

Chandan R. Narayan

CURRICULUM VITAE

Institute for Research in Cognitive Science
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RESEARCH & TEACHING APPOINTMENTS

2006-2008 **Institute for Research in Cognitive Science (IRCS)**, University of Pennsylvania
Language and Communication Science-IGERT (NSF) Postdoctoral Fellow
Supervisors: Daniel Swingley (Psychology), Jiahong Yuan (Linguistics)

EDUCATION

- Ph.D. **Linguistics**, University of Michigan, Ann Arbor. July 2006
Dissertation: *Acoustic-perceptual salience and developmental speech perception*
Winner of the Horace H. Rackham Distinguished Dissertation Award, 2007
Co-chairs: Patrice Speeter Beddor (Linguistics) & Janet F. Werker (Psychology, University of British Columbia)
- M.A. **Sanskrit**, University of California, Berkeley. May 2000
Department of South and Southeast Asian Studies
Master's thesis: *Sanskrit in a world of vernaculars: Responses to multilingualism in traditional India*
- A.B. **Sanskrit and Religious Studies**, University of California, Berkeley. May 1997
Departments of South and Southeast Asian Studies and Religious Studies

RESEARCH INTERESTS

Developmental psycholinguistics, speech perception in infancy and childhood, infants' contribution to historical sound change, perceptual factors in phonological structure and sound change, acoustic phonetics, phonetics-phonology interface, perceptual learning of phonetic categories, fine-grained phonetics of infant-directed speech

RESEARCH TRAINING

Infant Studies Centre, Department of Psychology, University of British Columbia, Vancouver. Training in methods in infant speech perception. Summer 2003, Fall-Winter 2004-2005.
Mini-Institute on Speech Synthesis, Department of Linguistics, The Ohio State University. Summer 2002.
University of Pennsylvania, Visitor, Department of Linguistics, Research in Sanskrit grammar. Fall 1999.
Summer Institute of the Linguistic Society of America, University of Illinois, Urbana-Champaign. Summer 1999.

GRANTS & AWARDS

Horace H. Rackham Distinguished Dissertation Award, University of Michigan, 2007.
LCS-IGERT Postdoctoral Fellowship, University of Pennsylvania. Awarded by the Institute for Research in Cognitive Science (IRCS) with funding from the NSF.
Rackham One-Term Dissertation Grant, Awarded by the University of Michigan Graduate School, 2006.
Rackham Merit Fellowship, Awarded by the University of Michigan Graduate School, 2001-2006.
Paula Menyuk Travel Award. Awarded by the Department of Applied Linguistics, Boston University. Conference travel, November 2005.
Department of Linguistics block grants: For various speech perception studies and follow-up infant data collection, Winter 2006, Fall 2005, Winter 2005, Summer 2004, Winter, 2004.
Summer Research Grant. Funded by the *John H. D'Arms Award for Distinguished Graduate Mentoring in the Humanities* to P.S. Beddor. Summer 2003.
Foreign Language and Area Studies (FLAS) fellowship, UM Center for South Asian Studies: Hindi, 2002-2003.
Department of South and Southeast Asian Studies block grant, UC Berkeley, 1998-1999.
Dean's Honor List, UC Berkeley, 1992-1997.

PUBLICATIONS

- Narayan, C.R.** (2008) "The acoustic-perceptual salience of nasal place contrasts," *Journal of Phonetics* **36**, 1, 191-217.
- Beddor, P.S., Brasher, A., and **Narayan, C.** (2007), "Applying perceptual methods to the study of phonetic variation and sound change" in *Experimental Approaches to Phonology*, eds. M.J. Solé, P.S. Beddor, and M. Ohala (Oxford University Press).
- Narayan, C.** (2006), "*Follow your nose: Non-native nasal-consonant perception in infancy*" in *Proceedings of 30th Boston University Conference on Language Development* (Cascadilla Press).

