

Patricia K. Kuhl

Co-Director, Institute for Learning and Brain Sciences

Director, NSF Science of Learning Center (LIFE)

The Bezos Family Foundation Endowed Chair for Early Childhood Learning



BASIC DATA

Academic Rank: Professor, Department of Speech and Hearing Sciences
Date of Birth: November 5, 1946
Married: Andrew N. Meltzoff

EDUCATIONAL BACKGROUND

<u>Institution</u>	<u>Degree</u>	<u>Dates</u>
St. Cloud State University	B.A. (Psychology)	1964-1967
University of Minnesota	M.A. (Speech Science)	1968-1971
University of Minnesota	Ph.D. (Psychology; Speech)	1971-1973

EMPLOYMENT RECORD

<u>Institution</u>	<u>Position</u>	<u>Dates</u>
Central Institute for the Deaf	Post-doctoral Fellow	1973-1976
University of Washington	Assistant Professor	1977-1979
University of Washington	Associate Professor	1979-1982
University of Washington	Professor (Speech and Hearing)	1982-present
University of Washington	Adjunct Professor (Psychology)	1985-present
University of Washington	Adjunct Professor (Otolaryngology)	1987-present
University of Washington	Adjunct Professor (Neuroscience)	1994-present
University of Washington	Adjunct Professor (Linguistics)	1998-present
University of Washington	Adjunct Professor (Education)	2004-present

PROFESSIONAL OFFICES AND AWARDS

Fellow: Acoustical Society of America
 American Psychological Society
 American Association for the Advancement of Science

Associate Editor: *Journal of the Acoustical Society of America* (1988-1992), *Journal of Neuroscience* (1989-1995), *Developmental Science* (2000-present)

Research Award: Virginia Merrill Bloedel Scholar, University of Washington, 1992-1994

Neuroscience Affiliate: G. Edelman's Neuroscience Research Group, La Jolla, CA, 1994-2000

Board of Directors: American Institute of Physics, 1994-1996

Board of Directors (Governor Appointed): Washington Technology Center, 1994-1997

Board of Trustees: Neurosciences Research Foundation, Inc., 1994-1999

Vice President: Acoustical Society of America, 1996-1997

Silver Medal: Acoustical Society of America, 1997

Endowed Professorship: William P. and Ruth Gerberding University Professor, 1997- 2005

Faculty Lectureship Award: University of Washington, 1999

American Academy of Arts and Sciences: Elected 1998

President: Acoustical Society of America, 1999-2000

Rodin Academy: Elected 2000

Norwegian Academy of Science and Letters: Elected 2003

International Board of Directors: Nippon Telegraph and Telephone, 2005-present

Research Award: Kenneth Craik Award: University of Cambridge, Cambridge, England, 2005

Alumni Outstanding Achievement Award: University of Minnesota, April 2007

Gold Medal: Acoustical Society of America, Paris, France, July 2008

Endowed Chair for Early Childhood Learning: Bezos Family Foundation, 2009

National Academy of Sciences: Elected 2010

TED.com presentation: 2011, http://www.ted.com/talks/patricia_kuhl_the_linguistic_genius_of_babies.html

Education Nation: 2011, <http://ilabs.washington.edu/i-labs-news-education-nation-2011>

IPSEN Fondation's Jean-Louis Signoret Neuropsychology Prize: Paris, Nov 29, 2011

Fellow of the Cognitive Science Society: Elected 2011

CURRENT RESEARCH GRANTS

P. K. Kuhl, Principal Investigator

NIH/NICHD (HD 37954)

“Developmental Speech Perception and Brain Plasticity,” 2007-2012.

P. K. Kuhl, Principal Investigator and Director of the LIFE Center

NSF Science of Learning Center Grant

“Center for LIFE (Learning in Informal and Formal Environments),” 2004-2014.

P. K. Kuhl, Principal Investigator, Project 2

Autism Center of Excellence Grant

“Linguistic and Social Responses to Speech in Infants at Risk for Autism,” 2007-2012.

PUBLICATIONS

- Martin, R. R., Haroldson, S. K. & **Kuhl, P.** (1972). Disfluencies of young children in two speaking situations. *Journal of Speech and Hearing Research*, 15, 831-836.
- Martin, R. R., **Kuhl, P.** & Haroldson, S. (1972). An experimental treatment with two preschool stuttering children. *Journal of Speech and Hearing Research*, 15, 743-752.
- Speaks, C., Parker, B., Harris, C. & **Kuhl, P.** (1972). Intelligibility of connected discourse. *Journal of Speech and Hearing Research*, 15, 590-602.
- Ingham, R. J., Martin, R. R. & **Kuhl, P.** (1974). Modification and control of rate of speaking by stutterers. *Journal of Speech and Hearing Research*, 17, 489-496.
- Kuhl, P. K.** & Miller, J. D. (1975). Speech perception by the chinchilla: Voiced-voiceless distinction in alveolar plosive consonants. *Science*, 190, 69-72.
- Kuhl, P. K.** (1976). Speech perception in early infancy: The acquisition of speech-sound categories. In S. K. Hirsh, D. H. Eldredge, I. J. Hirsh & S. R. Silverman (Eds.), *Hearing and Davis: Essays Honoring Hallowell Davis* (pp. 265-280). St. Louis: Washington University Press.
- Kuhl, P. K.** (1978). Predispositions for the perception of speech-sound categories: A species-specific phenomenon? In F. D. Minifie & L. L. Lloyd (Eds.), *Communicative and Cognitive Abilities — Early Behavioral Assessment* (pp. 229-255). Baltimore: University Park Press.
- Kuhl, P. K.** & Miller, J. D. (1978). Speech perception by the chinchilla: Identification functions for synthetic VOT stimuli. *Journal of the Acoustical Society of America*, 63, 905-917.
- Sparks, D. W., **Kuhl, P. K.**, Edmonds, A. E. & Gray, G. P. (1978). Investigating the MESA (Multipoint Electrotactile Speech Aid): The transmission of segmental features of speech. *Journal of the Acoustical Society of America*, 63, 246-257.
- Kuhl, P. K.** (1979). Models and mechanisms in speech perception: Species comparisons provide further contributions. *Brain, Behavior and Evolution*, 16, 374-408.
- Kuhl, P. K.** (1979). The perception of speech in early infancy. In N. J. Lass (Ed.), *Speech and Language: Advances In Basic Research and Practice* (pp. 1-47). San Francisco: Academic Press.
- Kuhl, P. K.** (1979). Predispositions for the perception of speech by human infants. In *Proceedings of the Ninth International Congress of Phonetic Sciences, Copenhagen, 1979* (pp. 162-168). Copenhagen: Institute of Phonetics.
- Sparks, D. W., Ardell, L. A., Bourgeois, M., Wiedmer, B. & **Kuhl, P. K.** (1979). Investigating the MESA (Multipoint Electrotactile Speech Aid): The transmission of connected discourse. *Journal of the Acoustical Society of America*, 65, 810-815.

