

IPA NEWS

IN MEMORIAM
 JOHN J. OHALA (1941–2020)



John J. Ohala, past president of the International Phonetic Association, died in Berkeley, California, on 22 August 2020. He was married to Manjari (Agrawal) Ohala (former Professor and Chair of Linguistics at San Jose State University) for 51 years, and was a professor at UC Berkeley for one year less than that. He was born in Chicago on 19 July 1941, and he received his A.B. in English from Notre Dame in 1963. In 1966, he received an M.A. in Linguistics from UCLA, and in June 1969 he completed his Ph.D. also at UCLA under the direction of Peter Ladefoged. After a one-year post-doc at Tokyo University, he started his career at Berkeley in April 1970 and by 1977 he was a full professor. In 2004, he retired from teaching.

One of the most fascinating and intellectually influential figures in 20th century linguistics, Ohala insisted that the sound systems of language, their phonologies, are constrained by the physiology of speech production and speech perception (Ohala 1974). He noted, for example, that the aerodynamic conditions which are required to produce vocal fold vibration (the AERODYNAMIC VOICING CONSTRAINT) underlie cross-linguistic patterns of pitch patterning, and (de)voicing processes. A key feature of this approach, distinguishing it from the approach that was dominant at this period in Linguistics in North America, concerns the role of corpus-external information in linguistic explanation. At the time, the dominant way to explain phonological patterns found in a corpus of elicited forms was to state the phonological patterns in a formal grammar that is maximally simple and universal. Ohala critiqued

this as more of a reification of observations than an explanation of them, and argued that a deeper understanding of language sound patterns is to be found by reference to aerodynamic, articulatory, and auditory constraints that are external to the linguistic corpus. Such constraint-based approaches for describing and explaining phonology, which were pioneered by Ohala, are now the standard view in linguistics.

His theory of the listener as a source of sound change (Ohala 1981) was similarly influential. This theory rejects teleological explanations of change – the idea that change somehow improves the fitness of a language by making it easier to produce or perceive, as if these were the goals of speakers in producing sound change. Instead, he assumed that speakers aim to faithfully reproduce words as they have heard them, and that listener misperceptions sometimes introduce change. Just as he rejected the notion of an unseen divine hand in the shaping of the physical world, he also rejected the idea that speakers and hearers would be guided by a desire to optimize the sound system of their language for maximal communicative efficiency. He saw any tendency for optimality as emergent from the cumulative effects of individual acts of speaking – with the articulatory slop (his word) and listener misperceptions that are inherent in speech communication. This scientific approach to sound change as an explanation of language sound patterns was fleshed out in a series of influential papers (Ohala 1987, 1993; Ohala & Feder 1994; Ohala & Ohala 1995).

He was deeply interested in the ethology of sound symbolism. He felt that sound symbolism was an understudied field where most work lacked scientific rigor. His goal was to propose ‘a unifying, ethologically based and phonetically plausible theory of aspects of sound symbolism’ (Ohala 1983, 1984, 1994, 1997). He focused on what he called the FREQUENCY CODE, with a high F_0 innately signaling a ‘small vocalizer’, and a low F_0 to ‘large vocalizer’. Ohala’s desire to stimulate the field and increase the amount of scientifically sound literature on sound symbolism led him to initiate and host a major conference on the subject at UC Berkeley. The results of this conference became the Cambridge volume *Sound Symbolism* (Hinton, Nichols & Ohala 1994), still the most-cited work on the topic.

Another accomplishment, for which he was well known, is that he was an inventor of phonetic instruments. He refined the use of the whole-body plethysmograph for the measurement of subglottal pressure (and produced a delightful video about the technique). Additionally, he perfected the use of the photoelectric thyroumbrometer for the measurement of larynx movement. Beyond these, he invented two instruments that stand out for their simplicity and insightful use. His photoelectric glottograph (Ohala 1966) used the transillumination of the glottis to measure the opening of the vocal folds. A light source was positioned on the skin of the neck below the glottis, and a light-sensitive diode encased in a plastic catheter was swallowed into the throat above the glottis. This simple use of a photodiode to measure vocal tract constriction was also used in his nasograph (Ohala 1971). These devices produced insights regarding the complex relationship between articulatory and aerodynamic processes and their acoustic consequences which informed his subsequent theoretical work. Although he reported that ‘dedicated subjects report no great discomfort or disruption of natural speech articulation’, swallowing the catheter and leaving it suspended in the esophagus did require some dedication.

John received many honors over the years, including two festschrifts (Jaeger 1992 and Solé, Beddor & M. Ohala 2007). He was awarded an honorary Ph.D. by the University of Copenhagen in 1992 (the same year that he was elected as a Fellow of the Acoustical Society of America). He was the president of the International Phonetic Association from 1995 to 1999. In 2004 he was awarded the Berkeley Citation, and in 2006 he was awarded the Medal for Scientific Achievement by the International Speech Communication Association. In 2015, he was awarded the Silver Medal in Speech Communication by the Acoustical Society of

America ‘for advancing the understanding of speech production and perception and applying phonetic principles to the study of spoken language change over time’ (Maddieson & Beddor 2015).

Many of John’s students looked up to him as an intellectual father figure, and celebrated him in festschrifts and honorary conferences. He is described as a very patient and supportive research supervisor who always encouraged his students to think about the big-picture goals of their research. His ambitions for himself and his students are hinted in his 1987 paper on *Experimental Phonology*. He said, ‘all who would be the Galileos, Newtons, Harveys, Lavoisiers, and Pasteurs of phonology can still get in at the beginning where imagination and a breadth of knowledge counts for more than narrowly focussed technical knowledge’ (Ohala 1987: 208). Many answered this call to high intellectual ambition.

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