman, C. P., & Goldstein, L. M. (1988). Some notes on syllable structure in articulatory phonology. *Phonetica*, 45, 140-155.
- Browman, C. P., & Goldstein, L. M. (1989). Articulatory gestures as phonological units. *Phonology*, 6, 151-206.
- Browman, C. P., & Goldstein, L. M. (1990). Tiers in articulatory phonology, with some implications for casual speech. In J. Kingston & M. E. Beckman (Eds.), *Papers in laboratory phonology I: Between the grammar and physics of speech* (pp. 341-376). Cambridge: Cambridge University Press.
- Browman, C. P., & Goldstein, L. M. (1995a). Dynamics and Articulatory Phonology. In R. F. Port & T. v. Gelder (Eds.), *Mind as motion* (pp. 175-193). Cambridge, MA: MIT Press.
- Browman, C. P., & Goldstein, L. M. (1995b). Gestural syllable position effects in American English. In F. Bell-Berti & L. Raphael (Eds.), *Producing speech: Contemporary issues. For Katherine Safford Harris* (pp. 19-34). Woodbury, NY: American Institute of Physics Press.
- Byrd, D. (1995). C-centers revisited. *Phonetica*, 52, 285-306.
- Gafos, A. I., & Goldstein, L. M. (2011). Articulatory representation and organization. In A. C. Cohn, C. Fougeron & M. K. Huffman (Eds.), *Oxford handbook of laboratory phonology* (pp. 220-231). Oxford: Oxford University Press.
- Gafos, A. I., Hoole, P., Roon, K., & Zeroual, C. (2010). Variation in overlap and phonological grammar in Moroccan Arabic clusters. In C. Fougeron, B. Kühnert, M. D'Imperio & N. Vallée (Eds.), *Laboratory Phonology 10* (pp. 657-698). Berlin; New York: Mouton de Gruyter.
- Gao, M. (2008). *Mandarin tones: An Articulatory Phonology account*. Unpublished Ph.D. dissertation, Yale University, New Haven.
- Gao, M. (2010). *Articulatory Phonology (AP) and Tonal Alignment: further testing of a proposed AP model of tone-to-segment alignment in Mandarin Chinese*. Paper presented at the Tone and Intonation in Europe (TIE) 4.
- Gick, B., Campbell, F., Oh, S., & Tamburri-Watt, L. (2006). Toward universals in the gestural organization of syllables: A cross-linguistic study of liquids. *Journal of Phonetics*, 34, 49-72.
- Giulivi, S., Whalen, D. H., Goldstein, L. M., Nam, H., & Levitt, A. G. (2011). An Articulatory Phonology account of preferred consonant-vowel combinations. *Language Learning and Development*, 7, 202-225.
- Goldrick, M., & Chu, K. (2014). Gradient co-activation and speech error articulation: comment on Pouplier and Goldstein (2010). *Language, Cognition and Neuroscience*, 29, 452-458.
- Goldstein, L. M. (2011). Back to the past tense in English. In R. Gutiérrez-Bravo, L. Mikkelsen & E. Potsdam (Eds.), *Representing language: Essays in honor of Judith Aissen* (pp. 69-88). Santa Cruz, CA: Linguistics Research Center.

- Goldstein, L. M., & Fowler, C. A. (2003). Articulatory phonology: A phonology for public language use. In N. Schiller & A. Meyer (Eds.), *Phonetics and phonology in language comprehension and production: Differences and similarities* (pp. 159-207). Berlin: Mouton de Gruyter.
- Goldstein, L. M., & Pouplier, M. (2014). The temporal organization of speech. In M. Goldrick, V. S. Ferreira & M. Miozzo (Eds.), *The Oxford handbook of language production* (pp. 210-227). Oxford: Oxford University Press.
- Goldstein, L. M., Pouplier, M., Chen, L., Saltzman, E., & Byrd, D. (2007). Dynamic action units slip in speech production errors. *Cognition*, *103*, 386-412.
- Hayes, B. (2009). *Introductory phonology*. Malden, MA: Wiley-Blackwell.