- Kuhl, P.K.** (1979) Speech perception in early infancy: Perceptual constancy for spectrally dissimilar vowel categories. *Journal of the Acoustical Society of America*, 66, 1668-1679.
- Kuhl, P. K.** (1980). Infant speech perception: Reviewing data on auditory category formation. In P. Levinson & C. Sloan (Eds.), *Auditory Processing and Language: Clinical and Research Perspectives* (pp. 35-59). New York: Grune & Stratton.
- Kuhl, P. K.** (1980). Perceptual constancy for speech-sound categories in early infancy. In G. H. Yeni-Komshian, J. F. Kavanagh & C. A. Ferguson (Eds.), *Child Phonology: Vol. 2. Perception* (pp. 41-66). New York: Academic Press.
- Kuhl, P. K.** (1981). Auditory category formation and developmental speech perception. In R. E. Stark (Ed.), *Language behavior in infancy and early childhood* (pp. 165-183). New York: Elsevier/North-Holland.
- Kuhl, P. K.** (1981). Discrimination of speech by nonhuman animals: Basic auditory sensitivities conducive to the perception of speech-sound categories. *Journal of the Acoustical Society of America*, 70, 340-349.
- Kuhl, P. K.** (1982). Speech perception: An overview of current issues. In N. J. Lass, L. V. McReynolds, J. L. Northern & D. E. Yoder (Eds.), *Speech, Language, and Hearing: Vol. 1. Normal Processes* (pp. 286-322). Philadelphia: Saunders.
- Kuhl, P. K. & Meltzoff, A. N.** (1982). The bimodal perception of speech in infancy. *Science*, 218, 1138-1141.
- Kuhl, P. K. & Miller, J. D.** (1982). Discrimination of auditory target dimensions in the presence or absence of variation in a second dimension by infants. *Perception & Psychophysics*, 31, 279-292.
- Kuhl, P. K. & Padden, D. M.** (1982). Enhanced discriminability at the phonetic boundaries for the voicing feature in macaques. *Perception & Psychophysics*, 32, 542-550.
- Kuhl, P. K.** (1983). Perception of auditory equivalence classes for speech in early infancy. *Infant Behavior & Development*, 6, 263-285.
- Kuhl, P. K.** (1983). The perception of speech in early infancy: Four phenomena. In S. E. Gerber & G. T. Mencher (Eds.), *The Development of Auditory Behavior* (pp. 187-218). New York: Grune & Stratton.
- Kuhl, P. K. & Padden, D. M.** (1983). Enhanced discriminability at the phonetic boundaries for the place feature in macaques. *Journal of the Acoustical Society of America*, 73, 1003-1010.
- Kuhl, P. K. & Meltzoff, A. N.** (1984). The intermodal representation of speech in infants. *Infant Behavior & Development*, 7, 361-381.

- Grant, K. W., Ardell, L. H., **Kuhl, P. K.** & Sparks, D. W. (1985). The contribution of fundamental frequency, amplitude envelope, and voicing duration cues to speechreading in normal-hearing subjects. *Journal of the Acoustical Society of America*, 77, 671-677.
- Kuhl, P. K.** (1985). Categorization of speech by infants. In J. Mehler & R. Fox (Eds.), *Neonate Cognition: Beyond the Blooming Buzzing Confusion* (pp. 231-262). Hillsdale, NJ: Erlbaum.
- Kuhl, P. K.** (1985). Methods in the study of infant speech perception. In G. Gottlieb & N. Krasnegor (Eds.), *Measurement of Audition and Vision in the First Year of Postnatal Life: A Methodological Overview* (pp. 223-251). Norwood, NJ: Ablex.
- Grant, K. W., Ardell, L. H., **Kuhl, P. K.** & Sparks, D. W. (1986). The transmission of prosodic information via an electrotactile speechreading aid. *Ear and Hearing*, 7, 328-335.
- Kuhl, P. K.** (1986). Infants' perception of speech: Constraints on characterizations of the initial state. In B. Lindblom & R. Zetterström (Eds.), *Precursors of Early Speech* (pp. 219-244). New York: Stockton Press.
- Kuhl, P. K.** (1986). Reflections on infants' perception and representation of speech. In J. S. Perkell & D. H. Klatt (Eds.), *Invariance and Variability in Speech Processes* (pp. 19-30). Hillsdale, NJ: Erlbaum.
- Kuhl, P. K.** (1986). Theoretical contributions of tests on animals to the special-mechanisms debate in speech. *Experimental Biology*, 45, 233-265.
- Fernald, A. & **Kuhl, P.** (1987). Acoustic determinants of infant preference for Motherese speech. *Infant Behavior and Development*, 10, 279-293.
- Kuhl, P. K.** (1987). Perception of speech and sound in early infancy. In P. Salapatek & L. Cohen (Eds.), *Handbook of Infant Perception: Vol 2. From Perception to Cognition* (pp. 275-382). New York: Academic Press.
- Kuhl, P. K.** (1987). The special-mechanisms debate in speech research: Categorization tests on animals and infants. In S. Harnad (Ed.), *Categorical Perception: The Groundwork of Cognition* (pp. 355-386). New York: Cambridge University Press.
- Grieser, D. L. & **Kuhl, P. K.** (1988). Maternal speech to infants in a tonal language: Support for universal prosodic features in motherese. *Developmental Psychology*, 24, 14-20.
- Kuhl, P. K.** (1988). Auditory perception and the evolution of speech. *Human Evolution*, 3, 19-43.
- Kuhl, P. K.** (1988). On handedness in primates and human infants. *Behavioral and Brain Sciences*, 11, 727-729.
- Kuhl, P. K.** & Meltzoff, A. N. (1988). Speech as an intermodal object of perception. In A. Yonas (Ed.), *Perceptual Development in Infancy: The Minnesota Symposia on Child Psychology* (Vol. 20, pp. 235-266). Hillsdale, NJ: Erlbaum.

- Green, K. P. & **Kuhl, P. K.** (1989). The role of visual information in the processing of place and manner features in speech perception. *Perception & Psychophysics*, 45, 34-42.
- Grieser, D. & **Kuhl, P. K.** (1989). Categorization of speech by infants: Support for speech-sound prototypes. *Developmental Psychology*, 25, 577-588.
- Kuhl, P. K.** (1989). Infants' acquisition of speech: Evidence of an early understanding of auditory-articulatory correspondences. In J. Erber, R. Menzel, H. Pfluger & D. Todt (Eds.), *Neural Mechanisms of Behavior* (pp. 153-154). Stuttgart: Georg Thieme Verlag.
- Kuhl, P. K.** (1989). On babies, birds, modules, and mechanisms: A comparative approach to the acquisition of vocal communication. In R. J. Dooling & S. H. Hulse (Eds.), *The Comparative Psychology of Audition: Perceiving Complex Sounds* (pp. 379-419). Hillsdale, NJ: Erlbaum.
- Meltzoff, A. N. & **Kuhl, P. K.** (1989). Infants' perception of faces and speech sounds: challenges to developmental theory. In P. R. Zelazo & R. G. Barr (Eds.), *Challenges to Developmental Paradigms: Implications for Theory, Assessment and Treatment* (pp. 67-91). Hillsdale, NJ: Erlbaum.
- Kuhl, P. K.** (1990). Auditory perception and the ontogeny and phylogeny of human speech. *Seminars in Speech and Language*, 11, 77-91.
- Kuhl, P. K.** (1990). Towards a new theory of the development of speech perception. In H. Fujisaki (Ed.), *Proceedings of the International Conference on Spoken Language Processing* (pp. 745-748). Tokyo: The Acoustical Society of Japan.
- Green, K. P. & **Kuhl, P. K.** (1991). Integral processing of visual place and auditory voicing information during phonetic perception. *Journal of Experimental Psychology: Human Perception and Performance*, 17, 278-288.
- Green, K. P., **Kuhl, P. K.**, Meltzoff, A. N. & Stevens, E. B. (1991). Integrating speech information across talkers, gender, and sensory modality: Female faces and male voices in the McGurk effect. *Perception & Psychophysics*, 50, 524-536.
- Kuhl, P. K.** (1991). Human adults and human infants show a "perceptual magnet effect" for the prototypes of speech categories, monkeys do not. *Perception & Psychophysics*, 50, 93-107.
- Kuhl, P. K.** (1991). Perception, cognition, and the ontogenetic and phylogenetic emergence of human speech. In S. E. Brauth, W. S. Hall & R. J. Dooling (Eds.), *Plasticity of Development* (pp. 73-106). Cambridge, MA: MIT Press.
- Kuhl, P. K.** (1991). [Review of Modularity and the motor theory of speech perception: Proceedings of a conference to honor Alvin M. Liberman, I. G. Mattingly & M. Studdert-Kennedy, (Eds.)]. *Language and Speech*, 34, 367-373.

