

*Workshop on “Intonational Phonology: Understudied or Fieldwork Languages”*  
*Maltese*

*Abstract*

The description of prosodic structure and intonation of *Maltese* has continued to be hampered, in part, by the lack of structured resources for use in its study. Much of the work of this researcher on the subject of prosodic structure and intonation in Maltese has in fact relied mainly on data collected in the form of sentences read out by speakers from cue cards, thus limiting the pragmatic and discourse contexts which are so eminently involved in the prosodic structure and intonational choices made by speakers (Vella 1995, 2003).

Recent attempts to address this lacuna in the availability of structured resources for use in the study of Maltese have led to the compilation of a small corpus of spoken Maltese. The corpus consists of data from 16 speakers of standard Maltese (balanced for age, sex and educational background), in four different speech styles ranging from more formal text reading, through to more informal, quasi-conversational speech which has been compiled and digitised (Vella and Farrugia 2006). The quasi-conversational material is currently being developed into a tagged corpus through the addition of labelling at the orthographic and intonational levels as part of the project *SPAN* (Speech Annotation for a Corpus of Maltese) which the author is co-ordinating.<sup>1</sup>

This paper reports on the results of consolidation of the phonological analysis of Maltese within the Autosegmental-Metrical framework used in other work on intonation and in previous work of the author (Vella 1995, 2003 and submitted). It is intended as a preliminary adaptation of a ToBI-style annotation system (Beckman 1997) for Maltese similar to that which has been developed for other languages such as German (Baumann 2000 and Grice et. al. 2005a) and Italian (Grice et. al. 2005b), amongst others. This adaptation is expected to serve as the basis for annotating data from the corpus of standard spoken Maltese currently being undertaken as part of *SPAN*, as well as, eventually, of other data. It is hoped that annotated data from the project will be used in work on establishing the distribution of intonation patterns and their functions in Maltese, and that such a functional analysis will contribute to a better understanding of the workings of prosodic structure and intonation in Maltese in the broader context of prosodic typology.

The adaptation of a ToBI-style framework, or *MalToBI*, for Maltese is based on the results of research previously carried out on the prosodic structure and intonation of Maltese (Vella 1995, 2003, submitted). This suggests, amongst other things, that Maltese not only utilises a number of accent-related pitch accents but is also characterised by the existence of events of an accent-related but post-nuclear nature similar to other “phrase accent” type phenomena which have been described and discussed for example in Grice et. al. (2000) for other languages. Although the existence of such phrase accent-type phenomena now seems relatively non-controversial, research of a more extensive nature on the basis of corpus data should help establish more clearly what the nature and function of such phrase accents in Maltese is. Also, other aspects of the phonetics and phonology of the intonation of Maltese should be easier to determine given a larger body of data involving different speech styles for

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<sup>1</sup> A project of a similar, if somewhat more ambitious, nature, *MLRS* (Maltese Language Resource Server), run by *MCST* (the Malta Council for Science and Technology), and coordinated by the University of Malta, which involves the development of a corpus and lexicon for Maltese, is also currently under way. At present the texts included as part of *MLRS* are written ones.

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use in the analysis. Amongst other things, it is hoped that a *MalToBI* adaptation will make it possible for some of the following questions to be answered:

1. What set of pitch and phrase accent, as well as boundary tones, are necessary to describe Maltese intonation?
2. What break index types are relevant to the description of Maltese intonation?
3. How do different tonal configurations relate to specific intonational functions in Maltese?
4. Are there any phonetic implementation characteristics relating in particular, either to the timing of events, or to scaling of pitch, that are worthy of note?

Unlike earlier work in this area, both compilation of the corpus of spoken Maltese and work on *SPAN* involve a number of researchers working together rather than one researcher working alone. It is hoped that the increase in the community of researchers equipped to work in this field in itself should have a positive effect on future research in this field.

This paper is therefore intended to provide a state-of-the-art description of the work which has been carried out on the intonation of Maltese to date. In particular, it will attempt to establish what still needs to be done in order for the description of the prosody of standard Maltese to be adapted in such a way as for a set of ToBI-style labels for the transcription of Maltese intonation, *MalToBI*, to be determined. Preliminary testing of such a system will be immediately possible given the work being carried out currently as part of the project *SPAN*.

*References*

- Baumann, S.; Grice, M.; Benzmüller, R.; 2000. ‘GToBI – a phonological system for the transcription of German intonation.’ In *Prosody 2000: speech recognition and synthesis*, Puppel, Stanislaw & Grazyna Demenko (eds.). Poznan: Adam Mickiewicz University, Faculty of Modern Languages and Literature, 21-28.
- Beckman, M.; Elam, G.A.; 1997. *Guidelines for ToBI Labeling*. 3.0 edition. The Ohio State University Research Foundation.
- Grice, M.; Ladd, D. R.; Arvaniti, A.; 2000. ‘On the place of phrase accents in intonational phonology’. *Phonology* 17.2, 143-185.
- Grice, M.; Baumann, S.; Benzmüller, R.; 2005a. ‘German Intonation in autosegmental-metrical Phonology.’ In *Prosodic Typology: the phonology of intonation and phrasing*, Jun, Sun-Ah (ed.). Oxford: OUP, 55-83.
- Grice, M.; D’Imperio, M.; Savino, M.; Avesani, C.; 2005b. ‘A strategy for intonation labelling varieties of Italian.’ In *Prosodic Typology: the phonology of intonation and phrasing*, Jun, Sun-Ah (ed.). Oxford: OUP, 362-389.
- MLRS* (Malta Language Resource Service). <http://mlrs.cs.um.edu.mt/Corpus/> visited on 15-05-07
- Vella, A.; 1995. *Prosodic Structure and Intonation in Maltese and its Influence on Maltese English*. PhD thesis, University of Edinburgh.
- Vella, A.; 2003. ‘Phrase accents in Maltese: distribution and realization.’ *International Congress of Phonetic Sciences*. Barcelona.
- Vella, A.; submitted. ‘The phonetics and phonology of wh-question intonation in Maltese.’ *International Congress of Phonetic Sciences*. Saarbrücken.
- Vella, A.; Farrugia, P-J.; 2006. ‘MalToBI – Building an Annotated Corpus of Spoken Maltese.’