ON THE DYNAMICS OF /h/, EVIDENCE FROM FINNISH

Antti Iivonen, Department of Phonetics, University of Helsinki, Finland

Contrary to languages which have dropped the /h/, Finnish has established it as a new phoneme after the early proto Baltic-Finnic stage (cf. hän, iho, pihti, pihvi, inho).

The consonant /h/ is not involved in the quantity opposition (except hihhuli and huhho), its participation in the boundary doubling rule is weaker than that of the other consonants (cf. istu+pa = [istup:a], but istu+han = [istuh:an] or more frequently [istuhan], all meaning 'do sit down'), and the stress signalling of h in /-Vh.C-/ structures shows some peculiarities.

Morphophonological alternations (kaksi/kahden, mies/miehen), some lexical relicts (löyhä/löysä 'loose', karkea/karhea 'rough'), diachronic changes, dialectal correspondences, omissions, assimilations, and substitutions in the first language acquisition reveal a number of similarities in the dynamics of /h/. Symptomatic interjections of the type huh-huh (sign for tiredness or fear) seem to show that the origin of /h/ is in an audible breathed sound which is phonemicized in marginal positions. /h/ is used also iconically as indication for frictional types of sound (huohottaa 'to puff', 'to pant'; suhina 'hum').

Diachronically \underline{h} is the outcome from \underline{s} , \underline{z} , $\underline{\int}$ or the palatal \underline{t} or the velar plosive \underline{k} . Final occurrences are diachronically avoided by metathesis (<u>mureh</u> > <u>murhe</u> 'sorrow').

Contrastively the syllable final cases of /h/ compared with German [ç] and [x] are interesting, especially the combinations of /h/ with the labial close vowels (Fi. nyhtää/Germ. nüchtern; Fi. puhti/Germ. Bucht) in which the Finnish h is produced with labial coarticulatory constriction (and corresponding "friction").

Phonetically: photo-electric glottograms show that the glottal
opening for /h/ is greatest in /-h.C-/ structures (pihti, pihvi)
where it is comparable with the first element in consonant clusters
like /-k.s-/ or in double plosives (geminates) like /-k.k-/.

The usual voicing of \underline{h} in /-h.C-/ structures (C being voiced) does not cause a homophony with /-VV-/ structures (cf. $\underline{vihdan}/\underline{viidan}$) and similar pairs can be distinguished in whispered speech. Whispered initial /h/ is also recognizable (cf. $\underline{hosua/osua}$).