- Kuhl, P. K.**, Williams, K. A. & Meltzoff, A. N. (1991). Cross-modal speech perception in adults and infants using nonspeech auditory stimuli. *Journal of Experimental Psychology: Human Perception and Performance*, 17, 829-840.
- Meltzoff, A. N., **Kuhl, P. K.** & Moore, M. K. (1991). Perception, representation, and the control of action in newborns and young infants: toward a new synthesis. In M. J. S. Weiss & P. R. Zelazo (Eds.), *Newborn Attention: Biological Constraints and the Influence of Experience* (pp. 377-411). Norwood, NJ: Ablex.
- Davis, K. & **Kuhl, P. K.** (1992). Best exemplars of English velar stops: A first report. In J. J. Ohala, T. M. Nearey, B. L. Derwing, M. M. Hodge & G. E. Wiebe (Eds.), *Proceedings of the International Conference on Spoken Language Processing* (pp. 495-498). Edmonton, Alberta: University of Alberta.
- Kuhl, P. K.** (1992). Infants' perception and representation of speech: Development of a new theory. In J. J. Ohala, T. M. Nearey, B. L. Derwing, M. M. Hodge & G. E. Wiebe (Eds.), *Proceedings of the International Conference on Spoken Language Processing* (pp. 449-456). Edmonton, Alberta: University of Alberta.
- Kuhl, P. K.** (1992). Psychoacoustics and speech perception: Internal standards, perceptual anchors, and prototypes. In L. A. Werner & E. W. Rubel (Eds.), *Developmental Psychoacoustics* (pp. 293-332). Washington, DC: American Psychological Association.
- Kuhl, P. K.** (1992). Speech prototypes: Studies on the nature, function, ontogeny and phylogeny of the "centers" of speech categories. In Y. Tohkura, E. Vatikiotis-Bateson & Y. Sagisaka (Eds.), *Speech Perception, Production and Linguistic structure* (pp. 239-264). Tokyo: Ohmsha.
- Kuhl, P. K.**, Williams, K. A., Lacerda, F., Stevens, K. N. & Lindblom, B. (1992). Linguistic experience alters phonetic perception in infants by 6 months of age. *Science*, 255, 606-608.
- Marean, G. C., Werner, L. A. & **Kuhl, P. K.** (1992). Vowel categorization by very young infants. *Developmental Psychology*, 28, 396-405.
- Goodsitt, J. V., Morgan, J. L. & **Kuhl, P. K.** (1993). Perceptual strategies in prelingual speech segmentation. *Journal of Child Language*, 20, 229-252.
- Kuhl, P. K.** (1993). Developmental speech perception: Implications for models of language impairment. In P. Tallal, A. M. Galaburda, R. R. Llinás & C. von Euler (Eds.), *Temporal Information Processing in the Nervous System. Annals of the New York Academy of Sciences* (Vol. 682, pp. 248-263). New York: The New York Academy of Sciences.
- Kuhl, P. K.** (1993). Early linguistic experience and phonetic perception: Implications for theories of developmental speech perception. *Journal of Phonetics*, 21, 125-139.
- Kuhl, P. K.** (1993). Infant speech perception: A window on psycholinguistic development. *International Journal of Psycholinguistics*, 9, 33-56.

- Kuhl, P. K.** (1993). Innate predispositions and the effects of experience: The native language magnet theory. In B. de Boysson-Bardies, S. de Schonen, P. Jusczyk, P. McNeilage & J. Morton (Eds.), *Developmental Neurocognition: Speech and Face Processing in the First Year of Life* (pp. 259-274). Dordrecht, Netherlands: Kluwer Academic Publishers.
- Green, K. P., Stevens, E. B. & **Kuhl, P. K.** (1994). Talker continuity and the use of rate information during phonetic perception. *Perception & Psychophysics*, 55, 249-260.
- Kuhl, P. K.** (1994). Forming the brain's perceptual maps: Effects of language experience on speech perception. In *Brain and Communication: 1994 Yakult International Symposium* (pp. 1-22). Japan: Yakult Honsha Co.
- Kuhl, P. K.** (1994). Learning and representation in speech and language. *Current Opinion in Neurobiology*, 4, 812-822.
- Kuhl, P. K.** (1994). Speech perception. In F. D. Minifie (Ed.), *Introduction to Communication Sciences and Disorders* (pp. 77-148). San Diego: Singular.
- Kuhl, P. K.**, Tsuzaki, M., Tohkura, Y. & Meltzoff, A. N. (1994). Human processing of auditory-visual information in speech perception: Potential for multimodal human-machine interfaces. In *Proceedings of the International Conference on Spoken Language Processing* (pp. 539-542). Tokyo: Acoustical Society of Japan.
- Meltzoff, A. N. & **Kuhl, P. K.** (1994). Faces and speech: Intermodal processing of biologically relevant signals in infants and adults. In D. J. Lewkowicz & R. Lickliter (Eds.), *The Development of Intersensory Perception: Comparative Perspectives* (pp. 335-369). Hillsdale, NJ: Erlbaum.
- Iverson, P. & **Kuhl, P. K.** (1995). Mapping the perceptual magnet effect for speech using signal detection theory and multidimensional scaling. *Journal of the Acoustical Society of America*, 97, 553-562.
- Kuhl, P. K.** (1995). The acquisition of language and speech. In G. Bloothoof, V. Hazan, D. Huber, & J. Llisterri (Eds.), *European Studies in Phonetics and Speech Communication* (pp. 93-98). Utrecht, Netherlands: OTS Publications.
- Kuhl, P. K.** (1995). Mechanisms of developmental change in speech and language. *Proceedings of the XIIIth International Congress on Phonetic Sciences*, 2, 132-139.
- Kuhl, P. K.** & Iverson, P. (1995). Linguistic experience and the “perceptual magnet effect.” In W. Strange (Ed.), *Speech Perception and Linguistic Experience: Issues in Cross-Language Research* (pp. 121-154). Timonium, MD: York Press.
- Kuhl, P. K.** & Meltzoff, A. N. (1995). Vocal learning in infants: Development of perceptual-motor links for speech. *Proceedings of the XIIIth International Congress on Phonetic Sciences*, 1, 146-149.

- Andruski, J. E. & **Kuhl, P. K.** (1996). The acoustic structure of vowels in mothers' speech to infants and adults. *Proceedings of the 1996 International Conference on Spoken Language Processing*, 3, 1545-1548.
- Iverson, P. & **Kuhl, P. K.** (1996). Influences of phonetic identification and category goodness on American listeners' perception of /r/ and /l/. *Journal of the Acoustical Society of America*, 99, 1130-1140.
- Kuhl, P. K.** & Meltzoff, A. N. (1996). Infant vocalizations in response to speech: Vocal imitation and developmental change. *Journal of the Acoustical Society of America*, 100, 2425-2438.
- Willerman, R. & **Kuhl, P. K.** (1996). Cross-language speech perception: Swedish, English, and Spanish speakers' perception of front rounded vowels. *Proceedings of the 1996 International Conference on Spoken Language Processing*, 1, 442-445.
- Green, K. P., Tomiak, G. R., & **Kuhl, P. K.** (1997). The encoding of rate and talker information during phonetic perception. *Perception and Psychophysics*, 59, 675-692.
- Kuhl, P. K.**, Andruski, J. E., Chistovich, I. A., Chistovich, L. A., Kozhevnikova, E. V., Ryskina, V. L., Stolyarova, E. I., Sundberg, U., & Lacerda, F. (1997). Cross-language analysis of phonetic units in language addressed to infants. *Science*, 277, 684-686.
- Kuhl, P. K.** & Meltzoff, A. N. (1997). Evolution, nativism, and learning in the development of language and speech. In M. Gopnik (Ed.), *The Inheritance and Innateness of Grammars* (pp. 7-44). New York: Oxford University Press.
- Kuhl, P. K.** (1998). The development of speech and language. In T. J. Carew, R. Menzel, & C. J. Shatz (Eds.), *Mechanistic Relationships Between Development and Learning* (pp. 53-73). New York: Wiley.
- Kuhl, P. K.** (1998). Effects of language experience on speech perception. In P. K. Kuhl & L. Crum (Eds.), *Proceedings 16th International Congress on Acoustics and 135th Meeting of the Acoustical Society of America* (Vol. 3, pp. 1601-1602). Woodbury, NY: Acoustical Society of America.
- Kuhl, P. K.** (1998). Language, culture, and intersubjectivity: The creation of shared perception. In S. Bråten (Ed.), *Intersubjective Communication and Emotion in Early Ontogeny* (pp. 297-315). Cambridge, UK: Cambridge University Press.
- Kuhl, P. K.** (1998). The development of language. In C. von Euler, I. Lundberg, & R. Llinás (Eds.), *Basic Mechanisms in Cognition and Language* (pp. 175-195). New York: Elsevier.
- Doupe, A., & **Kuhl, P. K.** (1999). Birdsong and speech: Common themes and mechanisms. *Annual Review of Neuroscience*, 22, 567-631.
- Gopnik, A., Meltzoff, A. N., & **Kuhl, P. K.** (1999). *The Scientist in the Crib: Minds, Brains, and How Children Learn*. New York: William Morrow.

