The prosodic coding of pragmatic focus in Paraguayan Guaraní
Keywords: focus, prosody, Guaraní

One assumption in the literature on focus is that the pragmatic focus of an utterance, i.e. what answers the (explicit or implicit) question under discussion, is prosodically marked (e.g. Selkirk 1984, Schwarzschild 1999, Féry and Samek-Lodovici 2006). This project explores the validity of this assumption for Paraguayan Guaraní, a South American language of the Tupí-Guaraní family. The results of our experiment support the assumption that new and contrastive pragmatic foci are prosodically marked, but our findings also suggest that certain types of pragmatic foci are not distinguished by prosody alone, and may also require contextual information to differentiate them.

Experimental design: We conducted a production experiment in San Lorenzo, Paraguay, that was designed to explore the prosodic realization of utterances consisting of a proper name subject and an intransitive verb, in that order. (The subject-verb word order can realize a variety of information structures, cf. Velázquez-Castillo 1995, Tonhauser and Colijn to appear.) Fifteen pairs of native speakers of Guaraní read discourses containing 79 target utterances in one of three information structural conditions (26-27 targets per condition): subject old information/verb contrastively focused as in (1a), subject contrastively focused/verb old information as in (1b), and subject old information/verb new focus as in (1c). Each target utterance followed a question, as illustrated in (1), and each question/answer pair was part of a longer discourse including filler utterances that provided relevant background information. Our findings are based on an analysis of 916 target utterances, excluding those that were misread or produced with disfluencies.

Findings: The findings suggest that pragmatic foci are prosodically marked in Guaraní by three factors: intonation contour shape, phonetic implementation of the intonation contour, and the duration of the stressed syllable of the pragmatically focused element. First, we identified two primary contours in the data: a 'hat' contour, consisting of a rise out of the stressed syllable of the subject (L*+H) and a fall onto the stressed syllable of the verb (H+L*), as shown in Figure 1 (504 utterances); and a 'two peak' contour, consisting of rises out of the stressed syllables of the subject (L*+H) and the verb (L*+H), as shown in Figure 2 (412 utterances). We observed significantly more hat contours in utterances where the subject was contrastively focused than in utterances where the verb was new, and significantly more two peak contours in utterances where the verb was new than in utterances where the subject was contrastively focused. Second, in the two peak contours, the high plateau between the first and second rises was longer in the verb new focus condition than the subject contrastively focused condition. Third, in the hat contours, the stressed syllable of the subject was significantly longer in utterances where the subject was contrastively focused than in utterances where the verb was new or contrastively focused. In the two peak contours, the stressed syllable of the verb was significantly longer in utterances where the verb was new or contrastively focused than in utterances with a contrastively focused subject.

Discussion: The assumption that pragmatic foci are prosodically marked is empirically supported by the Guaraní data. Our study also suggests that the prosodic factors distinguishing pragmatic foci are not independent, and that not all types of foci are distinguished prosodically. In both the hat and the two peak contours, stressed syllable duration is used to mark focused elements, but the subject is lengthened to mark contrastively focused subjects in the hat contour and the verb is lengthened to mark new and contrastively focused verbs in the two peak contour. In addition, in both the hat and the two peak contours, utterances where the subject is contrastively focused are distinguished from utterances where the verb is new or contrastively focused by stressed syllable duration, but we have not observed any factors that prosodically distinguish utterances where the verb is new from utterances where the verb is contrastively focused (although the verb is prosodically marked in both conditions). Thus, we argue that prosodic marking is but one factor that distinguishes prosodic foci and that the interpretation of pragmatic foci in Guaraní may depend on both prosody and information given in the discourse context.

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(1) **Excerpts from discourses for the three information structural conditions.** Questions read by speaker A, answers by speaker B. Lexical stress is orthographically indicated by an accent or tilde on the stressed vowel unless the stressed syllable is word-final. Glosses: 3 = third person, QU = question.

　　a. Subject old information/verb contrastively focused
　　　　Context: The speaker is waiting for Alejo to go to the park with him.
　　　　A: Aléjo o-jeprepara　o ha'e o-rambosa? B: Aléjo o-rambosa.
　　　　　Alejo 3-get.ready　or he　3-breakfast　　Alejo 3-breakfast
　　　　'A: Is Alejo getting ready or breakfasting? B: Alejo is breakfasting.'
　　b. Subject contrastively focused/verb old information
　　　　Context: Maria and Malena are writing a children's book together.
　　　　A: Máva-pa o-hai,　Maria o　Maléna? B: Maria　o-hai.
　　　　　who-QU 3-write Maria or Malena?　　Maria 3-write
　　　　'A: Who is writing, Maria or Malena?　B: Maria is writing.'
　　c. Subject old information/verb new focus
　　　　Context: Marco's wife Maria is sick.
　　　　A: Mba'é-icha-pa Maria　o-ĩ? B: Maria o-mano.
　　　　　what-like-QU　Maria 3-be　　Maria 3-die
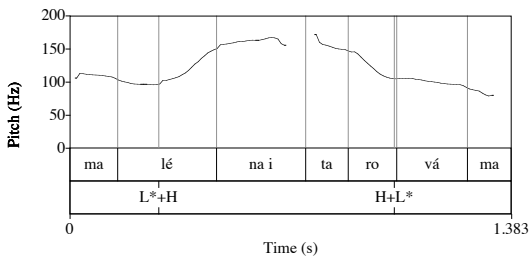　　　　'A: How is Maria?　B: Maria died.'

Figure 1. Example 'hat' contour pitch track for the utterance *Maléna itarováma* 'Malena is already crazy' in the subject contrastive condition.
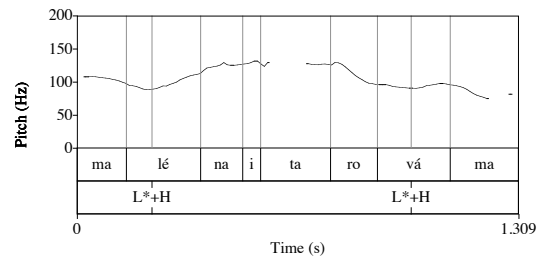

Figure 2. Example 'two peak' contour pitch track for the utterance *Maléna itarováma* 'Malena is already crazy' in the verb contrastive condition.

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