Wapichana's tense system: a first formal approach

This study discusses Wapichana's [ISO 639-3: wap] tense system. This is a language from the Arawak family spoken by people who live in the northern region of Brazil and Guyana (Santos, 2006). The phonological, morphological, and syntactic systems of the language were previously described by Santos (2006) in his doctoral thesis. According to the author, in relation to verbal morphology, this language belongs to the present vs. non-present tense system. The non-present tense is marked by the {*-nii*} morpheme whereas present tense does not have a corresponding morphology.

The author discusses how the non-present tense {*-nii*} might designate past as illustrated in (1a) or future as illustrated in (1b), whereas the lack of this morpheme indicates present tense as illustrated in (1c).

(1) a. py-tyz-**nii** parakary.
2SG-drink-**NPRES** caxiri
'You have drank the Caxiri drink.' (Santos, 2006, p. 162)

b. py-tyz-an-**nii** parakary.
2SG-drink-IM-**NPRES** caxiri
'You will drink the Caxiri drink.' (Santos, 2006, p. 162)

c. kuzara nik-a-n xixiwak-ak.
red.macaw eats-EP-MI jutaí-TCL:fruit
'The red macaw eats the jutaí fruit.' (Santos, 2006, p. 166)

Comrie (1985, p. 48) points out that languages generally organize their tense systems in binary patterns (FUT-NFUT and PAST-NPAST). However, PRES-NPRES type systems are not attested so far according to Comrie (1985, p. 50). Therefore, in Santos' (2006) analysis, Wapichana would be a very unique language typology-wise. However, this analysis does not seem to hold up to scrutiny considering the author's own examples since it is possible to observe sentences with verbs without {*-nii*} being interpreted as past tense (Santos, 2006, p. 151).

Our goal in this presentation is to provide a more in-depth description of Wapichana's tense system adopting a formal semantics theoretic framework (Reichenbach, 1947; Klein, 1994) and methodology with contextualized translations and controlled elicitation of readings (Matthewson, 2004; Sanchez-Mendes, 2014). A questionnaire was created to test present, past and future readings with ten different verbs (three accomplishments, three achievements,

two activities and two states). In order to specify the readings, we have used adverbs such as *mynymyn* (‘yesterday’), *waiken an* (‘tomorrow’), *kai* (‘now’) and karikeunan (‘always’). We have collected data with four native speakers of Wapichana.

Our data suggests that the combination of the morphemes {*-an*} and the particle {*-nii*} strictly expresses the future as illustrated in (2a). The absence of either {*-an*} or {*-nii*} made speakers reject the sentence (2a) with future reading.

(2) João paray-**an nii** kabayn waiken an.
João sweep-**an nii** house tomorrow
‘João will sweep the house tomorrow.’

However, when only one of those morphemes is present, past and present readings were used interchangeably in many data as illustrated in (3).

(3) a. João paray kabayn.
João sweep house
‘João sweeps the house.’ or ‘João has swept the house’
b. João zuii kuazaza.
João kill snake
‘João kills snakes.’ or ‘João killed the snake.’
c. Ana mixidi-**an** João.
Ana believes-**an** João
‘Ana believes João.’ or ‘Ana believed João.’
d. Pedro marainhap **nii** Ana.
Pedro love **nii** Ana.
‘Pedro loves Ana.’ or ‘Pedro loved Ana.’

Therefore, our data suggests that Wapichana is actually a FUT-NFUT language with {*an nii*} conveying future and its absence {-∅} conveying NFUT. Although the association of {*an nii*} with future was consistent, it was not possible to pinpoint the specific contribution of each morpheme yet. Therefore, further investigation is needed for a composition analysis and the next steps of this research are checking if these morphemes can be analyzed as conveying any other aspectual, evidential or modal meanings.

References

COMRIE, Bernard. **Tense**. Cambridge textbooks in linguistics. Cambridge: Cambridge University Press, 1985.

MATTHEWSON, L. On the Methodology of Semantic Fieldwork. **International Journal of American Linguistics**, v. 70, p. 369-415, 2004.

REICHENBACH, H. The tense of verbs. In: _____. **Elements of symbolic logic**. New York: The Macmillan Company, 1947. P. 287-298.

SANCHEZ-MENDES, L. Trabalho de Campo para Análise Linguística em Semântica Formal. **Revista Letras**, v. 90, p. 277-293, 2014.

SANTOS, M. G. **Uma gramática do Wapixana** (Aruak) – Aspectos da Fonologia, da Morfologia e da Sintaxe. 2006. 298p. Tese (Doutorado em Linguística) – Instituto de Estudos da Linguagem, Universidade Estadual de Campinas, Campinas, 2006.