- Kuhl, P. K.** (1999). Speech, language, and the brain: Innate preparation for learning. In M. D. Hauser & M. Konishi (Eds.), *The Design of Animal Communication* (pp. 419-450). Cambridge, MA: MIT Press.
- Iverson, P. & **Kuhl, P. K.** (2000). Perceptual magnet and phoneme boundary effects in speech perception: Do they arise from a common mechanism? *Perception and Psychophysics*, *62*, 874-886.
- Kuhl, P. K.** (2000). Language, mind, and brain: Experience alters perception. In M. S. Gazzaniga (Ed.), *The New Cognitive Neurosciences* (2nd ed.) (pp. 99-115). Cambridge, MA: MIT Press.
- Kuhl, P. K.** (2000). A new view of language acquisition. *Proceedings of the National Academy of Sciences*, *97*, 11850-11857.
- Kuhl, P. K.** (2001). Speech, language, and developmental change. In F. Lacerda, C. von Hofsten, & M. Heimann (Eds.), *Emerging Cognitive Abilities in Early Infancy* (pp. 111-133). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Kuhl, P. K.**, Tsao, F. M., Liu, H. M., Zhang, Y. & de Boer, B. (2001). Language/Culture/Mind/Brain: Progress at the Margins Between Disciplines. In A. Domasio et al. (Eds.). *Unity of Knowledge: The Convergence of Natural and Human Science* (pp. 136-174). New York: The New York Academy of Sciences.
- de Boer, B. & **Kuhl, P. K.** (2003). Investigating the role of infant-directed speech with a computer model. *Acoustic Research Letters Online (ARLO)*, *4*, 129-134.
- Iverson, P., **Kuhl, P. K.**, Akahane-Yamada, R., Diesch, E., Tohkura, Y., Kettermann, A., & Siebert, C. (2003). A perceptual interference account of acquisition difficulties for non-native phonemes. *Cognition*, *87*, B47-B57.
- Kuhl, P. K.**, Tsao, F. -M, & Liu, H. -M. (2003). Foreign-language experience in infancy: Effects of short-term exposure and social interaction on phonetic learning. *Proceedings of the National Academy of Sciences, USA*, *100*, 9096-9101.
- Kuhl, P. K.** (2003). Human speech and birdsong: Communication and the social brain. *Proceedings of the National Academy of Sciences, USA*, *100*, 9645-9646.
- Liu, H. -M, **Kuhl, P. K.** & Tsao, F. -M. (2003). An association between mother's speech clarity and infants' speech discrimination skills. *Developmental Science*, *6*, F1-F10.
- Wang, Y. & **Kuhl, P. K.** (2003). Evaluating the "critical period" hypothesis: Perceptual learning of Mandarin tones in American adults and American children at 6, 10, and 14 years of age. *Proceedings of the 15th International Congress of Phonetic Sciences*, 1537-1540.
- Cheour, M., Imada, T., Taulu, S., Ahonen, A., Salonen, J., and **Kuhl, P. K.** (2004). Magnetoencephalography (MEG) is feasible for infant assessment of auditory discrimination. *Experimental Neurology*, *190*, 44-51.

- Kuhl, P. K.** (2004). Early language acquisition: Cracking the speech code. *Nature Reviews Neuroscience*, 5, 831-843.
- Tsao, F. M., Liu, H. M., & **Kuhl, P. K.** (2004). Speech perception in infancy predicts language development in the second year of life: A longitudinal study. *Child Development*, 75, 1067-1084.
- Conboy, B., Rivera-Gaxiola, M., Klarman, L., Aksoylu, E. & **Kuhl, P.K.** (2005). Associations between native and nonnative speech sound discrimination and language development at the end of the first year. *Proceedings Supplement of the 29th Annual Boston University Conference on Language Development*.
- Kuhl, P. K.**, Coffey-Corina, S., Padden, D. M., & Dawson, G. (2005). Links between social and linguistic processing of speech in preschool children with autism: Behavioral and electrophysiological measures. *Developmental Science*, 8, F9-F20.
- Kuhl, P. K.**, Conboy, B.T., Padden, D., Nelson, T., & Pruitt, J. (2005). Early speech perception and later language development: Implications for the Critical Period. *Language Learning and Development*, 1, 237-264.
- Liu, H-M., Tsao, F-M., and **Kuhl, P. K.** (2005). The effect of reduced vowel working space on speech intelligibility in Mandarin-speaking young adults with cerebral palsy. *Journal of the Acoustical Society of America*, 117, 3879-3889.
- Rivera-Gaxiola, M., Klarman, L., Garcia-Sierra, A. & **Kuhl, P. K.** (2005). Neural patterns to speech and vocabulary growth in American infants. *NeuroReport*, 16, 495-498.
- Rivera-Gaxiola, M., Silva-Pereyra, J. and **Kuhl, P. K.** (2005). Brain potentials to native- and non-native speech contrasts in seven- and eleven-month-old American infants. *Developmental Science*, 8, 162-172.
- Silva-Pereyra, J., Klarman, L., Lin Jo-Fu, L. and **Kuhl, P.** (2005). Sentence processing in 30-month-old children: An ERP study. *NeuroReport*, 16, 645-648.
- Silva-Pereyra, J., Rivera-Gaxiola, M. and **Kuhl, P.** (2005). An event-related brain potential study of sentence comprehension in preschoolers: Semantic and morphosyntactic processing. *Cognitive Brain Research*, 23, 247-258.
- Zhang, Y., **Kuhl, P. K.**, Imada, T., Kotani, M., & Tohkura, Y. (2005). Effects of language experience: Neural commitment to language-specific auditory patterns. *NeuroImage*, 26, 703-720.
- Bransford, J. D., Barron, B., Pea, R., Meltzoff, A. N., **Kuhl, P. K.**, Bell, P., Stevens, R., Schwartz, D., Vye, N., Reeves, B., Roschelle, J. & Sabelli, N. (2006). Foundations and opportunities for an interdisciplinary science of learning. In K. Sawyer (Ed.), *The Cambridge Handbook of the Learning Sciences* (pp. 19-34). New York: Cambridge University Press.

