Complex vowels in Maltese: length and diphthongization

ABSTRACT (word count: 300)

A complex vowel in Maltese is a phonological expression occupying two slots on the timing axis: a nuclear head and an extension. Each position is identified by two (de)synchronized gestures. On the stricture tier, consonantal segments are headed by C; vowels by V; extensions by Ø, that is a temporal slot not occupied by C or V. On the melodic tier C, V, or Ø are characterized by monovalent element(s) I, U and/or A, interpreting an articulatory/auditory gesture.

In the model implemented in Puech (2023) the Obligatory Contour Principle prevents two Cs or Vs from being contiguous. By contrast, phonological expressions like CVØC are allowed. "Vocalic glides" (cf. Maddieson 2007) are represented by Ø on the stricture tier, and I, U or A on the melodic tier. I will study four types of complex vowels:

1- early-modern Maltese phonemic pair /ǔ vs. û/ (Vassalli's glyphs 1796 & 1827);
2- dialectal diphthongs /e̞u vs. o̞u/ and (Gozitan) /e̞i vs. o̞i/;
3- pharyngealized (mid)low vowels (Stumme 1904, Aquilina 1959, Schabert 1976);
4- (half)long vowels in mainstream Maltese.

Complexity arises from (de)synchronization between stricture and melody in 'VØ' phonological expressions. The vocalic melodic gesture may be extended to the empty position to derive long vowels; anticipation of melody leftward from I/U derives falling diphthongs; fusion of V-and-Ø melodic gestures yields complex monophthongs.

In the case of pharyngealized vowels, V is preceded and/or followed by the guttural glide |Ø:A|, which in (pre)modern Maltese is the reflex of pharyngeal approximant ꝙ. In present-day Maltese, these complex vowels are no longer pharyngealized but still variably lengthened.

I conclude that length is not a primitive in Maltese phonology. Diphthongization in complex vowels involves a vowel-like glide; another type of diphthongs results from V preceded and/or followed by an underlyingly consonant-like glide (approximant j~w), e.g. bejt/mewt, tajjeb/dawwal, qarréj, wasal/jikteb.