

PHONETICS IN TODAY'S WORLD

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1. It is an honour to be speaking on phonetics at the invitation of the Phonetic Society of Korea. Through the Korean hangeul script, invented in the fifteenth century at the instigation of the great King Sejong, and the work Hunminjeongeum which describes it, this country has an important place in the world history of phonetics.

2.1 Phonetics is the description and analysis of pronunciation. Spoken language can be investigated at three points: in the speaker (articulatory phonetics), in the hearer (auditory phonetics), and in the physical speech signal (acoustic phonetics).

2.2 All of these can be explored either by direct human observation (improved by appropriate training), or by instrumental methods. The latter may involve neighbouring disciplines such as physiology, audiology, and physics; nowadays electrical engineering and computer science are also increasingly relevant. Experimental phonetics includes the investigation of the hearer's reactions to various auditory stimuli, and thus borders on the psychology of perception.

2.3 Phonology is phonetics looked at from the point of view of linguistics: the patterned organization of speech sounds exploited for communicative purposes in language. Phonemics is a phonological theory to account for segmental sounds (vowels, consonants); other parts of phonology deal with prosodic matters (stress, tone, intonation). In all linguistic phonetics it is crucial to distinguish between those differences which have the potential of differentiating messages and those which do not (the phonemic principle).

2.4 Phoneticians make use of phonetic symbols in order to symbolize sounds consistently and explicitly. The best-known system is the International Phonetic Alphabet sponsored by the International Phonetic Association. Through ear-training, using such symbols, the learner of phonetics can enhance his powers of auditory discrimination and acquire the ability to make accurate observations by ear. A well-trained phonetician learns to recognize, classify, describe, and reproduce all the sound-types found in human language anywhere in the world.

3.1 The applications of phonetics are many and growing. One area of great current interest is that of speech technology: the use of speech to interact with machines. Automatic speech recognition (ASR) enables human speech to be used as input to a computer; speech synthesis makes it possible for computer output to resemble human speech. Phoneticians are currently working on converting existing phonetic knowledge about

languages into machine-usable software. Speech-input word processors, speech-input database query systems, reading machines for the blind, and many other devices are thus gradually going to become available.

3.2 Another area of application of phonetics is in speech pathology and speech therapy. Some kinds of speech problem (e.g. lisping) are simple matters of inappropriate articulation; others involve deeper levels of language organization. The phonology of children's speech (including speech which is delayed or deviant) has been the subject of interesting recent work. To make accurate case notes a speech therapist needs a good knowledge of phonetics.

3.3 It is in language teaching that phonetics has its most obvious application. It is easier to teach and learn the proper pronunciation of a foreign language if one understands what kinds of articulation are involved. Foreign languages do not just involve the sounds of one's mother tongue plus some additions: each language has its own phonological system, its own phonological rules.

3.4 The language learner's difficulties are greater in cases where the writing system does not convey accurate information about pronunciation. Korean is a shining example of a language whose writing system is phonologically explicit and logical; but even the foreign learner of Korean faces many words where the pronunciation is not exactly what the orthography

leads him to expect. For the learner of English there are many and varied traps, so that the use of phonetic transcription, supported by appropriate phonetic drilling, is to be strongly recommended.

3.5 Phonetics is of use to the actor who wants to be adopt special types of pronunciation for dramatic purposes. It is even of use to the administration of justice, when those accused of blackmail or other crimes may be convicted, or alternatively acquitted, on expert evidence regarding speaker identity.

4. Since the primary medium of language is speech, phonology necessarily constitutes a most important part of linguistics. In descriptive work, including the description of previously unknown languages, and in dialectology, it is indispensable. The range of pronunciation possibilities attested in the world's languages is enormous, and their careful observation and description enable us to make important hypotheses about linguistic universals. Recent work on "autosegmental" phonology has been inspired mainly by the problems of describing the tonal systems of African languages.

5. The most famous British phonetician was Daniel Jones. Building on work done by pioneers such as Sweet, and particularly on that of the French (Passy) and German (Viëtor), he developed phonetics as an independent academic discipline. He founded the Department of Phonetics at University College London

in the early part of the twentieth century. Now combined with the newer discipline of linguistics into a Department of Phonetics and Linguistics, this Department, of which I have the honour to be a member, has retained a leading position in the subject. Many leading phoneticians throughout the world have been trained there: I am happy to congratulate Prof. H B Lee on being one of them.