MANUSCRIPTS SUBMITTED FOR PUBLICATION OR IN PREPARATION

- Narayan, C.R.**, Werker, J.F., Beddor, P.S. (under revision) "Acoustic salience affects speech perception in infancy: Evidence from nasal place discrimination"
- Narayan, C.R.**, Gorman, K.B., Swingley, D. (in prep) "Word-initial [voice] in infant- and adult-directed speech: VOT and f_0 "
- Narayan, C.R.**, Swingley, D. (in prep) "Young children's knowledge of the microprosodic cues to [voice] in known words"
- Narayan, C.R.** (under revision) "Temporal and contextual constraints on /ai/ and their spectral consequences"

PUBLISHED ABSTRACTS

- "Perceptual salience and acoustic distance: Evidence from Tagalog nasal-place contrasts" (2006) *Journal of the Acoustical Society of America*, **119**, 3242.
- "A phonological asymmetry and its perceptual consequence: The case of the velar-nasal onset" (2004) *Journal of the Acoustical Society of America*, **116**, 2572.
- "Word-length and context effects on the acoustics of /ai/" (2004) *Journal of the Acoustical Society of America*, **115**, 5, pt. 2, 2541-2542.

INVITED TALKS

- April 2008 "Infant-directed speech, developmental speech perception and a window of opportunity for sound change," Presented in the Department of Linguistics, Swarthmore College
- February 2008 "What babies teach us about language: The intersections of infant speech perception, phonological typology, and historical phonology," Presented in the Department of Linguistics, University of Toronto
- February 2007 "The intersections of developmental speech perception, acoustic salience, and phonological typology," Presented in the Department of Linguistics, University of California, San Diego
- May 2006 "Perceptual salience and the development of speech perception," Presented in the Department of Psychology, Northwestern University

CONFERENCE PRESENTATIONS

- January 2008 "The microprosody of [VOICE] in infant- and adult-directed speech," Presented at the symposium, "Attention to cues in phonological learning" at the Linguistic Society of America (LSA) annual meeting, Chicago. Co-authored with Kyle B. Gorman and Daniel Swingley.
- June 2007 "Infant perception of a non-native nasal contrast," Presented at the Canadian Psychological Association convention, Ottawa. Co-authored with Corinna Elliott and Janet F. Werker.
- January 2007 "Nasal consonant perception in infancy: Effects of acoustic-perceptual salience," Presented at the Linguistic Society of America (LSA) annual meeting, Anaheim.
- June 2006 "A new pattern of perceptual development: Evidence from non-native nasal perception in infancy," Presented at the 10th Laboratory Phonology Conference (LabPhon10), Paris.
- June 2006 "Adult and infant perception of the English nasal-place asymmetry," Presented in the Symposium on The Interaction of Phonetics and Phonotactics in Infant Speech Perception at the International Conference on Infant Studies (ICIS), Kyoto.
- June 2006 "Perceptual salience and acoustic distance: Evidence from Tagalog nasal-place contrasts," Presented at the 151st Meeting of the Acoustical Society of America (ASA), Providence.
- November 2005 "*Follow your nose: Non-native nasal consonant perception in infancy*," Presented at the 30th Boston University Conference on Language Development (BUCLD30), Boston.
- November 2004 "A phonological asymmetry and its perceptual consequence: the case of the velar-nasal onset," Presented at the 76th Meeting of the Acoustical Society of America (ASA), San Diego.

- April 2004 "Temporal and contextual constraints on /ai/ and their spectral consequences," Presented at the 75th Meeting of the Acoustical Society of America (ASA), New York City.
- June 2004 (Accepted but not presented) "Word-length and consonant effects on /ai/," 9th Laboratory Phonology Conference (LabPhon9), Urbana-Champaign.
- November 2003 "Word-length effects on the acoustics of /ai/," Presented at the 9th Mid-Continental Workshop on Phonology (MCWOP9), University of Illinois, Urbana-Champaign.

