The International
Journal of
Speech,
Language
and the Law

IJSLL (PRINT) ISSN 1748-8885
IJSLL (ONLINE) ISSN 1748-8893

Obituary

Professor Harry Hollien (16 July 1926–12 July 2022): A tribute to a dear friend and mentor

Ruth Huntley Bahr

Just four days short of his 96th birthday, Professor Harry Hollien passed away on 12 July 2022, in Gainesville, Florida. He is remembered for his scientific contributions in the areas of vocal physiology, underwater communication, forensic communication and the acoustics of gunfire. Born on 16 July 1926, in Brockton, Massachusetts, he went on to serve in the United States Navy from 1944 to 1946. After completing his military service with honours, he attended Boston University where he received a Bachelor of Science degree in 1949 and a Master's in Education in 1951. He then travelled to the University of Iowa to earn a Master of Arts in 1953 and a Ph.D. in 1955. This is where he worked with the esteemed scientist of communication and communication disorders James Curtis and met many of the early American scientific leaders in the field of experimental phonetics. The programme at the University of Iowa was truly interdisciplinary and he learned from experts in developmental psychology, psychiatry, otolaryngology and paediatrics. This training was followed by a postdoctoral programme with Dr G. Paul Moore at Northwestern University.

Prof. Hollien began his teaching career at Baylor University (1955–1958) and then moved to the University of Wichita and taught there from 1958 to 1962. He found his academic home at the University of Florida in 1962 and remained there until his retirement in 1991. At the University of Florida, he achieved the rank of Professor in the speech, linguistics, and criminal justice programmes. He was the Associate Director, then Director, of the Communication Sciences Laboratory from 1962 to 1975, when he founded the Institute for the Advanced

Affiliation
University of South Florida, USA
email: rbahr@usf.edu

IJSLL VOL 29.1 2022 95–98 https://doi.org/10.1558/ijsll.24263

Harry Hollien and his wife Patti, at a picnic on the journey from London to the IAFP meeting in Cardiff, Wales, in 1994. Photo credit: Ruth Bahr.

Study of the Communication Processes (IASCP). This institute served as the centre for research focused on laryngeal physiology, acoustics, speech perception and production, and psychoacoustics. Many experimental phoneticians would come to IASCP to study and collaborate on research projects

Prof. Hollien's research evolved over his career, covering his many interests in voice and hearing. He began his career with a research focus on the vocal folds as audio oscillators. He developed x-ray techniques that were used to measure the length and thickness of the vocal folds (Hollien 1960), as well as developing the stroboscopic-laminographic (STROL) technique (Hollien, Coleman and Moore 1968; Hollien and Coleman 1970), which allowed for the study of cross-sectional areas of the folds at specific intervals throughout the vibratory cycle. These studies are remarkable because Prof. Hollien and his research team had to develop new procedures and build the necessary equipment to make these laryngeal measurements. These studies demonstrate what he instilled in all of his students: careful data collection, precise experimental design and validation testing. His work in laryngeal physiology led to studies in vocal fundamental frequency (Hollien and Shipp 1972; Hollien 2014; Shipp and Hollien 1969; Shipp, Qi, Huntley and Hollien, 1992), voice changes with age and the development of the Male-Female Coalescence model (dePinto and Hollien 1982) and definitions of vocal registers (Hollien, 1974). He then shifted his research interests to underwater sound localisation and with John Brandt and Stephen Feinstein developed the Diver Communication Research System (DICORS) (Hollien and Brandt 1969; Hollien and Feinstein 1975). They produced seminal work in underwater communication and a monograph, *Underwater Sound Localization*

in Humans (Hollien 1973). These research studies led to projects on the sounds that dolphins and tigers use to communicate. As his research career progressed, he began to focus on forensic communication, conducting many experiments on the role of acoustic features in the identification of a speaker, the effects of alcohol and stress on the voice and the acoustics of gunfire. Prof. Hollien is well known for two of his books: *The Acoustics of Crime* (1990) and *Forensic Voice Identification* (2002). He developed the Semi-Automatic Speaker Identification System (SAUSI) (Hollien, Childers and Doherty 1977; Hollien 2013), which he used frequently in forensic casework. He published over 400 articles and served as an expert in nearly 1,000 civil and criminal cases. He also was featured in several television episodes of *Forensic Files*.