- Imada, T., Zhang, Y., Cheour M., Taulu, S., Ahonen, A. & **Kuhl, P. K.** (2006). Infant speech perception activates Broca's Area: A developmental MEG study. *NeuroReport*, *17*, 957-962.
- Bransford, J., Vye, N., Stevens, R., **Kuhl, P. K.**, Schwartz, D., Bell, P., Meltzoff, A., Barron, B., Pea, R., Reeves, B., Roschelle, J., & Sabelli, N. (2006). Learning theories and education: Toward a decade of synergy. In P. Alexander & P. Winne (Eds.), *Handbook of Educational Psychology*, 2nd edition (pp. 209-244). Mahwah, NJ: Erlbaum.
- Kuhl, P. K.**, Stevens, E., Hayashi, A., Deguchi, T., Kiritani, S. & Iverson, P. (2006). Infants show a facilitation effect for native language phonetic perception between 6 and 12 months. *Developmental Science*, *9*, F13-F21.
- Tsao, F.-M., Liu, H.-M., **Kuhl, P. K.** (2006). Perception of native and non-native affricate-fricative contrasts: Cross-language tests on adults and infants. *Journal of the Acoustical Society of America*, *120*, 2285-2294.
- Conboy, B. & **Kuhl, P. K.** (2007). Early speech perception: Developing a culturally specific way of listening through social interaction. In S. Braten (Ed.), *On Being Moved: From Mirror Neurons to Empathy* (pp. 175-199). Cambridge, England: Cambridge University Press.
- Kuhl, P. K.** (2007). Is speech learning 'gated' by the social brain? *Developmental Science*, *10*, 110-120.
- Liu, H. -M., Tsao, F. -M., & **Kuhl, P. K.** (2007). Acoustic analysis of lexical tone in Mandarin infant-directed speech. *Developmental Psychology*, *43*, 912-917.
- Rivera-Gaxiola, M., Silva-Pereyra, J., Klarman, L., Garcia-Sierra, A., Lara-Ayala, L., Cadena-Salazar, C. & **Kuhl, P. K.** (2007). Principal component analyses and scalp distribution of the auditory P150-250 and N250-550 to speech contrasts in Mexican and American infants. *Developmental Neuropsychology*, *31*, 363-378.
- Silva-Pereyra, J., Conboy, B.T., Klarman, L., & **Kuhl, P. K.** (2007). Grammatical processing without semantics? An event-related brain potential study of preschoolers using jabberwocky sentences. *Journal of Cognitive Neuroscience*, *19*, 1-16.
- Wang, Y., Lin, J. -F., **Kuhl, P. K.**, & Hirsch, J. (2007). Mathematical and linguistic processing differs between native and second languages: An fMRI study. *Brain Imaging and Behavior*, *1*, 68-82.
- Coffey-Corina, S., Padden, D., **Kuhl, P. K.**, & Dawson, G. (2008). ERPs to words correlate with behavioral measures in children with Autism Spectrum Disorder. *Journal of the Acoustical Society of America*, *123*, 3742.
- Conboy, B. T., Rivera-Gaxiola, M., Silva-Pereyra, J., & **Kuhl, P. K.** (2008). Event-related potential studies of early language processing at the phoneme, word, and sentence levels. In A. D. Friederici & G. Thierry (Eds.), *Trends in Language Acquisition Research*, *5*, 23-64. Amsterdam, The Netherlands: John Benjamins.

- Conboy, B.T., Sommerville, J., & **Kuhl, P. K.** (2008). Cognitive control factors in speech perception at 11 months. *Developmental Psychology*, *44*, 1505-1512.
- Doupe, A. J. & **Kuhl, P. K.** (2008). Birdsong and human speech: Common themes and mechanisms. In H. P. Zeigler, & P. Marler (Eds.), *Neuroscience of Birdsong* (pp. 5-31). Cambridge, England: Cambridge University Press.
- Kuhl, P. K.** (2008). Linking infant speech perception to language acquisition: Phonetic learning predicts language growth. In J. Colombo, P. McCardle & L. Freund (Eds.), *Infant pathways to language: Methods, models, and research directions* (pp. 213-243). Erlbaum: New York.
- Kuhl, P. K.**, Conboy, B. T., Coffey-Corina, S., Padden, D., Rivera-Gaxiola, M., & Nelson, T. (2008). Phonetic learning as a pathway to language: New data and Native Language Magnet Theory, expanded (NLM-e). *Philosophical Transactions of the Royal Society B*, *363*, 979-1000.
- Kuhl, P. K.**, & Rivera-Gaxiola, M. (2008). Neural substrates of language acquisition. *Annual Review of Neuroscience*, *31*, 511-534.
- Lin, J. F., Imada, T., Tanaka, K., Hirai, K., Maeshima, K., Nemoto, I., & **Kuhl, P. K.** (2008). The effect of translation on bilingual mental addition revealed by magnetoencephalography (MEG). In R. Kakigi, K. Yokosawa, & S. Kuriki. (Eds.), *Biomagnetism -- Interdisciplinary research and exploration* (pp. 212-214). Sapporo, Japan: Hokkaido University Press.
- Raizada, R. D., Richards, T. L., Meltzoff, A. N., & **Kuhl, P. K.** (2008). Socioeconomic status predicts hemispheric specialization of the left inferior frontal gyrus in young children. *NeuroImage*, *40*, 1392-1401.
- Kuhl, P. K.** (2009). Early language acquisition: Phonetic and word learning, neural substrates, and a theoretical model. In B. Moore, L. Tyler & W. Marslen-Wilson (Eds.), *The Perception of Speech: From Sound to Meaning* (pp. 103-131). Oxford, UK: Oxford University Press.
- Kuhl, P. K.** (2009). Early language acquisition: Neural substrates and theoretical models. In M. S. Gazzaniga (Ed.), *The Cognitive Neurosciences*, 4th Edition (pp. 837-854). Cambridge, MA: MIT Press.
- Liu, H. -M., Tsao, F. -M., & **Kuhl, P. K.** (2009). Age-related changes in acoustic modifications of Mandarin maternal speech to preverbal infants and five-year-old children: A longitudinal study. *Journal of Child Language*, *36*, 909-922
- Meltzoff, A. N., **Kuhl, P. K.**, Movellan, J., & Sejnowski, T. J. (2009). Foundations for a new science of learning. *Science*, *325*, 284-288.
- Wang, Y., **Kuhl, P. K.**, Chen, C., & Dong, Q. (2009). Sustained and transient language control in the bilingual brain. *NeuroImage*, *47*, 414-422.

- Zhang, Y., **Kuhl, P. K.**, Imada, T., Iverson, P., Pruitt, E. B., Kawakatsu, M., Tohkura, Y., & Nemoto, I. (2009). Neural signatures of phonetic learning in adulthood: A magnetoencephalography study. *Neuroimage*, *46*, 226-240.
- Kuhl, P. K.** (2010). Brain mechanisms in early language acquisition. *Neuron*, *67*, 713-727.
- Lebedeva, G. C., & **Kuhl, P. K.** (2010). Sing that tune: Infants' perception of melody and lyrics and the facilitation of phonetic recognition in songs. *Infant Behavior and Development*, *33*, 419-430.
- Raizada, R. D. S., Tsao, F. -M., Liu, H. -M., & **Kuhl, P. K.** (2010). Quantifying the adequacy of neural representations for a cross-language phonetic discrimination task: Prediction of individual differences. *Cerebral Cortex*, *20*, 1-12.
- Raizada, R. D. S., Tsao, F. -M., Liu, H. -M., Holloway, I. D., Ansari, D., & **Kuhl, P. K.** (2010). Linking brain-wide multivoxel activation patterns to behaviour: Examples from language and math. *NeuroImage*, *51*, 462-471.
- Conboy, B. T., & **Kuhl, P. K.** (2011). Impact of second-language experience in infancy: Brain measures of first- and second-language speech perception. *Developmental Science*, *14*, 242-248.
- Sundara, M., Demuth, K. & **Kuhl, P. K.** (2011). Sentence-position effects on children's perception and production of English 3rd person singular -s. *Journal of Speech, Language, and Hearing Research*, *54*, 55-71.
- Kuhl, P. K.** (2011). Early language learning and literacy: Neuroscience implications for education. *Mind, Brain, and Education*, *5*, 128-142. Article first published online: 10 AUG 2011, DOI: 10.1111/j.1751-228X.2011.01121.
- Kuhl, P. K.** (2011). Social mechanisms in early language acquisition: Understanding integrated brain systems supporting language. In J. Decety & J. Cacioppo (Eds.), *The Oxford handbook of social neuroscience* (pp. 649-667). Oxford UK: Oxford University Press.
- Kuhl, P. K.** (2011). Who's talking? *Science*, *29*, 529-530.
- Garcia-Sierra, A., Rivera-Gaxiola, M., Conboy, B. T., Romo, H., Percaccio, C. R., Klarman, L., Ortiz, S., & **Kuhl, P. K.** (2011). Bilingual language learning: An ERP study relating early brain responses to speech, language input, and later word production. *Journal of Phonetics*, *39*, 546-557.
- Lin, J.-F. L., Imada, T., & **Kuhl, P. K.** (2011). Mental addition in bilinguals: an fMRI study of task-related and performance-related activation. *Cerebral Cortex*, *28*, 1851-1861. doi:10.1093/cercor/bhr263

