

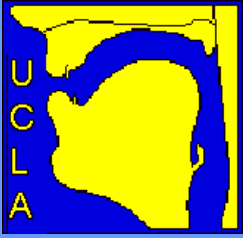
# Phonetic Linguistics:

Honoring the Contributions  
of

Peter Ladefoged

Session 4aSC

October 20, 2005



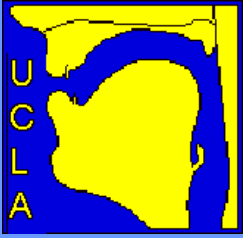
# A bit of early biography

- Born Sept. 17 1925 in Surrey, England
- 1943–44 Cambridge University
- 1944–47 Royal Sussex Regiment
- MA 1951, PhD 1959 in Phonetics, U. of Edinburgh
- Peter and Jenny married 1953
- Asst. Lecturer/Lecturer, U. of Edinburgh 1953–61



# Career moves

- 1959–60, 1961–62: Africa
- Summer 1960: U. Michigan
- Summer 1961: KTH (Stockholm)
- 1962: Moved to UCLA
- 1966: Within UCLA, moved from English Dept. to join the new Linguistics Dept.
- 1991: “retired” to become Research Linguist
- 2005–?: Adjunct professor at USC
- This term: Leverhulme Professor, U. Edinburgh



# First publications

- 3 papers in 1956: in *Nature*, *Lingua*, and *Speech*
- 5 papers in 1957, including 2 in *JASA*
- First ASA meeting: Providence, 1960
- Now 67 *JASA* entries for articles, published abstracts, letters

## Information Conveyed by Vowels

PETER LADEFOGED, *Phonetics Department, University of Edinburgh, Scotland*

AND

D. E. BROADBENT, *Medical Research Council Applied Psychology Unit, Cambridge, England*

(Received June 12, 1956)

Most speech sounds may be said to convey three kinds of information: linguistic information which enables the listener to identify the words that are being used; socio-linguistic information, which enables him to appreciate something about the background of the speaker; and personal information which helps to identify the speaker. An experiment has been carried out which shows that the linguistic information conveyed by a vowel sound does not depend on the absolute values of its formant frequencies, but on the relationship between the formant frequencies for that vowel and the formant frequencies of other vowels pronounced by that speaker. Six versions of the sentence *Please say what this word is* were synthesized on a Parametric Artificial Talking device. Four test words of the form *b-(vowel)-t* were also synthesized. It is shown that the identification of the test word depends on the formant structure of the introductory sentence. Some psychological implications of this experiment are discussed, and hypotheses are put forward concerning the ways in which all three kinds of information are conveyed by vowels.

IN recent years a great deal of research has been directed towards the specification of the "information-bearing elements of speech."<sup>1</sup> It seems that at the moment much of this research is hampered through lack of consideration of the kinds of information that are conveyed by speech. For the sake of convenience in exposition we may consider this information to be of three kinds. Firstly, when we listen to a person talking, we can receive information about what he is saying; in other words, we can appreciate the linguistic significance of the utterance. Secondly, in addition to the information we receive as a result of considering an utterance in terms of a linguistic system, we also receive information of a different kind about the general background of the speaker; thus we can usually infer something about a speaker's place of origin and his social status from his accent. This kind of information may be termed socio-linguistic; it is conveyed by the features of a person's speech which he acquires through the influence of the particular groups of which he is (or was) a member. Lastly there is the kind of information conveyed by the idiosyncratic features of a person's speech. These, like the group and linguistic features, may be part of an individual's learned speech behavior; but, unlike the other features, idiosyncratic features may also be due to anatomical and physiological considerations, such as the particular shape of the vocal

cavities. The information which these features convey may be termed personal information. The relations between these three kinds of information are summarized in Fig. 1.

It is possible to arrange experimental situations which will elicit responses with respect to each of these three kinds of information. Thus one can ask a subject: Were these two sounds pronounced by the same speaker? (personal information); or: Is there any difference of accent between these two speakers? (socio-linguistic information); or: Do these two utterances consist of the same words used in the same way? (linguistic information). It is also possible to arrange a situation where the socio-linguistic information and the linguistic information will be assessed concurrently. These two kinds of information taken together are sometimes said to be equivalent to the phonetic value of a sound.<sup>2</sup> This point of view, however, is disputed by others who believe that "The phonetic

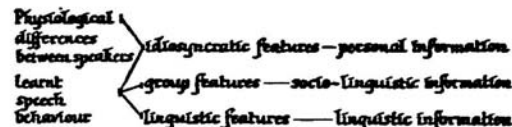


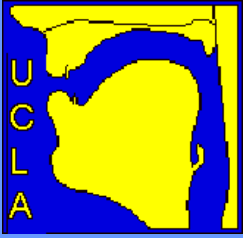
FIG. 1. Differences in utterances and the information that they convey.

