

INTERVOCALIC AFFRICATES IN PRESENT-DAY HUNGARIAN

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Present-day Hungarian has the following set of affricates: /ts/, /ts:/, /dz/, /dz:/, /tʃ/, /tʃ:/, /dʒ/, /dʒ:/, /c/, /c:/, /ʃ/, and /ʃ:/. All they have monophonemic status in the Hungarian sound pattern. All affricates satisfy the basic criterion in their acoustic structure in so far as they are set up as two-phase consonants where both the so-called stop (phase 1) and the explosion (phase 2) are substantial.

While the mean duration value of affricates generally exceeds that of the stops by 23 - 33 % (see e.g. the limit values of short stops: 0.065 - 0.120 s and the limits of short affricates: 0.080 - 0.160 s), the duration of [c], [c:], [ʃ], and [ʃ:] tends to that of the stops [t], [t:], [d], and [d:].

In intervocalic position certain combinations of phonemes turn up as affricates, as well, like [ts] for /t/ + /s/, [c:] for /t/ + /j/, and so on. At the same time some affricates in the speech flow correspond to different phonemes or combinations of phonemes, so e.g. [c:] to /c:/ in hattyú 'swan', to /t/ + /j/ in látja '(he is) seeing (that)', to /t/ + /c/ in hat tyúk '6 hens'.

Let us see some results of investigations carried out on intervocalic affricates.

(1) There are relevant differences between speech sounds which are realizations of (phonemic) affricates and combinations of phonemes pronounced as affricates respectively. Differences

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in the acoustic features can be achieved in two ways which correspond to the two-phase structure of articulating affricates. They are distinguished either by the duration of phase 1 or by the relative intensity of phase 2, see the mean values:

[c:] for	phase 1	phase 2
/c:/	0.163 s	0.038 s
/t/ + /j/	0.160 s	0.040 s
/t/ + /c/	0.192 s	0.040 s
and [c:] for	phase 1	phase 2
/c:/		16 dB
/t/ + /j/		8 dB
/t/ + /c/		14 dB

Differences both in duration and in intensity surpass the threshold of perception. In this way the speaker is able to assert his 'phonemic intentions' by altering some of the acoustic parameters of his speech sounds.

(2) The whole articulatory formation, the several parameters, and the acoustical substance of the affricates are the function of the position within the sequence they occur in. The greater namely the relative articulatory energy of the phrase in which the affricate is found, the more stable the intrinsic articulatory features of the affricate realized in it. The features will be less marked when the affricate occurs in unstressed words and is placed in a longer phrase than those which appear in short, emphasized phrases, thus e.g.:

[tʃ] <u>kicsi</u> (long phrase, unstressed) 'little, small'	
mean duration value	0.105 sec
relative intensity	11.4 dB
[tʃ] <u>csúcs</u> (short, slow phrase) 'on the peak'	
mean duration value	0.135 sec
relative intensity	17.5 dB

(3) A statistical evaluation of the data shows that the affricates adapt themselves to their position in the speech flow in different ways. That means, some of them are more resistant if put to the eventualities in setting up the actual phrase than others are. So e.g. [ts] loses more in its inherent articulatory features if the relative energy of articulation decreases, while [tʃ] is more stable, and the same is valid for [dz] vs. [ts], and [c] vs. [tʃ], and so on. The rule is that the more complex the articulatory construction of an (intervocalic) affricate, the less susceptible to the influence in the speech event.