9:15

2aSC2. Revisiting "Acoustic information for objects, places, and events". Valeriy Shafiro (Dept. Commun. Disord., Rush Univ. Medical Ctr., 600 S. Paulina, 1015 AAC, Chicago, IL 60612)

Over two decades ago, Jenkins proposed a broad taxonomy of acoustic information which addresses the perception of objects, places, and events in the world around the listener [J.J. Jenkins "Acoustic information for objects, places, and events," *Persistence and Change: Proceedings of the First International Conference on Event Perception,* edited by W. H. Warren and R. E. Shaw, Erlbaum, (2006)]. Although lesser known than some of his other publications, this chapter has anticipated several future directions in auditory research by asking what is being perceived by the listener and why. Inspired by this taxonomy, our research on environmental sound perception by normal-hearing and cochlear implant listeners has investigated how objects and events are perceived when sensory input is degraded. Experiments with vocoded environmental sounds of varying spectral resolution indicate large differences among individual sounds in the amount of spectral resolution required for identification. Temporally patterned sounds generally need a lower spectral resolution than harmonically rich sounds. However, with training, perception of environmental sounds can substantially improve and generalize to novel sounds, potentially including speech. Findings in cochlear implant listeners further indicate strong correlations between speech and environmental sound perception abilities, suggesting a considerable overlap in the perception of these two ecologically significant sound classes.

9:40

2aSC3. Studies of speech perception: A mentor's influence. Joanne L. Miller (Dept. of Psych., Northeastern Univ., Boston, MA 02115)

A major focus of my research program has been the nature of phonetic categorization. Many of our early studies examined the locations of boundaries between phonetic categories and the kinds of contextual factors that alter boundary locations. Later, as it became increasingly clear that phonetic categories are internally structured, with some category members more representative than others, we extended our efforts to specify the nature of this internal structure and the contextual factors that fine-tune it. Most recently, we have been investigating how these internally structured context-dependent categories might be customized for the systematic acoustic-phonetic variation in the speech of individual talkers. In this presentation, I will provide examples of our findings and drawing from studies of speech perception in adults and infants. Of particular relevance, I will point out how the many important lessons I learned in graduate school from Jim Jenkins, one of my mentors, have influenced my approach to speech research over the years. [Work supported by the NIDCD.]

10:05—10:15 Break

10:15

2aSC4. Adventures of a J. J.Jenkins student in speech technology research. Ann Syrdal (ATT Labs. Res., 180 Park Ave., RmD159, Florham Park, NJ 07932-0971, syrdal@research.att.com)

Two of the most valuable lessons I learned from Jenkins were (1) to focus on what interests me and explore why it interests me and (2) that an experiment with unexpected results can be more valuable than one that confirms the hypothesis. My graduate student years in Minnesota at the Center for Research in Human Learning, which Jenkins directed, were an exciting and revolutionary time, both on a large societal scale and academically. Experimental psychology at Minnesota had been a bastion of behaviorism and learning theory. Jenkins was our fearless leader in advancing the revolutionary ideas and emerging paradigms of cognitive psychology and psycholinguistics. In this new field, it was now possible to be scientifically rigorous and to study mental as well as behavioral phenomena. Jenkins and co-workers who played a role in my education at Minnesota have influenced both my earlier academic research and my research in speech technology over the past 22 years. After a brief overview of how I as an experimental/cognitive/perceptual/psycholinguist contributed to several speech technology projects, my talk will focus on unit selection text-to-speech synthesis and how studying and modeling the perception of speech is central to the technology.

10:40

2aSC5. What the eyes can tell us about spoken-language comprehension. Andrea Weber (Max Planck Inst. for Psycholinguistics, Wundtlaan 1, 6525 XD Nijmegen, The Netherlands, andrea.weber@mpi.nl)

As an academic great-grandchild of Jim, I had the fortune to have Jim's personal advice during the last stages of my graduate studies and during my first steps as a postdoctoral researcher. I was inspired by his great expertise, his respectful and sage comments on my work, and his encouragement for collaboration across disciplines. This paper pays tribute to Jim Jenkins by showing how his mindset influenced my own research in the field of spoken-language comprehension. In particular, I will introduce work that investigates the intersection of lower- and higher-processing levels using eye movements. Eye movements to displayed objects are tightly linked to spoken-language comprehension and are commonly used in psycholinguistic research to gain insights into underlying processes. I will present evidence for how difficulties on the perceptual level of processing can affect lexical processing and how, in turn, sentence processing can be influenced by characteristics of the lexical level, such as lexical frequency.

11:05

2aSC6. Speech perception within a biologically realistic information-theoretic framework. Keith R. Kluender (Dept. of Psych., Univ. of Wisconsin, 1202 W Johnson St., Madison, WI 53706, krkluend@wisc.edu)

Fundamental principles that govern all perception, from hair cell to cortex, are shaping our understanding of the perception of speech and other familiar sounds. Following modest presentation of historical and philosophical background, I will explain how ecological and sensorineural considerations encourage an information theoretical approach to speech perception. Information theory and