OTHER TALKS AND GUEST LECTURES

- September 2006 "Acoustic-perceptual salience and developmental speech perception," Speech Group, University of Pennsylvania
- April 2006 "Acoustic distance and perceptual salience: Evidence from Filipino nasal onsets," Phonetics and Phonology Discussion Group, University of Michigan
- March 2006 "Speech Perception," Brief presentation at the Linguistics Undergraduate Concentration Fair, Department of Linguistics, University of Michigan
- February 2006 "What we hear (and why): Some issues in speech production and perception," Guest Lecture, Linguistics 200 "Language and Human Mind," Taught by Profs. Sam Epstein and Julie Boland, Department of Linguistics, University of Michigan
- March 2005 "Adult and infant perception of a phonological asymmetry" Research Colloquium, Department of Linguistics, University of British Columbia
- October 2004 "Phonology and how we hear it: fundamentals of speech perception in adults and infants" Guest lecture, Linguistics 105/Honors250 "Language and Mind," Professor Samuel Epstein, Department of Linguistics, University of Michigan
- October 2004 "Native-Cantonese and native-English listeners' perception of velar nasals in onset position," Infant Studies Centre, Department of Psychology, University of British Columbia
- October 2003 "Temporal and contextual constraints on /ai/ and their spectral consequences," Phonetics and Phonology Discussion Group, University of Michigan
- May 2003 "Word-length effects on /ai/," Infant Studies Centre, University of British Columbia
- May 1999 "Towards a history of code alternation in traditional India," Master's Thesis Colloquium, Department of South and Southeast Asian Studies, UC Berkeley

TEACHING

- Organizer, Discussion leader: IRCS (University of Pennsylvania) Common Ground Seminar, Spring 2007.
Organized interdisciplinary talks and led discussions of relevant readings with IRCS graduate students.
Facilitated cross-disciplinary discussion of research methods and theories across the fields of Psychology, Linguistics, Biology, Anthropology and Computer Science.
- Instructor: UM Linguistics 112: *Languages of the World*, Summer 2004.
Sole responsibility for designing and teaching two sections of an introductory Linguistics course (25 students). Topics included: typology, phonetics, phonology, syntax, and sociolinguistics.
- Graduate Student Instructor: UM Linguistics 211: *Introduction to Linguistics*, Fall 2003.
Led three sections, including one honors section (15-20 students each). Responsible for leading discussion, elaborating on lecture topics, detailing phonology and syntax problems, and grading. Topics included: phonetics, phonology, syntax, language acquisition, and sociolinguistics.
- Instructor: UC Berkeley South Asian Studies 5B: *India in the Writer's Eye*, Spring 2001.
Sole responsibility for designing two sections (25 students each) of this reading and composition course; lectured on many novels and short stories, and graded essays.
- Graduate Student Instructor: UC Berkeley South Asian Studies 5B: *India in the Traveler's Eye*, Spring 2000.
Led two sections (20 students each) of this undergraduate reading and composition course. Responsible for discussing texts, and grading essays and exams.
- Research Assistant: Prof. P.S. Beddor, NSF Grant "The interplay between segmental timing and coarticulation: Acoustic, perceptual, and phonological investigations," Winter 2004, UM.
Recorded, manipulated and assembled real-speech stimuli, conducted speech perception experiments with adults and ran analyses of discrimination and identification data. Data from this study will appear as a chapter in the forthcoming edited volume, Experimental Approaches to Phonology.

SERVICE

- Ad hoc* reviewer for: *Journal of Phonetics*, Boston University Conference on Language Development (BUCLD), Penn Linguistics Colloquium (PLC), West Coast Conference on Formal Linguistics (WCCFL)

SERVICE—DEPARTMENT OF LINGUISTICS, UNIVERSITY OF MICHIGAN

Organizing committee, Mid-Continental Workshop on Phonology (MCWOP-11), Fall 2005

Search committee, *Language Learning* Phonetics/Phonology faculty position, 2004

Graduate Employees Organization liaison, 2003-2004

Colloquium Committee, 2001-2002, 2003-2004

Newsletter Committee, 2001-2002, 2005-2006

LANGUAGE SKILLS

Advanced reading: Classical Sanskrit, Vedic, Pali, Buddhist Hybrid Sanskrit (and other Prakrits)

Basic reading, speaking, and writing: Hindi (3 years), Spanish (4 years in High School)

Advanced speaking: Tamil and Kannada

Basic reading: Kannada

PROFESSIONAL MEMBERSHIPS

Acoustical Society of America

Linguistic Society of America

REFERENCES

Dissertation Co-chair:

Patrice Speeter Beddor

Professor and Chair

Department of Linguistics

University of Michigan

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Dissertation Co-chair:

Janet F. Werker

Professor and Director

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Postdoctoral Faculty Advisor:

Daniel Swingley

Assistant Professor

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University of Pennsylvania

3401 Walnut Street, Room 411

Philadelphia, Pennsylvania 19104

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Professor Samuel Epstein

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