<sup>1</sup> G. E. Peterson, *J. Acoust. Soc. Am.* 24, 629-637 (1952).

<sup>2</sup> Peter Ladefoged, *Lingua* 5, 113-127 (1956).

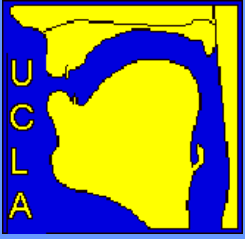


First  
JASA  
Paper,  
1957

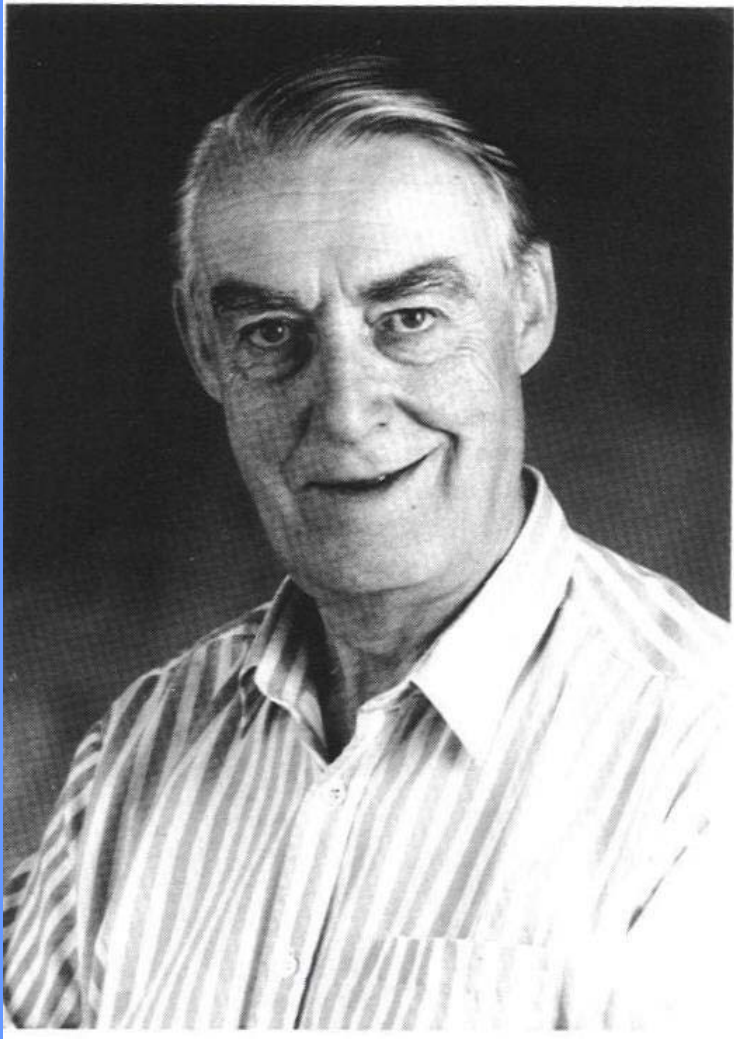


# Presidencies

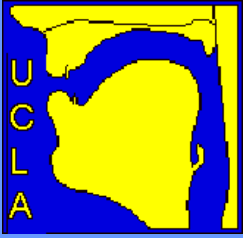
- Linguistic Society of America, 1978
- Permanent Council for the Organization of International Congresses of Phonetic Sciences, 1983–91
- International Phonetic Association, 1987–91



# 1994: ASA Silver Medal in Speech Communication



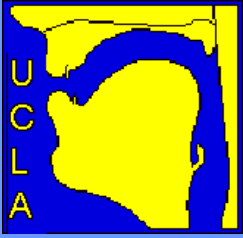
“for advancing the theory of acoustic phonetics and phonology using acoustic field data from many of the world’s languages”



# At the end of the session

- After the last paper (about 11:50), Dani Byrd and Shri Narayanan will present some birthday greetings to Peter





# At the end of the day

- After tonight's TC meeting (about 9 pm) there will be a party in the Marquette Hotel (Marquette and 7<sup>th</sup>)