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ИМЕННОГО ВРЕМЕНИ: ПИЛОТНОЕ ТИПОЛОГИЧЕСКОЕ
ИССЛЕДОВАНИЕ

Lexical Scope of Nominal Tense Markers: A Pilot Typological Study

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Abstract

The phenomenon of nominal tense has been widely discussed in the past twenty years, however most of the researchers usually left the cases that do not fully fit the definition of tense undescribed. This paper presents five corpus-based case studies on markers that modify nominal semantics temporally, but at the same time do not satisfy some of the criteria for nominal tense postulated in (Nordlinger & Sadler, 2004) and (Tonhauser, 2006). The study analyses semantic and compatibility properties of such markers, gives a comment on the criteria about required productivity and paradigmaticity of nominal tense, and offers a new comparative concept of nominal tense needed for the future cross-linguistic comparison in this area.

1. Introduction

Nominal tense (further also NT) is a term that describes a range of different grammatical categories that encode temporal information while being marked on nouns. It was first mentioned in Boas, Yampolsky, and Harris (1947) in their grammar of Kwakiutl (Wakashan, North America). However the first typological paper on nominal tense was only published in 2004 by Nordlinger and Sadler (2004). They described two semantically different concepts: propositional nominal tense and independent nominal tense. Propositional nominal tense stands for the cases where the marker modifies the semantics of the whole proposition while occurring on nouns. In turn, independent nominal tense includes the cases where a grammatical marker modifies the temporal properties of the noun phrase itself without having any influence on the whole proposition. In this paper, I am going to focus on independent nominal tense only, and the term ‘nominal tense’ further in this paper will be used for independent nominal tense.

Based on an overview of 12 languages, Nordlinger and Sadler (2004) postulated four criteria to define the category of nominal tense:

1. The marker only modifies the semantics of the noun group without influencing the whole proposition. Nominal constituents show a distinction in tense ‘where these categories are standardly defined as they would be for verbs’ (Nordlinger & Sadler, 2004: 4).
2. Its use is not restricted to nouns in predicative position, otherwise it modifies the proposition headed by a noun group, and falls under the definition of propositional nominal tense. In contrast, it is marked on nominals that are arguments, or adjunct NP or DPs in a verbal clause.

3. The marker must be compatible with different noun classes, i. e. productive, and not restricted to a small set of nouns.
4. It is not a transcategorial clitic that only attaches to a nominal constituent phonologically. It has to be a category of the nominal word class.

Nordlinger and Sadler mention one more tendency without explicitly including it in the core criteria of nominal tense: the marker should be inflectional. That statement is based on the evidence from different languages, including the cases when a proposed nominal tense marker has other syntactic or semantic function besides temporal modification, e. g. portmanteau with possession (Hixkaryana, Cariban, South America) or definiteness (Somali, Afro-Asiatic, Africa), or triggering adjectival agreement (Somali, Afro-Asiatic, Africa). As the definition of inflection-derivation opposition, according to Haspelmath (2023), is somewhat vague and controversial, I am not going to observe this parameter in the current paper.

The most notable critique of Nordlinger and Sadler's definition of nominal tense was presented by Judith Tonhauser (2006, 2008). She analyzed the data on Guaraní markers *-kue* and *-rã* that were previously mentioned as examples of nominal tense in (Nordlinger & Sadler, 2004) based on three types of situation times relevant in the analysis of nominal tense: 1) *tnp* — the time of NP which is by default is equal to the proposition time, 2) *tnom* — the time of the property denoted by a nominal, 3) *tposs* — the time of possessive relation in the possessive NP. As a result, she maintained that Guaraní markers *-kue* and *-rã*, in fact, are closer to verbal aspect rather than verbal tense, because they encode a state change while verbal tenses do not. Moreover, she commented on the statement 'as they would be for verbs' pinpointing that in case if this statement is true, then Guaraní markers *-kue* and *-rã* do not fall under the definition of neither tense nor any other verbal category, and therefore constitute an independent grammatical category different from TAM. Additionally, Tonhauser (2008) provides her six criteria of independent nominal tense, i. e. what is expected from a nominal tense category 'as it would be for verbs':

- A. The marker occurs on a nominal constituent, and modifies the semantics of this constituent.
- B. Such markers form a grammatical paradigm, and, respectively, different markers of this paradigm cannot co-occur on the same nominal constituent.

