

OBITUARIES

Alvin M. Liberman • 1917–2000



Alvin M. Liberman, a Fellow of this Society, died on 13 January 2000, from complications of open heart surgery. He was past president of Haskins Laboratories (1975–1986) and professor emeritus in the Department of Psychology at the University of Connecticut and the Department of Linguistics at Yale University. His pioneering work in the field of speech perception set a research agenda that is still being followed today. Al was active in the field for more than 50 years, and was working on revisions to a major paper while he was in the hospital where he spent his last days.

Born in St. Joseph, Missouri, Al stayed close to home for his bachelor's and master's degrees, both from the University of Missouri. He moved to Yale for his Ph.D., in psychology, awarded in 1942. After a stint of aeromedical research for the Army during World War II (still at Yale), he came to Haskins Laboratories in New York to work with Franklin S. Cooper on the development of a reading machine for the blind, work sponsored by the Veterans Administration. Despite years of effort, he and his colleagues never succeeded in devising an acoustic transformation of the letters that listeners could follow faster than Morse code, roughly $\frac{1}{10}$ of a normal speaking rate, and intolerably slow for extended use. This failure raised the question to which he devoted much of the rest of his research career: Why is speech so much more efficient as a carrier of linguistic information than other sounds? The answer gradually emerged from dozens of experiments in the 1950s and 1960s.

Al realized that speech is not an arbitrary signal that just happened to be available as language evolved; rather, speech is an integral part of language. Consonants and vowels, the discrete phonemic elements essential for a sizeable lexicon, do not combine like beads on a string, but are overlapped, or encoded, into syllables; speed is thus purchased at the price of

acoustic complexity. Human listeners are biologically adapted to decode the continuously variable signal of running speech, and to recover its discrete phonemic components. In the course of developing this theoretical view, Al and his colleagues at Haskins Laboratories discovered the main acoustic cues to the consonants and vowels of English. These cues later served to guide the development of speech synthesis by rule, now widely used for man/machine interaction.

Al's provocative work was largely responsible for drawing speech research into the mainstream of experimental cognitive psychology, where his "nativist" views were not to everyone's liking. But he thrived on controversy, and up until the last months of his life he designed a steady stream of ingenious and telling experiments to support what he liked to call his "unconventional view" against the "conventional view" of most other experimental psychologists.

During the 1970s and 1980s, Al increasingly collaborated with his wife, the late Isabelle Yoffe Liberman, and other Haskins Laboratories scientists on reading. A central discovery of this work was that children who have difficulty in learning to read almost always lack what Isabelle termed "phoneme awareness": they cannot easily learn to break a word into its component consonants and vowels. The critical requirement of phoneme awareness in learning to read alphabetic print is now internationally recognized, in large part due to the two Libermans' passionate advocacy of the "alphabetic principle" against the "whole word" or "sight reading" method of instruction. Al was a member of the National Academy of Sciences and of the American Academy of Arts and Sciences, and received the Distinguished Scientific Contribution Award, the highest honor of the American Psychological Association. He also received many other awards, including the Warren Medal from the Society of Experimental Psychologists; honorary doctoral degrees from the State University of New York and from the Université Libre de Bruxelles, a medal from the Collège de France, Paris, and the Wilbur Cross Medal from the Graduate School of Yale University.

He is survived by two sons, Mark of Philadelphia, and Charles of Milton, MA; by a daughter, Sarah Ash, of Raleigh, NC, and by nine grandchildren.

DOUG H. WHALEN