OCP factors governing the realization of [OBSTRUENT+SONORANT] Clusters in Child Greek: A case study

The topic of our study focuses on the realization of [OBSTRUENT+SONORANT] clusters in Greek child language, during the late stages of the intermediate developmental phase. This phase is characterized universally by the emergence of more marked sounds or structures e.g. fricative consonants, complex syllable onsets, codas, its duration is quite long lasting and it is characterized by a variety of type production, until the child systematically realizes all target words (Ingram 1989, Macken 1992, among many others). A variation also appears regarding the kind of the consonant clusters which are acquired first, as well as their acquisition order. The variation is not only interlingual, but also intralingual, e.g. with respect to Greek, it has been reported that the consonant clusters which are first acquired at a word-initial onset position are of type [Plosive+Sonorant] and later occur the consonant clusters consisting of [s+Plosive]: [st], [sp], [sk] (Kappa, 2002). There have, though, been reported cases which demonstrate a reverse acquisition order, that is, the [s+Plosive] clusters are first acquired (Sanoudaki, 2007).

In this case study, we draw on a corpus of Greek L1 naturalistic developmental (longitudinal) data of a normally developing child. At the age of 2;06, the child has already acquired and systematically realizes the fricatives [f/v, θ/ð, s/z, χ/γ], and the liquids [l, r] in simple onsets of the syllable type [CV]. At the same time, it realizes faithfully the liquid consonants in word-internal coda, as well as the two-member tautosyllabic consonant clusters [Obstruent+Nasal/Liquid], e.g. [pn, kn, pl/bl, pr/ br, kl/ gl, gr] and [xn/ γn, fn/ vn, xl/ γl] (Note: *[sl, sr, sn] Clusters are not allowed in the Greek phonological system). The child does not realize yet the consonant clusters whose members share the same place of articulation, i.e. the homorganic coronal clusters, e.g. [tr, ðr, θn] (ratio 100%); In this case, the child uses the following 'repair' strategies: (i) deletion of the second member of the cluster (1a, 1b), (ii) metathesis of the second member of the cluster to coda position of the preceding syllable, (iii) change of place of articulation of the first member of the cluster (1d).

(1)	Adult/Target	Child	Age	Gloss
a)	jatros	jatos	2;06.15	doctor (Masc.Nom. Sg.)
b)	ðromo	ðomo	2;06.17	street (Masc. Acc. Sg.)
c)	puðra	pur. ða	2;07.29	face-powder (Fem.Nom. Sg.)
d)	θnitos	fnitos	2;6.22	mortal (Masc.Nom. Sg.)

We claim that during the intermediate developmental phase, only consonants with different Place of Articulation may be licensed under Onset due to the action of the OCP constraint which disallows the co-emergence of homorganic tautosyllabic consonants under syllable onset. This OCP action results in the deletion of the phonologically weaker consonant (Nasal or Liquid), and the preservation of the onset head (Obstruent), which is phonologically stronger (1a, 1b). In (1c), the initial (target) number of segments within the word is preserved via metathesis, and –at the same time- the onset is simplified. In (1d) the onset head changes its CORONAL place of articulation into a LABIAL one, thus, on the one hand, avoiding the homorganic cluster and preserving the onset binary, and, on the other hand, the onset head realizes a stronger place of articulation compared to the second member. The above data imply an acquisition order for the realization of [OBSTRUENT+SONORANT] clusters: LABIAL/DORSAL+[SON]>>CORONAL+[SON]. A further evidence in support of the OCP action only in the case of tautosyllabic homorganic consonants, is provided by the faithful realization of the anti-sonority coronal cluster [st], e.g. [steno] 'narrow'. We claim that, in the case of a [st] cluster, the extrasyllabicity of [s] blocks the application of the above OCP constraint, because [s] is prosodically not licensed under syllable onset.