- C. The marker is not lexically selective, i. e. is applicable to different noun classes regardless of the semantics of the head noun.
- D. The marker shows the temporal relations between the NP-time and either the utterance time (which yields deictic nominal tense), or any other contextually given time (which yields relative nominal tense).
- E. The nominal tense marker in its pure sense does not encode change of a state, otherwise it is either an aspectual or mixed tense-aspectual category.
- F. The NP-time may be anaphorically resolved in the context (following Partee, 1984), i. e. the NP-time may be located regarding some contextually-specified time expressed with, for example, temporal adverbs.

The criteria presented by Tonhauser have been criticized with counter arguments from other languages rather than Guaraní. Nikolaeva (2015) described Tundra Nenets predestinative based on Tonhauser's criteria. Though Tundra Nenets predestinative does not satisfy some of the criteria, namely, it presupposes that *t_{poss}* is false at the certain time, and *t_{poss}* is not contextually evaluated since it is always interpreted regarding *t_{np}*; it still fulfills some of the other criteria, unlike Guaraní: predestinative does not show lexical selectivity, it does not co-occur with other morphemes that modify the noun in the temporal domain, and its semantics can be restricted with temporal modifiers like 'next year'. However, since predestinative only modifies the possessive component of the NP and not the whole NP, it cannot be considered tense in Tonhauser's definition.

In turn, Bertinetto (2020) noticed that even the most prototypical verbal tense systems do not satisfy all the criteria, let alone nominal tense systems. He argued for a holistic approach towards TAM systems where such markers can combine various tense, aspect, and modality meanings, and, respectively, for a broader definition of nominal tense.

The previous approaches and definitions of nominal tense do not include some peculiar cases, where morphological markers modify the NPs in the temporal domain without satisfying all the criteria for nominal tense. The highly restrictive approach of Tonhauser does not let almost any well-described case of temporal-modifying nominal morphology to be considered nominal tense, while the Nordlinger and Sadler's approach excludes the cases when the markers are not 'purely inflectional' and are 'lexically selective', even though the questions of lexical selectivity and inflectional status are a topic for a huge debate. Thus, in almost any approach, the

derivations like English *ex-* and *-to-be* are excluded from the investigation. On the contrary, the cases one might find peripheral as they are not purely morphological or encode some other semantics along with temporal are traditionally considered to be the standards of nominal tense. Such cases include demonstratives in Somali with an evidentiality-like semantics (Lecarme, 1996; 2012), demonstratives in Nambiquara (Kroeker, 2001), articles in Movima (Haude, 2011).

In this paper, I argue for a broader definition of nominal tense as a comparative concept that includes all the cases where the semantics of the NP undergoes the modification in a temporal domain while the source of modification is not expressed by a separate independent lexeme (therefore we can exclude the cases like English *former* or Russian *бывший*). The main reason for such an approach is the observation that different languages use drastically different ways to specify the temporal characteristics of nominal constituents at the same time being uniform in one thing — choosing morphology over independent lexemes. First of all, I will analyze the corpus data on five non-related languages that have the morphological inventory to modify the temporal properties of nominals. For each language, I will examine semantics and compatibility features of categories that have temporal influence on nominals they attach to, and match them with the criteria of Nordlinger and Sadler, and Tonhauser. Next, I will discuss the criterion (3) of Nordlinger and Sadler, and criterion (C) of Tonhauser, since ‘lexical preference’ or ‘productivity’ is rather a continuum than a sharp border. Hence, following Bertinetto (2020: 319) this argument cannot be applied in a consistent way. After, I aim to comment on the criterion (B) by Tonhauser by presenting the data from English where *ex-* and *-to-be* can co-occur, and they do not form a single paradigm rather being two separate categories that both influence the nominal semantics in the temporal domain. Additional evidence in support of this statement, although without co-occurrence, can be found in Even (*-mija* ‘old, defunct, destroyed’ VS destinative *-ga-* ‘destined to someone’). Finally, I will introduce a comparative concept of nominal tense, and will argue in favor of it, because it can be useful for cross-linguistic comparison of nominal categories with temporal semantics (following Haspelmath, 2010).