- Rivera-Gaxiola, M., Garcia-Sierra, A., Lara-Ayala, L., Cadena, C., Jackson-Maldonado, D., & **Kuhl, P. K.** (2012). Event-related potentials to an English/Spanish syllabic contrast in Mexican 10-13 month-old infants. *ISRN Neurology*, doi:10.5402/2012/702986
- Kuhl, P. K.** & Damasio, A. (2012). Language, in E. R. Kandel, J. H. Schwartz, T. M. Jessell, S. Siegelbaum, & J. Hudspeth (Eds.), *Principles of neural science: 5th Edition*. New York: McGraw Hill.
- Ramirez-Esparza, N., Reder, S., Harris, K., Hellermann, J., Richards, C., & **Kuhl, P. K.** (2012). Socio-interactive practices and personality in adult learners of English with little formal education. *Language Learning*, 62, 541-570.
- Deniz, D. C., Richards, T. L., & **Kuhl, P. K.** (submitted). Early gray-matter density in infancy predicts later language skills: A whole-brain voxel-based morphometry study.
- Ramírez-Esparza, N., García-Sierra, A., & **Kuhl, P. K.** (submitted). Look who's talking: Social context is linked to infants' speech development.
- Conboy, B. T., Brooks, R., Meltzoff, A. M., & **Kuhl, P. K.** (submitted). A role for social interaction in infants' learning of second-language phonetics.
- Sundara, M., Ward, N., Conboy, B., & **Kuhl, P. K.** (submitted). Listening to Spanish for 5 hours alters infant babbling in response to Spanish (but not English).
- Kuhl, P. K.**, Coffey-Corina, S., Padden, D., Munson, J., Estes, A., & Dawson, G. (submitted), Brain responses to words in 2-year-olds with autism predict developmental outcomes at age 6.
- Bosseler, A. N., Taulu, S., Pihko, E., Mäkelä, J. P., Imada, T., Ahonen, A., & **Kuhl, P. K.** (submitted). Theta brain rhythms index perceptual narrowing in infant speech perception.

INVITED ADDRESSES

(Since 2000)

- “Brain and Language: Reinterpreting the ‘Critical Period,’” Neuroscience Research Institute, La Jolla, CA, March, 2000.
- “Born to Learn: Language and the Brain of the Baby,” *The Felix Santschi Lecture*, University of Zurich, Zurich, April, 2000.
- “Early Experience and Language Development: Reinterpreting ‘Critical Periods,’” *National Academy of Science Colloquium*, Auditory Neuroscience, Irvine, CA, May, 2000.
- “Language, Emotion, and the Human Brain,” *New York Academy of Sciences Conference, Unity of Knowledge: The Convergence of Natural and Human Science*, Rockefeller University, New York, NY, June, 2000.

- “Plasticity for Learning: Language and the Brain,” *Keynote Address, Cold Spring Harbor Conference, Neuronal Plasticity*, Cold Spring Harbor, NY, September, 2000.
- “Brain Plasticity and the ‘Critical Period,’” *Keynote Address, Neuroscience Symposium, Plasticity and Learning*, New Orleans, LA, October, 2000.
- “Frontiers of Auditory Neuroscience: Language and the Brain,” *Symposium on New Frontiers in Hearing*, St. Louis, MO, March, 2001.
- “Language/Culture/Mind/Brain: Progress at the Margins Between Disciplines,” *Kerry P. Green Memorial Address*, Tucson, AZ, May, 2001.
- “Reinterpreting the Critical Period: Language Acquisition,” *Keynote Address, Gordon Research Conference on Neural Plasticity*, Newport, RI, July, 2001.
- “Born to Learn: Language, Reading, and the Brain of the Child,” *White House Summit on Early Childhood Cognitive Development: Ready to Read; Ready to Learn*, Washington, D.C., July, 2001.
- “The Secret Life of the Brain: Early Development,” *Smithsonian Museum Series on The Secret Life of the Brain*, Washington, D.C., November, 2001.
- “Auditory Neuroscience: Language and the Brain,” *The Richard Silverman Lecture*, Washington University, St. Louis, MO, December, 2001.
- “Language and the Brain: New Methods and Theory,” *NIH Keynote Address, Language and the Brain*, April, 2002.
- “Reinterpreting the ‘Critical Period’ for Language,” *Neuronal Function Research Group, International Workshop on Sensory Systems Plasticity*, RIKEN, Japan, May, 2002.
- “The Infant Brain: How Do We Know What’s Going on Up There?” *Rockefeller University Annual Luncheon Honoring Women and Science*, New York, NY, May, 2002.
- “Early Learning, Language, and the Infant Brain,” *Rockefeller University Neuroscience Colloquium Series*, New York, NY, May, 2002.
- “Reinterpreting the ‘Critical Period’ for Language,” *Neuronal Function Research Group, International Workshop on Sensory Systems Plasticity*, RIKEN, Japan, May, 2002.
- “Born to Learn: Language, Reading, and the Brain of the Child,” *White House Summit on Early Cognitive Development: Eight Northwestern States*, Boise, ID, June, 2002.
- “Reevaluating the Critical Period Hypothesis: Early Language Learning,” *Meeting of the Human Frontiers Science Program, G-7 Nations*, Ottawa, June, 2002.
- “Babies at Work: The Scientist in the Crib,” *Mead-Johnson Scholars Keynote Address*, Williamsburg, VA, September, 2002.

- “The Brain: The Incredible Learning Machine,” *University of Washington Alumni Association Fall Lecture Series, The Art & Science of the Brain*, Seattle, WA, October, 2002.
- “Language and the Baby Brain,” *AAAS Symposium: What Infants Can't Miss*, Denver, CO, February, 2003.
- “Infant Learning: Scientist in the Crib,” *Keynote Speaker, 10th Anniversary of the Neuroscience Program*, University of Texas, Houston, TX, March, 2003.
- “Language Acquisition: How the Mind Works,” *Dartmouth Lecture Series on The Mind*, Hanover, NH, May, 2003.
- “Born to Learn: Language, Learning, and the Child's Brain,” *White House Conference on Early Learning*, Denver, CO, May, 2003.
- “Reinterpreting the ‘Critical Period’ in Development,” *Riken Brain Institute Conference, Nurturing the Brain*, Tokyo, August, 2003.
- “Wiring the Baby Brain for Language: Statistical and Social Learning,” *Washington University Sesquicentennial Celebration Keynote*, St. Louis, MO, October, 2003.
- “Language, Reading, and the Developing Brain,” *The Norman Geschwind Memorial Lecture, Meeting of the International Dyslexia Association*, San Diego, CA, November, 2003.
- “Language and the Infant Brain: Computation with Constraints,” *Keynote Address, Institute of Electrical and Electronics Engineers, Inc. (IEEE)*, St. Thomas, December, 2003.
- “Language Input Maps the Baby Brain,” *AAAS Symposium, Wiring the Baby Brain for Language*, Seattle, WA, February, 2004.
- “Cues for a Lifetime of Perception,” *AAAS Symposium, Cues for Language Acquisition*, Seattle, WA, February, 2004.
- “Infant Speech Perception and Early Literacy,” *Keynote Speaker, Boston University School of Medicine Conference on Literacy*, San Francisco, CA, April, 2004.
- “Babies, Brains and How We Help Them Learn: The Scientist in the Crib,” *Pathways Lecture Series, Sponsored by Children’s Hospital*, Seattle, WA, May, 2004.
- “Advances in Neuroscience: Language and the Infant Brain,” *National Governors Association Meeting*, Seattle, WA, July, 2004.
- “Language and the Infant Brain: Computational Strategies and Social Influences,” *RIKEN-MIT Systems Neuroscience Symposium*, Cambridge, MA, September, 2004.
- “The Scientist in the Crib,” *ARCS Annual Awards Luncheon Speaker*, Seattle, WA, November, 2004.

