

Obituary

Irwin Pollack, 1925–2021



Irwin Pollack, professor emeritus of psychology at the University of Michigan, died in Ann Arbor, Michigan, on January 23, 2021. During a career spanning more than 50 years,

first as a civilian researcher in the US Air Force from 1949 to 1963 and then as a professor of psychology at Michigan from 1963 until his retirement in 1995, Irwin was a creative and highly productive research scientist who worked on a wide range of problems in sensory psychology, hearing, speech perception, and human information processing.

Irwin was born in Bridgeport, Connecticut, on April 10, 1925. He graduated from the University of Florida, Gainesville, in 1945 and completed his PhD degree in experimental psychology at Harvard University, Cambridge, Massachusetts, in 1949. Irwin was a Fellow of the Acoustical Society of America (ASA) and was internationally known for his pioneering work on hearing, loudness, pitch, and speech intelligibility.

Irwin initially worked on applied problems related to auditory information processing, especially hearing in noise and speech intelligibility under adverse listening conditions. Much of the research he did in the Air Force was published in *The Journal of the Acoustical Society of America (JASA)* in the 1950s and is considered to contain seminal findings in speech and hearing sciences and human factors. Several studies were ahead of the field, anticipating future applications in everyday, real-world environments. For example, Sumbly and Pollack (1954) demonstrated that seeing the face of the talker provides an improvement in the signal-to-noise ratio (SNR) equivalent to a 15 dB gain in speech intelligibility in noise. For many hearing-impaired listeners, dynamic optical information in the face plays a significant complementary role in supporting robust speech understanding, even under compromised listening conditions with hearing aids or cochlear implants.

After Irwin moved to Michigan, he began a second highly productive phase of his career, studying more basic fundamental issues of human information processing involving the detection, discrimination, and recognition of complex auditory and visual sequential patterns. In addition to his empirical work, he also contributed several highly influential papers on the application of signal detection theory and receiver operating characteristic (ROC) analyses to the problems of recognition memory. Irwin was a strong advocate of what was then considered to be the “new look” in perception and cognition. He was dedicated to developing more precise methods to study hearing and speech communication based on developments in statistical decision theory and sensory processing, motivated by the theory of signal detection that provided novel methods for separating sensory processing from decision making.

His wife of almost 72 years, Marcille Kaufman Pollack, passed away a few weeks after his death on March 9, 2021. He is survived by his three children Sharron, Phyllis, and Stanley; five grandchildren; and one great-grandson. Irwin leaves a wonderful legacy of generosity, wise guidance, kindness, and love with his family, colleagues, and students.

Selected Publications of Irwin Pollack

- Licklider, J. C. R., and Pollack, I. (1948). Effects of differentiation, integration, and infinite peak clipping upon the intelligibility of speech. *The Journal of the Acoustical Society of America* 20, 42-51.
- Pollack, I. (1948). Effects of high pass and low pass filtering on the intelligibility of speech in noise. *The Journal of the Acoustical Society of America* 20, 259-266.
- Pollack, I. (1952). Information of elementary auditory displays. *The Journal of the Acoustical Society of America* 24, 745-749.
- Pollack, I. and Ficks, L. (1954) Information of elementary multidimensional auditory displays. *The Journal of the Acoustical Society of America* 26, 155-158.
- Sumbly, W. H., and Pollack, I. (1954) Visual contribution to speech intelligibility in noise. *The Journal of the Acoustical Society of America* 26, 212-215.

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