I will start with Section 2 that provides a definition of ‘semantic components’ — a term that I am going to use further to describe the semantics and compatibility of the markers in question. Sections 3–7 are dedicated to corpus-based case studies on several languages that have morphological temporal modifiers on nominal constituents: Mapudungun (Araucanian, South America, Section 3), Mojeño Trinitario (Arawakan, South America, Section 4), Even (Tungusic,

Siberia, Section 5), Bora (Boran, South America, Section 6), and American English (Indo-European, North America, Section 7). The goals of these case studies are 1) to give a brief overview over the morphological properties of the modifiers in question, 2), to observe lexical distribution and the semantic impact of such modifiers, 3) to lay the groundwork for a wider typological research by pinpointing some of the common patterns in semantic impact and compatibility. Next, Section 8 provides a discussion of the formerly mentioned criteria for nominal tense and argues for a wider definition of this phenomenon. Finally, Conclusion discusses the benefits and the drawbacks of this analysis, and explains why this approach can be useful for the further typological research on nominal tense.

2. A brief note on semantic components

In this work, I am going to use the term ‘semantic component’ in order to describe the semantic effect caused by possible nominal tense markers on nominals they occur on. During my previous research (Baklanov, 2023; 2024), I have noticed that there are some tendencies of semantic modification patterns found in different unrelated languages, namely, that different components of nominal semantics are able to be modified by a particular marker. In this paper, I am going to use the term ‘semantic components’ for such items. The list of semantic components I observed is the following: 1) existence ‘X exists’; 2) status or function ‘Y is/has a status of X’ or ‘Y functions as X’; 3) possession ‘X is possessed by Y’.

I believe that the modification of these semantic components can be best described through the definition of semantic predicates. The idea that nominals form semantic predicates is one of the basic concepts in formal semantics (e. g. Heim & Kratzer, 1998), as well as that possessive relations can also be represented as semantic predicates (e. g. Barker, 1991). Hence, I assume that the temporal modification of the existential component of a nominal is applied to its existential semantic predicate. In case of possession and status semantic components, I assume that there might be a single semantic predicate of ‘relation’. It includes the cases of possessive relations if the possession is overtly marked, and the cases of status if a nominal is relational (e. g. kinship terms, social function, etc.). A reason for that claim is that social relation and possession often perform together, for example, in case of kinship relations, which include nouns that both designate social relations and are often marked with possession (Aikhenvald, 2013: 4). I am going to apply these definitions further in paper, when I discuss the semantics and

compatibility of nominal markers with temporal semantics for particular languages, starting from Mapudungun in the next section.

3. Mapudungun (Araucanian, South America)

Mapudungun (mapu1245, Araucanian, South America) is an Araucanian language spoken in Central Chile. In this chapter, I am going to explore and describe the properties of marker *-em/-yem*, which is described in (Smeets, 2008) as *ex* marker. The examples given in the grammar of Mapudungun present two different uses of this suffix: ‘dead’ and ‘former’, although its description by Smeets mentions other possible meanings such as ‘defunct’ and ‘no longer in function’.

For this analysis, I used the open-access dataset on Mapudungun (A Resource for Computational Experiments on Mapudungun) presented on Github (Duan et al., 2019) which contains 304,903 sentences on Mapudungun with Spanish translations¹.

3.1. Semantics and compatibility

According to the corpus data, the suffix *-em/-yem* in Mapudungun has an extremely restricted compatibility: it is predominantly used with some particular lexemes, namely, with terms that describe kinship relations: *ñuke* ‘mother’ (1), *chaw* ‘father’, *awela* ‘grandmother (Spanish)’ (2), *awelo* ‘grandfather (Spanish)’, *füta* ‘husband’, *wentru* ‘man/husband’. Occasionally, *-yem* also occurs on other kinship terms: *koñi* ‘son’, *llalla* ‘mother-in-law’, *ñeñe* ‘stepmother’, *kuku* ‘maternal grandmother’, *peñi* ‘brother’, *malle* ‘uncle’, *tía* ‘aunt (Spanish)’, *kure* ‘wife’. Frequently, it is translated as *finado/a* and *finá* ‘dead (Chilean Spanish)’, or *difunto/a* ‘dead’. One speaker also used an adjective *kude* ‘old’ in the same nominal group as the noun marked with *-yem* (3).