- “Bridging the Gap between Neuroscience and Education,” *The Society for Neuroscience K-12 Science Teachers Workshop*, The Salk Institute, San Diego, CA, November, 2004.
- “Language and the Infant Brain: Computation with Constraints,” *Special Lecture, The Society for Neuroscience*, San Diego, CA, November, 2004.
- “Language Development: Computation and the Social Brain,” *Keynote Speaker, Inaugural Celebration for the Language Learning and Development Journal*, Boston, MA, November, 2004.
- “Language and the Infant Brain,” *University of Texas at San Antonio Education Colloquium*, San Antonio, TX, January, 2005.
- “The Scientist in the Crib: Infant Learning and the Brain,” *New York Academy of Medicine*, New York, NY, March, 2005.
- “The Infant Brain: How Infants Learn and Why It Matters,” *Washington State House Appropriations Committee*, Olympia, WA, March, 2005.
- “Language and the Infant Brain: A Glimpse at How the Mind Develops,” *Inaugural Lecture, Georgetown University Neuroscience Program*, Washington, DC, March, 2005.
- “Language and the Infant Brain: The Scientist in the Crib,” *Keynote Speaker, John Merck Scholars 15th Anniversary*, New York Academy of Sciences, April, 2004.
- “Language and the Brain: A Glimpse at the Infant Mind,” *Infant and Early Childhood Conference (IECC)*, Bellevue, WA, May, 2005.
- “Early Learning and the Brain: Lessons from Language Learning,” *Keynote Speaker, Washington Learns Summit, Governor Christine Gregoire's Summit on Learning in 0-5, K-12, and Higher Education*, June, 2005.
- “Breakthroughs in Early Learning: Advances in Science, Economics and State Policy,” *Keynote Speaker, National Conference of State Legislatures (NCSL) meeting*, Seattle, WA, August, 2005.
- “Infant Language Learning: Computation with Constraints,” *NIH and the Merrill Advanced Studies Center Conference on Language Acquisition, Infant Pathways to Language: Methods, Models, and Research Directions*, Tempe, AZ, September, 2005.
- “The Scientist in the Crib: Computational Learning for Language in Infancy,” *Kenneth Craik Research Award*, University of Cambridge, Cambridge, England, November, 2005.
- “The Scientist in the Crib: Language and the Infant Brain,” *Keynote Address, Neuhaus Education Center 20th Anniversary*, Houston, TX, March, 2006.
- “Bridging Neuroscience and Education: Examples from Language,” *Invited Speech to Governor Gregoire and the Washington Learns Steering Committee*, Seattle, WA, April, 2006.

- “Early Speech Perception and Later Language Abilities: Implications for Theory and Practice,” *Keynote Address, Harvard University and the Dana Foundation’s Brain Awareness Week*, Cambridge, MA, May, 2006.
- “Language and the Infant Brain: Bridges from Neuroscience to Education,” *Keynote Address, The Tenth International Conference on Cognitive and Neural Systems*, Boston, MA, May, 2006.
- “Language and the Infant Brain: Implications for the ‘Critical Period,’” *Invited Speaker, Nobel Foundation Conference, Nurturing the Brain of the Child*, Stockholm, May, 2006.
- “Language and the Infant Brain: The Scientist in the Crib,” *Scientific Briefing*, Swedish Parliament, Stockholm, May, 2006.
- “Language, Education, and Society,” *Invited Speaker, Annual Awards Luncheon, Swedish Science Reporters*, Stockholm, May, 2006.
- “The New Science of Learning,” *Invited Address, Governor’s Committee, Washington Learns*, Seattle, WA, May, 2006.
- “New Brain Imaging Tools for Young Children,” *NBC Nightly News with Brian Williams, Filmed interview*, September, 2006.
- “From Synapse to Schoolroom—The Science of Learning,” *Invited Symposium Speaker, The NSF Science of Learning Center Satellite Symposium*, Society for Neuroscience, October, 2006.
- “Language as Human Specialization,” *Invited Speaker, National Academy of Sciences Sackler Colloquium*, Irvine, CA, November, 2006.
- “Speech Perception: Development from General Mechanisms to Modules,” *Invited Symposium Speaker, Acoustical Society of America Conference*, Honolulu, HI, December, 2006.
- “Early Learning and the Brain,” *Invited presentation to the Washington State Legislature’s Appropriations Committee*, Olympia, WA, January, 2007.
- “The Bilingual Brain,” *NBC Nightly News with Brian Williams, Filmed interview*, January, 2007.
- “Early Learning Research in Washington State,” *Briefing for U.S. Senator Patty Murray*, Seattle, WA, February, 2007.
- “Language, Bilingualism, Neuroscience and Education,” *Keynote speaker, International Symposium on the Human Brain and Early Education*, Santiago, March, 2007.
- “Linking Speech Perception in Infancy to Language Acquisition: Early Phonetic Learning Predicts Later Language,” *Invited Symposium Speaker, Society for Research on Child Development*, Boston, MA, March, 2007.
- “Neural Commitment to Language: Implications for Dyslexia,” *Keynote Address, International Dyslexia Association, From Research to Practice*, Newport Beach, CA, March, 2007.

- “Early Language Learning and the Brain: Implications for Education,” *Invited Symposium Speaker, American Educational Research Association*, Chicago, IL, April, 2007.
- “Language, the Bilingual Brain, Education and Society,” *University of Minnesota Alumni Outstanding Achievement Award Address*, Minneapolis, MN, April, 2007.
- “Early Learning, the Brain, and Society,” *UW Provost’s Distinguished Lecture*, Seattle, WA, April, 2007.
- “Babies and Brains: Truths, Myths, and Politics,” *Invited Speaker, Pathways Lecture Series sponsored by Parent Map*, Seattle, WA, April, 2007.
- “Language Learning and the ‘Social Brain’: Implications for Children with Autism,” *Keynote Address, International Meeting For Autism Research*, Seattle, WA, May, 2007.
- “Language as a Challenge for Robotics and Engineering,” *Keynote Address, NSF conference, Future Challenges in Engineering and Learning*, Washington, DC, July, 2007.
- “Neuroplasticity for Language in Infancy,” *NSF conference, Opportunities and Challenges for Language Learning and Education*, Washington, DC, September, 2007.
- “Language, Bilingualism, and the Infant Brain,” *University of Helsinki Conference, Developing Brain, Emerging Mind*, Helsinki, September, 2007.
- “Language as a Human Specialization,” *NSF conference, Neuroscience and Education*, Washington, DC, December, 2007.
- “Cracking the Speech Code: Language and the Infant Brain,” *CNBC Lecture Series*, Carnegie Mellon University, Pittsburg, PA, January, 2008.
- “Language and the Baby Brain,” *American Association for the Advancement of Science Symposium, Brain Basis of Speech*, Boston, MA, February, 2008.
- “It’s Not Just Talk: How the Child’s Brain Maps Language,” *Parents & Science Lecture*, The Rockefeller University, New York, NY, April, 2008.
- “Language, Bilingualism, and the Infant Brain,” *Maclyn McCarty Memorial Lecture*, The Rockefeller University, New York, NY, April, 2008.
- “The Scientist in the Crib: Early Learning and the Brain,” *McKnight Conference on Neuroscience Special Lecture*, Aspen, CO, June, 2008.
- “Cracking the Speech Code,” *Nobel Symposium, Genes, Brain, and Behavior*, Stockholm, June, 2008.
- “Dawn of the Enlightened Brain - The Scientist in the Crib,” *Shedding Light on Infant Brain Function Workshop*, Stockholm, June, 2008.

