

## 1. Object language

Yucatec Maya is the largest contemporary Mayan language (700,000 speakers according to the 1990 census). It is spoken on the Yucatecan Peninsula (see region 39 on the map).

Our data collection took place in the village Yaxley in



Quitana Roo in December 2004 (see red point on the map).

The subjects that participated in the D2-experiments were native speakers that are bilingual in Spanish but mainly use Yucatec Maya in their everyday communication within the community.

## 2. Information Structure

The pragmatically neutral word order is VOS (see (1)), whereby the relative position of postverbal arguments is alternating (see effects of animacy and definiteness on postverbal arguments in Skopeteas & Verhoeven 2005).

- (1) *T-u hàant-ah òon Pedro.*  
 PFV-A.3 eat:TRR-CMPL(B.3.SG) avocado Pedro  
 'Pedro ate avocado.'

Topicalized constituents are placed sentence-initially and are marked through a topic suffix (see (2)).

- (2) *Pedro-e' t-u hàant-ah òon.*  
 Pedro-TOP PFV-A.3 eat:TRR-CMPL(B.3.SG) avocado  
 'As for Pedro, he ate avocado.'

Focus assignment is expressed by the displacement of an argument in the preverbal position (cf (3)). Focus on the agent of a transitive verb triggers a special 'out of focus' form of the verb (cf (4)): The aspect auxiliary is dropped together with the cross-reference clitic for the agent. In the perfective aspect, the extrafocal verb bears the zero form subjunctive marker in non-clause-final position (Bricker 1979, Lehmann 1990).

- (3) *òon t-u hàant-ah Pedro.*  
 avocado PFV-A.3 eat:TRR-CMPL(B.3.SG) Pedro  
 'It was (an) avocado, that Pedro ate.'

- (4) *Pedro hàant òon.*  
 Pedro eat:TRR(SUBJ)(B.3.SG) avocado  
 'It was Pedro who ate (an) avocado.'

## 3. Empirical observations

### 3.1 Prosody

On the basis of the empirical data gained through QUIS and additional experiments on sentential prosody, we investigated the interaction between lexical tones and intonation in Yucatec Maya (see Kügler & Skopeteas 2006). We empirically tested previous accounts based on competence data and we identified:

- a lexical high tone (realized as a rise in pitch approaching a high target);
- a lexical low tone (realized with low level pitch).

On syllables containing long vowels this tonal distinction is obligatory, whereas syllables containing short vowels are empty TBUs.

Topicalized constituents in Yucatec Maya are accompanied by a salient tonal event: a high tone associated with the right edge of the topic phrase (see Fig. 1). In our study on Yucatec Maya prosody, we bring evidence that this high target is associated with the topic suffix and cannot be used independently of it in order to indicate topicalization.

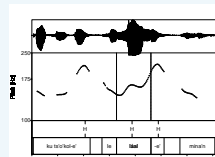


Fig. 1: High boundary tone associated with topic suffix -e'

## 5. References

- Bricker, V. R., 1979. Wh-questions, relativization, and clefting in Yucatec Maya. In *Papers in Mayan Linguistics*, Martin, L. (ed.), 107-136.  
 Kügler, Frank and Stavros Skopeteas. 2006. Interaction of Lexical Tone and Information Structure in Yucatec Maya. *TAL* 2006, 380-388.  
 Lehmann, Christian 1990. Yukatekisch. *Zeitschrift für Sprachwissenschaft* 9(1-2), 28-51.  
 Skopeteas, Stavros and Elisabeth Verhoeven. 2005. Postverbal argument order in Yucatec Maya. *Sprachtypologie und Universalienforschung* 53(1), 71-79.

Data gained through the translation tasks (QUIS: Intonational properties) has shown that the underlying shape of a prespecified tone remains preserved in focus position. Time-normalized F0-plots of target words elicited in focus, topic or postverbal position show no difference of tonal realization (see Fig. 3). Thus, we observe that there are no pitch accents for the expression of focus or topic.

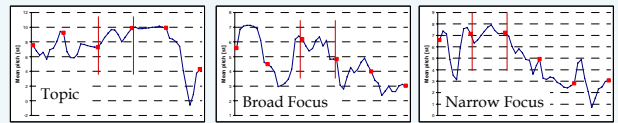


Fig. 3: Time-normalized F0-curves for six speakers: High lexical tone on *miis* 'broom' in the topic position, as postverbal broad focus, and as a preverbal narrow focus position

## 3.2 Syntax

### A. Occurrence of focus constructions

The focus constructions illustrated in section 2 are elicited through the experiment on question types (see QUIS:Anima; data from 16 Yucatec Mayan speakers). The focus constructions illustrated in (3) and (4) occur more frequently in the contexts that are more likely to induce an exhaustive answer.

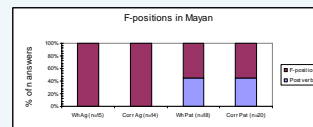


Fig. 4: Occurrence of the focus construction in question types

### B. Complementarity of prosody and syntax

The observation that Yucatec Maya does not use intonational means to encode information structure should have consequences on syntax. In the condition "new agent and given patient", intonational languages use: (a) active sentences in which the focused agent is encoded as the subject bearing a pitch accent; (b) passive sentences, in which the given patient is encoded as the subject and the new agent is the focussed oblique.

Since in a language like Yucatec Maya the choice (a) is not available, and since syntactic constructions are marked for their information structure, we expect that passive sentences will occur more frequently in the same discourse condition. This expectation has been confirmed through the results of the QUIS (see the results of the experiment "Visibility" in the following figure):

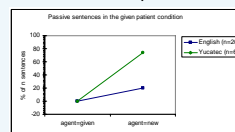


Fig. 5: Passive sentences in the condition agent=new & patient=given (description of picture sequences)

## 4. Summary/Future Work

Our data collection through QUIS allows for observations with respect to a number of typologically unique properties of Yucatec Maya that will be part of the next goals of our investigation: (a) the syntactic and prosodic behaviour of a class of topic/deictic suffixes which may move from the right edge of the heading constituent to the right edge of the phonological phrase; (b) the overall high frequency of syntactic means for encoding information structure (focus constructions, passives), which supports the generalization on the complementarity between prosody and syntax.