- (1) *pi-ke-fe-n-ew* ***ñuke-yem***
 say-CF-IPD-IND.1SG-DS mother-yem
 ‘My late (*finada*) mother used to tell me’.
 (Duan et al., 2019; nmlch-lfchl1_x_lfchl_00: 102).
- (2) *chum-ke-fu-y* *ta-mi* ***awela-yem***
 do.what-CF-IPD-IND.3 DEF-POSS.2SG grandma.S-yem

¹ I would like to thank Idoia Romero Goñi and Daniel Estebán Lopez for their help with interpretation of Spanish translations.

‘How was your late grandma doing?’.

(Duan et al., 2019; nmlch-lfjmcA1_x_lfjmc_00: 192).

- (3) *fey-mu* *ñi* *pen* *ñi* *kude* *kuku-yem*
that-INST POSS.1SG INTJ.see POSS.1SG old maternal_grandmother-yem

‘That is what my late maternal grandmother saw’.

(Duan et al., 2019; nmdch-nflcm1_x_nflcm_00: 0101).

In some sentences, the Spanish translations used the words *antiguo/a* ‘old’ and *anciano/a* ‘elderly’ which does not indicate that the person mentioned in the example is dead. Furthermore, the only example of *kure-yem* ‘wife-YEM’ is translated as *ex-esposa* ‘ex-wife’ and not ‘late wife’ (4).

- (4) *fe-m-ke-pe-la-fu-y* *fey-mu* *llemay*
become_like_that-CAUS-CF-PX-NEG-IPD-IND.3 that-INST PTCL.certainly
ñi *chi* *awelu-yem* *fey-ta* *rüf*
POSS.1SG DEF grandpa.S-yem that-DEF real
anü-m-el-fi *ñi* *dungu* *ñi* *kure-yem*
sit_down-CAUS-MIO-EDO POSS.3SG matter POSS.3SG wife-yem

‘That surely happened to him because of him, of course, his grandfather, so he was raised well by his ex-wife (Sp.: *su ex esposa*)’.

(Duan et al., 2019; nmlch-lfjph1_x_lfjph_00: 200).

Another common collocation found in the corpus was *fütake cheyem* ‘ancestors’ (lit. ‘old people-YEM’, e. g. 5). Such examples were not usually translated as ‘late, deceased’, however the word ‘ancestor’ presupposes that the people in question existed before and are no longer alive. This collocation is commonly used to designate family members like great-grandparents. Smeets (2008) provides a structurally similar collocation *füta-ke longko-yem* ‘former leaders’ (lit. ‘old heads-YEM’, e. g. 6), assuming by ‘former’ that they were not killed but rather changed their status from *longko* ‘leaders’ to *longko-yem* ‘former leaders’. In that case, *-yem* could in theory have wider compatibility possibilities extending to modification of social function similarly to English *ex-* and *-to-be*, however no similar examples were found in the corpus.

- (5) *newen-nge-ke-fu-y* *füta-ke* *che-yem*
strength-VBZ-CF-IPD-IND.3 old-DISTR person-yem

‘Our ancestors were strong’.

(Duan et al., 2019; nmlch-lfmch1_x_lfmch_00: 220).

- (6) *depwé aku-y ta ti pu españole*
 later arrive-IND.3 DEF DEF COLL spaniard
weycha-nge-pa-y kiñeñ pülé tayma-entu-nge-pa-y
 make_war-PASS-Hh-IND.3 one side remove-take_out-PASS-Hh-IND.3
ta futa-ke longko-yem
 the old-DISTR head-yem

‘Later the Spaniards came; the former ancient leaders were fought [and] put aside’.

(Smeets, 2008: 407–408; Olden Times: 24).

Occasionally, *-yem* occurs on proper nouns, namely, personal names (7). That is not the behavior expected from nominal tense because the temporal characteristics that may undergo semantic modification are intrinsic to nominal predications I have mentioned in Section 2. However, proper nouns do not have semantic predicates and, consequently, no semantic component to be modified temporally.

