

Conditioned Association Properties of Tones in Maltese

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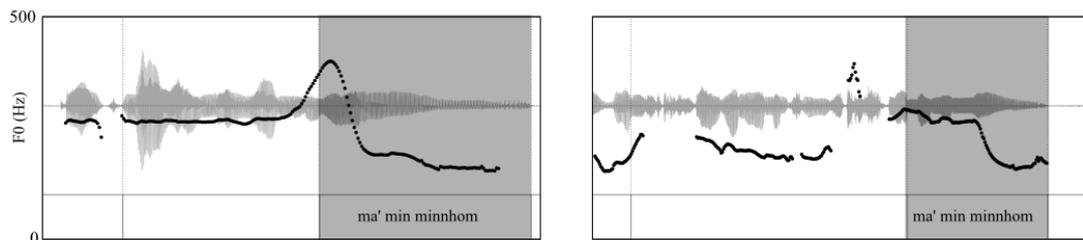
In languages with lexical stress and post-lexical pitch accent, wh-words (henceforth qwords), typically carry a prenuclear or nuclear pitch accent (e.g. Haan 2002 for Dutch; Prieto 2004, Henriksen 2014 for Spanish; Arvaniti & Ladd 2009 for Greek). Although Maltese is considered to have both lexical stress and post-lexical pitch accents, intonation in qword questions has so far defied straightforward intonational analysis (Vella 2007, 2011). Prior experimental studies have found a characteristic pitch peak at the beginning of the qword rather than – as would be the case if there were a regular pitch accent – on the lexically stressed syllable. The analysis is further complicated by the fact that when the qword is sentence-initial, the peak co-occurs with the beginning of the phrase, making it difficult to determine whether the peak is associated to some aspect of the word itself or to the phrase.

A study on qwords in different phrasal positions provided evidence that it is the word that is associated to the tone (Grice, Vella & Bruggeman, ms). However, this was only the case in interrogatives. In declaratives, the qword bore a regular pitch accent. Similar alternations in the association of tones between word edge and head can also be found in exclamatives, imperatives and vocatives.

To date, the existence of both of these tonal associations in a single language, on the same, identical phonological constituent, alternating as a function of sentence modality, has not been documented, making Maltese prosody seem typologically rare. Most languages are reported to make use of only one of these prosodic categories, i.e. of either pitch accents that associate to lexical heads (most commonly), or of postlexical intonational events that associate to phrasal domain edges (as in Malay, Korean and Greenlandic – languages that lack lexical stress altogether, Maskikit-Essed & Gussenhoven 2016; Jun 2005; Arnold 2014, respectively).

Our current understanding of prosodic typological variation among the languages of the world does not readily accommodate the results reported here

for Maltese. This suggests that we need to be more flexible in terms of the prosodic-typological properties languages may exhibit.



Maltese: F0 contours in interrogative (left) *Mar jgħum ir-Ramla ma' min minnhom?* 'With which one of them did he go swimming at Ramla?' and declarative (right) *Il-mistoqsija li għandna bzonn insaqsu hija: ma' min minnhom.* 'The question we need to ask is: with which one of them.'. Shaded area: complex question word, *ma' min minnhom* 'with which one of them?' adapted from Grice (to appear)

References

- Arnhold, Anja. 2014. Prosodic structure and focus realization in West Greenlandic. In Sun-Ah Jun (ed.), *Prosodic Typology II*, 216-251. Oxford: Oxford University Press.
- Arvaniti, Amalia & D. Robert Ladd. 2009. Greek wh-questions and the phonology of intonation. *Phonology* 26(1). 43-74. <https://doi.org/10.1017/S0952675709001717>
- Grice, Martine, Alexandra Vella and Anna Bruggeman. Ms. Stress, pitch accent, and beyond: Intonation in Maltese questions.
- Grice, Martine. to appear. Commentary: The autosegmental-metrical model of intonational phonology. In Shattuck-Hufnagel & Barnes (eds) *Prosodic Theory and Practice*, The MIT Press.
- Haan, Judith. 2002. *Speaking of questions: An exploration of Dutch question intonation*. (LOT series). The Hague: Holland Academic Graphics.
- Henriksen, Nicholas. 2014. Initial peaks and final falls in the intonation of Manhego Spanish wh-questions. *Probus* 26(1). 83-133. <https://doi.org/10.1515/probus-2013-0003>
- Jun, Sun-Ah. 2005. Korean intonational phonology and prosodic transcription. In Sun-Ah Jun (ed.) *Prosodic Typology*. Oxford: Oxford University Press, 201-229.
- Maskikit-Essed, Raechel & Carlos Gussenhoven. 2016. No stress, no pitch accent, no prosodic focus: The case of Ambonese Malay. *Phonology* 33(2). 1-37. <https://doi.org/10.1017/S0952675716000154>
- Prieto, Pilar. 2004. The search for phonological targets in the tonal space: H1 scaling and alignment in five sentence-types in Peninsular Spanish. In Timothy Face (ed.), *Laboratory approaches to Spanish phonology*, 29-59. Berlin/New York: Mouton de Gruyter.
- Vella, Alexandra. 2007. The phonetics and phonology of wh-question intonation in Maltese. *Proceedings of ICPHS XVI Saarbrücken*, 1285-1288.
- Vella, Alexandra. 2011. Alignment of the "early" HL sequence in Maltese falling tune wh-questions. *Proceedings of ICPHS XVII Hong Kong*, 2062-2065.