- Hodson, S. L., & Jardine, B. R. (2009). Revisiting Jarrod: Applications of gestural phonology theory to the assessment and treatment of speech sound disorder. *International Journal of Speech-Language Pathology*, *11*, 122-134.
- Iskarous, K. (2017). The relation between the continuous and the discrete: A note on the first principles of speech dynamics. *Journal of Phonetics*, *64*, 8-20.
- Katsika, A., Krivokapić, J., Mooshammer, C., Tiede, M., & Goldstein, L. M. (2014). The coordination of boundary tones and its interaction with prominence. *Journal of Phonetics*, *44*, 62-82.
- Ladefoged, P. (1982). *A course in phonetics* (2nd ed.). New York: Harcourt Brace Jovanovich.
- Munhall, K. G., & Löfqvist, A. (1992). Gestural aggregation in speech: Laryngeal gestures. *Journal of Phonetics*, *20*, 111-126.
- Nam, H. (2007). Syllable-level intergestural timing model: Split-gesture dynamics focusing on positional asymmetry and moraic structure. In J. Cole & J. I. Hualde (Eds.), *Laboratory Phonology 9* (pp. 483-506). Berlin, New York: Walter de Gruyter.
- Nam, H., & Goldstein, L. M. (2011). TADA (TAsk Dynamics Application) manual. Haskins Laboratories.
- Nam, H., Goldstein, L. M., & Saltzman, E. (2009). Self-organization of syllable structure: A coupled oscillator model. In F. Pellegrino, E. Marisco & I. Chitoran (Eds.), *Approaches to phonological complexity* (pp. 299-328). Berlin: Mouton de Gruyter.
- Nam, H., Mitra, V., Tiede, M., Hasegawa-Johnson, M., Espy-Wilson, C., Saltzman, E., et al. (2012). A procedure for estimating gestural scores from speech acoustics. *Journal of the Acoustical Society of America*, *132*, 3980-3989.
- Pastätter, M., & Pouplier, M. (2014). The articulatory modeling of German coronal consonants using TADA. In S. Fuchs, M. Grice, A. Hermes, L. Lancia & D. Mücke (Eds.), *Proceedings of the 10th International Seminar on Speech Production (ISSP)* (pp. 308-311). Cologne.
- Pouplier, M., & Goldstein, L. M. (2010). Intention in articulation: Articulatory timing in alternating consonant sequences and its implications for models of speech production. *Language and Cognitive Processes*, *25*, 616-649.
- Saltzman, E., & Munhall, K. G. (1989). A dynamical approach to gestural patterning in speech production. *Ecological Psychology*, *1*, 333-382.

- Shaw, J. A., & Davidson, L. (2011). Perceptual similarity in input–output mappings: A computational/experimental study of non-native speech production. *Lingua*, *121*, 1344-1358.
- Shaw, J. A., & Kawahara, S. (2018). The lingual articulation of devoiced /u/ in Tokyo Japanese. *Journal of Phonetics*, *66*, 100-119.
- Smith, C. L. (1995). Prosodic patterns in the coordination of vowel and consonant gestures. In B. Connell & A. Arvaniti (Eds.), *Phonology and phonetic evidence: Papers in Laboratory Phonology IV* (pp. 205-222). Cambridge: Cambridge University Press.
- Sproat, R., & Fujimura, s. (1993). Allophonic variation in English /l/ and its implications for phonetic implementation. *Journal of Phonetics*, *21*, 291-311.
- Studdert-Kennedy, M., & Goldstein, L. M. (2003). Launching language: The gestural origin of discrete infinity. In M. Christiansen & S. Kirby (Eds.), *Language evolution* (pp. 235-254). Oxford: Oxford University Press.
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- van Lieshout, P. H. H. M., & Goldstein, L. M. (2008). Articulatory Phonology and speech impairment. In M. J. Ball, M. R. Perkins, N. Müller & S. Howard (Eds.), *The handbook of clinical linguistics* (pp. 467-479): Blackwell Publishing Ltd.
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- Zsiga, E. (2011). External sandhi in a second language: The phonetics and phonology of obstruent nasalization in Korean-accented English. *Language*, *87*, 289-345.