- “How Children Learn: Can (Should) We Try to Improve it?” *How Can We Improve Our Brains?* Cold Spring Harbor, NY, September, 2008.
- “Exploring the Infant Brain with MEG,” *Neurospin Opening Keynote, MEG: New Images of Brain Dynamics*, Paris, December, 2008.
- “Aesthetics and the Infant Mind,” *Special Lecture, Evolutionary Origins of Art and Aesthetics*, Salk Institute, San Diego, CA, March, 2009.
- “Minds, Brains, and Early Learning: How Infants Crack the Speech Code,” *Plenary given at the Second Biennial Conference of the Mind, Brain, and Education Society*, Philadelphia, PA, May, 2009.
- “Why Learning to Read is More Complicated Than You Think,” *Discussion led at the Aspen Ideas Festival*, Aspen, CO, July, 2009.
- “What’s the Brain Got to Do with It?” *Tutor session given at the Aspen Ideas Festival*, Aspen, CO, July, 2009.
- “Being Human in a Digital World,” *Live from the Aspen Ideas Festival: The Brian Lehrer Show*, July, 2009. Podcast: <http://www.wnyc.org/shows/bl/episodes/2009/07/03/segments/135728>
- “Neuroscience to Education: Bridging Early Learning to Language and Literacy,” *Punahou and Hanalei Schools*, Honolulu, HI, September, 2009.
- “Fostering Early Brain Development: Windows of Opportunity for Learning,” *Keynote Lecture to the Swedish Academy of Medicine*, Stockholm, October, 2009.
- “Early Language Markers of Children at Risk for Autism Spectrum Disorders,” *Keynote Address to the Department of Neonatology at Stockholm’s Astrid Lindgren Children’s Hospital*, Stockholm, October, 2009.
- “The Science of Early Childhood Development and the Impact of Adversity,” *Applying the Science of Early Childhood Development to State Policy*, Seattle, WA, January, 2010.
- “Charlie Rose Brain Series Episode Five: The Developing Brain,” *The Charlie Rose Show*, New York, February, 2010. Video: <http://www.charlierose.com/view/interview/10877>
- “Cracking the Speech Code: Language and the Infant Brain,” *Twelfth Annual Benjamin & Anne A. Pinkel Endowed Lecture on Mind/Brain Paradigms*, University of Pennsylvania, Philadelphia, PA, April, 2010.
- “The New Science of Learning: What’s the Brain Have to Do With It?” *Presidential Session, American Educational Research Association Annual Meeting*, Denver, CO, May, 2010.
- “Cracking the Speech Code: Language and the Infant Brain,” *Merck Neurosciences Seminar Series, Neurosciences Graduate Program*, University of California, San Diego, La Jolla, May, 2010.

- “Minds, Brains & Early Learning: How Infants Crack the Speech Code,” *Keynote for Living, Learning, and the Brain Conference*, Genesee School District, Flint, MI, June, 2010.
- “Minds, Brains & Early Learning: How Infants Crack the Speech Code,” *Association for Library Service to Children Charlemae Rollins President’s Program*, American Library Association Annual Conference, Washington, DC, June, 2010.
- “Minds, Brains & Early Learning: How Young Children Crack the Speech Code,” *Early Learning in Missouri: Where Bright Futures Begin*, 49th Annual Cooperative Conference for School Administrators, August, 2010.
- “How Infants Crack the Speech Code: Exploring Minds in the Making Using the Tools of Modern Neuroscience,” *2010 Freshman Convocation Keynote*, University of Alaska Anchorage, Anchorage, AK, August 2010.
- “Learning and the ‘Social Brain’,” *National Science Foundation Distinguished Lecture, Directorate for Social, Behavioral & Economic Sciences*, Washington, DC, October, 2010.
- “How Infants Crack the Speech Code: Exploring the Infant Mind Using the Tools of Modern Neuroscience,” *Working Group on Human Neuroplasticity and Education*, The Pontifical Academy of Sciences, Vatican City, Italy, October, 2010.
- “The Linguistic Genius of Babies: Early Learning and the Brain,” *Public Talk for the Opening Ceremony of the Division of Brain Science and Educational Research*, Key State Laboratory, Beijing Normal University, Beijing, China, May, 2011.
- “How Infants Crack the Speech Code: Exploring the Infant Mind Using the Tools of Modern Neuroscience,” *First International Workshop on Brain, Cognition, and Learning*, Beijing, China, May, 2011.
- “Talking to the Media: Lessons in Crossing the Great Divide,” *Invited Presentation, 161st Meeting of the Acoustical Society of America*, Seattle, WA, May, 2011.
- “How Children Learn: ‘Windows of Opportunity’ for the Young Brain,” *Keynote Address at the Third Annual Starting Strong P-3 Institute*, Spokane, WA, August, 2011.
- “Babies, Brains, and Learning,” *Session Leader, Science Foo Camp*, Googleplex, Mountain View, CA, August, 2011.
- “A Visual Tour Through the Baby Brain: Why the First 2000 Days Matter,” *Launching of Education Nation at Rockefeller Plaza*, New York, NY, September, 2011.
- “The Mind of the Child: What Neuroscience Reveals About Brains, Learning, and Language,” *IPSEN Award Lecture*, Paris, November, 2011.
- “Exploring the Social Foundations of Learning Through Neuroscience, Technology, and Education,” *Presentation at OECD (Organization for Economic Cooperation and Development)*, Paris, January, 2012.

- “The First Stages of First and Second Language Acquisition: What Neuroscience Reveals About Mechanisms of Learning,” Invited Presentation, Collège de France, Paris, January, 2012.
- “Early Language and Brain Development,” Neuroscience and Education Workshop, NeuroSpin Institute, Paris, January, 2012.
- “Bilingual Language Learning, Cognitive Flexibility, and the Future of Education,” *Keynote Address for Early Childhood: Collaborating for Success*, Illinois Resource Center, Bloomington, Illinois, March, 2012.
- “The Linguistic Genius of Infants: Early Learning and Brain Plasticity: Lecture 1,” *Distinguished Lecturer, 2012: Mind, Brain, Behavior Interfaculty Initiative*, Harvard University, Cambridge, April, 2012.
- “The Infant Brain: Using Neuroscience Tools to Measure Neurolearning: Lecture 2,” *Distinguished Lecturer, 2012: Mind, Brain, Behavior Interfaculty Initiative*, Harvard University, Cambridge, April, 2012.
- “Using MEG to Explore Developmental Change in Speech Processing” *MEG: Applications to Cognitive Neuroscience*, The 2012 McGovern Institute Symposium, Massachusetts Institute of Technology, April, 2012.
- “Humans’ Capacity for Language: NeuroLearning,” *Seattle Brain Salon*, University of Washington I-LABS and Allen Institute for Brain Science, Seattle, April, 2012.
- “Language Learning and the Developing Brain: Cross-cultural Studies Unravel the Effects of Biology and Culture,” *Keynote Lecture, 161st Meeting of the Acoustical Society of America*, Hong Kong, May, 2012.
- “The Mind of the Child: What Neuroscience Reveals about Baby Brains and Learning,” Public Lecture, Chinese University of Hong Kong, Hong Kong, May, 2012.
- “The Genius of Bilingual Babies and Children,” Invited Speaker, *International Conference on Bilingualism and Comparative Linguistics*, Chinese University of Hong Kong, Hong Kong, May, 2012.
- “The Genius of Bilingual Babies: Recommendations for Parents,” Dinner Address, *Infants, Toddlers, and Twos, Inc.*, Hong Kong, May, 2012.
- “A Child’s First 2000 Days: What’s the Brain Got to Do With It?” Featured Speaker, *Aspen Ideas Festival*, Aspen, June, 2012.