

An Element Theory approach to vowel reduction and epenthesis

A case of phonologization in Lunigiana dialects

Carrarese (C) and Pontremolese (P) are two Northern Italian dialects spoken in Lunigiana. This area extends over the political and linguistic borders of Emilia, Liguria and Tuscany and is characterized by a high rate of linguistic micro-variation. An interesting case study is represented by the processes of unstressed vowel reduction (R) and vowel insertion (I).

As for R, both C and P regularly apply apocope (in paroxitones) if the resulting consonant cluster abides by the Sonority Sequencing Generalization (SSG) (CÖL(A)PHU(M) > C [kolp], P [kurp]). In proparoxitones, P regularly applies syncope. On the other hand, C produces forms where unstressed vowels are either both present, only one is present, or both are absent, no matter whether or not the resulting cluster violates SSG (SILVĀTĪCU(M) > P [sər'vadg^ə] vs. C [səl'vatək]/[səl'vat^ək^ə]/[səl'vat^ək]/[səl'vatk^ə]/[səl'vatk]). Similarly, C tolerates paroxitones with a word-final SSG violating cluster, P resorting instead to I (LĪBRU(M) and LĪBĒRU(M) > C ['libər]/[lib^ər]/[libr^ə]/[libr] vs. P ['libər]).

A significant difference concerns the melodic content of C and P inserted vocoids: depending on adjacent consonants' elemental content, P inserts either a low or a back vowel (MĀCRU(M) > ['magər] vs. ĀSĪNU(M) > ['asɔŋ]), C showing instead an optional schwa-like vocoid.

These data are accounted for with reference to the BiPhon model (Boersma 2011). This allows to predict/formalize the typology and trajectory of the changes under concern. For instance, the I patterns displayed by C and P are argued to represent two different and consecutive steps along the same process: the phonologization/stabilization of a schwa-like consonant release produced/enhanced as a consequence of the deletion of unstressed vowels.

Crucially, the possibility for a given process to 'proceed' from phonetics to phonology supports the hypothesis of a modular grammar architecture, in which phonetics and phonology constitute two autonomous modules, each one displaying its peculiar vocabulary. The interface between these modules, in turn, is argued to be managed by a set of cue constraints, i.e. by a set of OT constraints that map an acoustic structure onto a phonological object (and that function similarly to a 'translation device'; Scheer 2014). More precisely, they are argued to map (physical) acoustic dimensions such as formant structures (viz. objects belonging to the 'phonetic vocabulary') onto (abstract) phonological primitives such as elements (viz. objects belonging instead to the 'phonological vocabulary'). The privileged status recognized within the BiPhon model to acoustics, indeed, supports an approach to the subsegmental representational system whose primitives are represented in terms of elements. The arbitrariness of the phonetics-phonology mappings implied by the modular approach to grammar architecture, though, opens the possibility for these mappings to be learnt and, therefore, for them not to be universal. Indeed, these mappings are argued to (rarely) display an apparent phonetic-phonology 'schizophrenic' mismatch because of diachrony. This is seemingly the case, for instance, of the |A| [[ə Hz]]-to-|H| [[ə Hz]] mapping change characterizing unstressed vowel reduction process and (in reverse) vowel insertion: a weak schwa-like acoustic object produced by a speaker can be faithfully mapped by the listener to a vocalic element (|A|) or unfaithfully reinterpreted as the preceding stop's release (and mapped to |H|). These changes, in turn, are argued to be driven by the interaction of cue constraints with licensing constraints (such as *(N |STR|)_μ, which aims at 'reducing' the sonority/element structure licensed by unstressed nuclei) and (morphologically-oriented) phonological recoverability constraints (such as EXPRESS-|X|_μ, which requires the phonological exponent of a given morphosyntactic feature to be part of the relevant phonological string; Oostendorp 2007).

References

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