

## Time in Mapudungun

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Recently, there has been much debate as to whether there exist tenseless languages, especially within Native American languages: Kalaallisut (Bittner 2005), St'át'imcets Salish (Matthewson 2005), and Yukatek Mayan (Bohnenmeyer 2009). Mapudungun, an isolate spoken in Chile, displays properties commonly used as initial diagnostics for tenselessness: displaying a future vs. non-future distinction, suggestive of a modal rather than tense system, and displaying a correlation between the aktionsart of a predicate and its temporal interpretation. Specifically, unmarked stative stems are interpreted as present, unmarked eventive stems as past, and a predicate marked with *-a* is interpreted as future.

Nevertheless the traditional analysis of *-a* has been as a future tense (see Smeets 2008, who, however, analyzes it as a sort of irrealis). In addition, another morpheme, *-fu*, which when it occurs on statives implies that the state is over has traditionally been analyzed as a past preterite (Augusta 1903) or (past) imperfective marker (Valdivia 1606, Havestadt 1777). If these traditional analyses are correct, Mapudungun possesses tenses. In this presentation I carry out a semantic analysis of the morphemes of interest *-a* and *-fu*.

Reporting on original fieldwork, I argue that that *-a* is a future modal on the basis of various sources of morpho-syntactic evidence and, most importantly, semantically on the basis of the fact that it displays quantificational variability, and in particular that it allows an existential reading, (1), and permits different conversational backgrounds, (2).

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| (1) | Fey rakizuam-i ñi amu-a-el Pedro<br>3 think-indic.3 3.poss go-fut-inf P.<br>✓ 'He thinks that Pedro will go.' $\forall$<br>✓ 'He thinks that Pedro might go.' $\exists$ | (2) | Fey rakizuam-i ñi amu-a-fu-lu Pedro<br>3 think-indic.3 3.poss go-fut-FU-inf P.<br>'He thinks that Pedro should go.' Deont. |
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I also argue against potential analyses of *-a* as a subjunctive or irrealis mood. I therefore analyze *-a* as the spell-out of a WOLL modal of the type posited to underlie both English *will* and *would* (Abusch 1997), and propose the following simplified semantics for it (where *R* is the accessibility relation associated with the modal,  $R_w$  is the set of worlds *R*-accessible from *w*, and the universal force variant is used for illustration):

- (3)  $[[ \text{WOLL}_R \text{vP} ]]^{w,t} = 1$  iff  $\forall w' \in R_w. \exists t'. t < t' \ \& \ [[ \text{vP} ]]^{w',t'} = 1$

Recently, Golluscio (2000) has analyzed *-fu* as “a metapragmatic operator which acts to alert to, interrupt, or rupture conventional implicature in speech”. This analysis has been endorsed by Smeets (2008) and concords with that of Harmelink (1996). The primary empirical support for this view comes from matrix clauses such as the following in which certain contrary-to-expectation implicatures are salient.

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| (4) | La-fu-y<br>die-FU-indic.3<br>'It died and resurrected.' (Salas 2006) | (5) | Müle-ke-fu-n campo mew<br>be-hab-FU-indic.1.s country P<br>'I used to live in the country (but no longer do so).' |
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Nevertheless, I challenge this recent consensus view and vindicate the earlier analysis of –fu as an imperfective marker. Evidence comes from the examination of embedded occurrences of –fu. Embedded statives marked with –fu display simultaneous readings under matrix predicates interpreted as past, just like imperfective marked statives in Spanish and other languages (Gennari 1999). In addition, neither embedded statives nor eventives marked with –fu license the implicatures observed in matrix clauses.

- (6) iñché küre-fu-n ni la-fu-n  
 1.s believe-FU-1.s 1.s.poss die-FU-inf  
 ‘I thought I had died (and not resurrected).’ cf. (4)
- (7) upe-nentu-küno-n ni müle-fu-el leche  
 forget-take.out-leave-indic.1.s 3.poss be-FU-inf milk  
 ‘I forgot that there was already milk (and there still is).’ cf. (5)

I explain the matrix interpretations via an implicature by informativity such that if a state is described as imperfective anaphorically to the speech situation rather than perfective, then the state did not persist. An eventive predicate marked with –fu will express that its result state has ended. Embedded clauses are interpreted with respect to the time of the matrix eventuality and so escape this implicature and yield the ordinary dependent time interpretation of imperfectives instead.

In summary, I extend the empirical picture of the temporal interpretation of different types of clauses in Mapudungun and offer a semantic analysis of the morphemes –a and –fu. I discuss in what sense these may be considered tenses and, consequently, in what sense Mapudungun may be considered tenseless. Lastly, I note that since the empirical picture I present overlaps with, but also differs from, that of St’át’imcets presented in Matthewson (2005), who advocates a tensed analysis, this study contributes to our understanding of tense and tenselessness in Native American languages in general.

Abusch, Dorit. 1997. “Sequence of tense and temporal de re”. L&P 20:1-50.

de Augusta, Fray Félix José. 1903. *Gramática Araucana*. Imprenta Central, J. Lampert. Valdivia.

Bittner, Maria. 2005. “Future discourse in a tenseless language”. *Journal of Semantics* 22(4):339-388.

Bonhemeyer, Jürgen. 2009. “Temporal anaphora in a tenseless language”. In W. Klein and P. Li (eds.), *The Expression of Time in Language*. Mouton de Gruyter. Berlin. 83-128.

Gennari, Silvia. 1999. “Tense, aktionsart and sequence of tense”. In F. Corblin, C. Dobrovie-Sorin, and J. Marandin (eds.), *Empirical Issues in Formal Syntax and Semantics 2*. Peter Lange. Berne. 309-332.

Golluscio, Lucía A. 2000. “Rupturing implicature in the Mapudungun verbal system: the suffix –Fī”. *Journal of Pragmatics* 32:239-263.

Harmelink M., Bryan L. 1996. *Manual de Aprendizaje del Idioma Mapuche: Aspectos Morfológicos y Sintácticos*. Ediciones Universidad de La Frontera. Temuco.

Havestadt, Bernardo. 1777. *Chilidúgú sive Res Chilensis, vel description status tum naturalis, tum civilis, cum moralis regni populique Chilensis, inserta suis locis perfectae ad Chilensem Linguam manductioni etc.* 2 vols. Münster: Westphalen.

Matthewson, Lisa. 2005. “Temporal semantics in a superficially tenseless language”. L&P 29:673-713.

Salas, Adalberto. 2006. *El Mapuche o Araucano*. Centro de Estudios Públicos. Santiago.

Smeets, Ineke. 2008. *A Grammar of Mapuche*. Mouton de Gruyter. Berlin.

Valdivia, Luis de. 1606. *Arte y Gramática General de la lengua que corre en todo el Reyno de Chile*. Editorial Sudamericana. Lima.