Over the years, Prof. Hollien was a Fulbright Professor at the University of Trier, Germany, and held visiting appointments at Wrocław Technical University in Poland, the Royal Institute of Technology in Sweden and the Gould Research Laboratory, Julliard School of Music in New York. He was a Fellow of the American Speech and Hearing Association, the Acoustical Society of America, the International Society of Phonetic Sciences (ISPhS), the American Academy of Forensic Sciences, the American Association for the Advancement of Science and the Institute of Acoustics. In addition, he was Secretary-General, then President, of ISPhS. Prof. Hollien was an early member, and later elected an Honorary Life Member, of the International Association of Forensic Phonetics and Acoustics (IAPFA), hosting the annual meeting in Orlando, Florida, in 1995.

As one of his Ph.D. students, I remember his excellence as a mentor. He was collaborative, including students in all phases of his research projects. He loved to come into the office late in the afternoons to catch up on the day's activities and brainstorm on the day's projects. He built interdisciplinary teams to develop new technologies and systems to analyse the voice. He merged practical applications of knowledge with basic science experiments. There were many opportunities to participate in research and work on actual forensic cases. It was not unusual for us to go over to his house to discuss a current case or to meet with visiting faculty. His crab and oyster parties were legendary.

An antique gun enthusiast, he loved to show us his latest find. He was a fencer and an active member of the Sons of the American Revolution, the Descendants of the Mayflower Society, the Order of Founders and Patriots, the Sons of Union Veterans of the Civil War and the Descendants of the Knights of the Bath. One of his more interesting hobbies was recording and identifying different purrs/growls from tigers. He was a frequent visitor (and a member of the Board) at the Wild Animal Retirement Village in Waldo, Florida. His love for tigers was so great that the owners occasionally brought a tiger out to the Holliens' home in Gainesville for a visit. One day, Prof. Hollien was working with several tigers at the Wild Animal Retirement Village when his favourite tiger suddenly attacked

him, putting his claw into Prof. Hollien's upper arm. After spending several days in the hospital, he always insisted that his relationship with that tiger is what limited the extent of his injuries.

We will remember Prof. Hollien for his significant research contributions and casework in forensic communication. He is survived by his wife Patti and four of his children, Karen, Keith, Brian and Stephanie.

References

de Pinto, O. and Hollien, H. (1982) Speaking fundamental frequency characteristics of Australian women: Then and now. *Journal of Phonetics* 10(4): 367–375.

Hollien, H. (1960) Vocal pitch variation related to changes in vocal fold length. *Journal of Speech and Hearing Research* 3(2): 150–156.

Hollien, H. (1973) Underwater sound localization in humans. *Journal of the Acoustical Society of America* 53(5): 1288-1295.

Hollien, H. (1974) On vocal registers. *Journal of Phonetics* 2(2): 125–143.

Hollien, H. (1990) *The Acoustics of Crime: The New Science of Forensic Phonetics*. New York: Springer Science and Business Media.

Hollien, H. (2002) *Forensic Voice Identification*. Cambridge, MA: Academic Press.

Hollien, H. (2013) Barriers to progress in speaker identification with comments on the Trayvon Martin case. *Linguistic Evidence in Security, Law and Intelligence* 1(1): 76–98.

Hollien, H. (2014) Vocal fold dynamics for frequency change. *Journal of Voice* 28(4): 395–405.

Hollien, H. and Brandt, J. F. (1969) Effect of air bubbles in the external auditory meatus on underwater hearing thresholds. *Journal of the Acoustical Society of America* 46(2B): 384–387.

Hollien, H. and Coleman, R. F. (1970) Laryngeal correlates of frequency change: A STROL study. *Journal of Speech and Hearing Research* 13(2): 271–278.

Hollien, H. and Feinstein, S. (1975) Contribution of the external auditory meatus to auditory sensitivity underwater. *Journal of the Acoustical Society of America* 57(6): 1488–1492.

Hollien, H. and Shipp, T. (1972) Speaking fundamental frequency and chronologic age in males. *Journal of Speech and Hearing Research* 15(1): 155–159.

Hollien, H., Childers, D. and Doherty, E. (1977, May) Semi-automatic system for speaker identification (SAUSI). In *ICASSP'77. IEEE International Conference on Acoustics, Speech, and Signal Processing* (vol. 2) 768–771. New York: IEEE.

Hollien, H., Coleman, R. and Moore, G. P. (1968) Stroboscopic laminagraphy of the larynx during phonation. *Acta Oto-laryngologica* 65(1–6): 209–215.

Shipp, T. and Hollien, H. (1969) Perception of the aging male voice. *Journal of Speech and Hearing Research* 12(4): 703–710.

Shipp, T., Qi, Y., Huntley, R. and Hollien, H. (1992) Acoustic and temporal correlates of perceived age. *Journal of Voice* 6(3): 211–216.