

Gunnar Fant

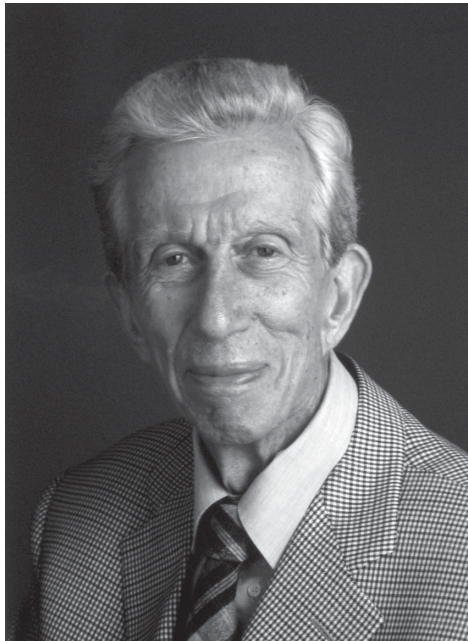
1920–2009

A pioneering giant in speech research has passed away. Professor emeritus Gunnar Fant died in June 2009 at the age of 89 after a long and prominent research career.

Gunnar graduated from KTH in 1945 with a Master's degree in electrical engineering. The spirit of the post-war period was characterized by optimism and the generous resources that could be devoted to research within communications technologies. The simmering activity was driven partly by the telecommunications industry and the goal of developing new aids for the hearing-impaired. At KTH, Gunnar had already written a thesis on how the perception of speech is dependent on disturbances and limitations in transmission. His first employment was at the telephone company Ericsson, where one of his responsibilities was to make acoustic analyses of Swedish speech sounds.

Between 1949 and 1951, Gunnar was invited to the USA. At MIT and Harvard he made many stimulating contacts with colleagues from varied disciplines. One researcher who became interested in Gunnar's work was the Harvard linguist Roman Jakobson. Their collaboration led to 'Preliminaries to Speech Analysis: The Distinctive Features and Their Correlates' together with Morris Halle, today considered a milestone in the history of linguistics.

Back in Sweden and at KTH, he founded the Speech Transmission Laboratory and achieved major successes, one of which was his attempts to produce synthetic speech that was very similar to human speech. Gunnar's good results were based on the theory that he formulated to describe at a general level what speech physically is, and to describe how vowels and consonants are produced and receive their acoustic



properties. When the theory was presented in his doctoral thesis in 1959, it had already met approval all over the world. Thus already at a young age, Gunnar was an established researcher with an international reputation.

Gunnar's research objectives were to investigate the fundamentals of speech and to transform his findings and insights into practical applications. The key to his world-leading position lies in the fact that his description of speech is completely general and ready to apply in many areas. It is independent of language; it applies to both normal and deviant speech; it covers the human voice in song as well as in speech. Gunnar's *Acoustic Theory of Speech Production* (1960) became an international standard. Today it provides an important reference in all education, research and development in connection with voice, speech and language. Gunnar's last book *Speech Acoustics and Phonetics – Selected Writings* was published in 2004, more than 40 years later. Gunnar had a large production of scientific articles in the Speech Transmission Laboratory Quarterly Progress Report (STL-QPSR), which was created as an important communication channel between his group and the scientific world. During many years 800 copies of each issue were distributed worldwide. Many famous guest researchers have contributed to the reports. STL-QPSR has been archived and can be found on the web page <http://www.speech.kth.se/qpsr/>.

The list of rewards and other signs of recognition is long. A few examples can be mentioned like: Acoustical Society of America, silver medal in speech communication 1980; European Speech Communication Association, gold medal 1989; IEEE James L. Flanagan Speech and Audio Processing Award, – together with Kenneth Stevens, 2004.

Gunnar was a mild person who cared about his colleagues and supported their personal and professional development. He created a unique spirit in his department, which was characterized by kindness, care, respect, scientific openness and cooperation. This feeling of scientific focus and human concern created a unique environment that was appreciated by all the researchers who made the pilgrimage to meet Gunnar. All of us who learned from and worked with him share a deep feeling of loss, but also many fond memories.

Gunnar himself has given some personal view on his scientific career in 'Half a Century in Phonetics and Speech Research', which can be found at <http://www.speech.kth.se/~gunnar/>

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