- (7) *fey-mu fey ñi ka palu ti maria-yem*
 that-INST that POSS.1SG PTCL paternal_aunt DEF M.-yem
de la tierra de arriba
 of.S DEF.F.S land.S of.S above.S
fey chali-ntuku-pu-e-n-ew ti kiñe lawe
 that welcome-put_at-LOC-IDO-IND.1SG-DS DEF one remedy

‘That's why the other niece, Mary from the land above, came to recommend a remedy to me’.

(Duan et al., 2019; nmlch-lfjph1_x_lfjph_00: 184).

There is one more collocation found twice in the corpus that does not fit the definition of *-em/-yem* in Mapudungun as nominal tense marker even in the widest understanding.

- (8) *eymi kon-pa püllü-yem*
 you enter-Hh.3 spirit-yem

‘[And when] the spirit of the deceased enters...’.

(Duan et al., 2019; nmlch-lfmim1_x_nmlch_00: 206).

In the example (8), *-yem* is used with the noun *püllü* ‘spirit’, and the collocation is translated as ‘the spirit of the deceased’, but not ‘what used to be a spirit / a dead spirit’. Therefore, I doubt that in the contemporary use *-yem* indeed modifies the semantics of a host noun in the temporal domain, since in case of the spirit nothing undergoes the temporal modification, and *-yem* is used to respect and honor the late relative or its spirit, i. e. what is called Deceased Referent Marking in (Dickenson & Epps, 2024). Another evidence in support of this assumption, is the ability of *-em/-yem* to occur on personal names like in example (7).

3.2. Possible origins

As mentioned in Smeets (2008: 110, 339), the suffix *-em/-yem* is homonymous to the particle *em* and is probably related to it. The clitic *em* is attested only in clauses where the verb is marked with impeditive *-fu-* (9). This particle has frustrative semantics and is used to express a speaker's regret about the event that happened or, vice versa, didn't come about in the past. According to Dickenson & Epps (2024: 6), the Deceased Referent markers sporadically overlap with frustrative markers in languages of South America, so this homophony is no surprise.

- (9) *fey-mu ka-fey küsaw-ke-la-fu-y em*
 that-INST other-she work-CF-NEG-IPD-IND.3 em.PTCL
 ‘That is why she didn't work’.

(Duan et al., 2019; nfmcp-nmfc1_x_nmfc_00: 47).

Notable, the marker *-yem* is homonymous to the verb ending *-ye-m* ‘CF-NEG’ which marks a temporal subordinate clause usually translated with Spanish *cuando* ‘when’. According to the corpus data, it is also used in some cases where English *if* is used (e. g. *If you have a headache...*). If there is indeed a diachronic connection between the subordinate clause ending *-ye-m*, the particle *em* and the nominal suffix *-yem*, it could explain the presence of temporal behavior of the nominal suffix *-yem*.

Finally, the diachronic change might be a reason why the compatibility of *-yem* in the corpus is different from the one described by Smeets, namely, I have not found any examples of status semantic component modification as it was mentioned in Smeets (2008: 110, and example 6). Eventual discrepancies between Smeets' observations and my findings in the text may be at least partially explained by diachronic change. Smeets used the recordings made in the 1970s, while the corpus data is based on the recordings from 1990s-2000s. Even though the time span seems to be insufficient, Mapudungun is considered *shifting* (Ethnologue, 1982–2008), which

means that the language is no longer transmitted to children. If there is ongoing language loss, one might expect lexicalization of the uses of *-yem* in the sense of increasingly strong lexical restrictions. That assumption explains why *-yem* in the corpus is only compatible with a highly restricted class of nouns that denote kinship relations, and does not modify the semantic component of status as it does in Smeets (2008). On the other hand, the modification of kinship relations might just be the most common pattern, especially in the recorded conversational speech. Either of the two theories needs more indepth research.

3.3. *Temporal reference*

There is one example that clarifies the temporal reference of *-yem* in Mapudungun. In the example (10), the mother of the speaker who is dead at the moment of speech was still alive during the situation that happened in the past.

- (10) *petú monge-le-y ñi ñuke-yem*
 still recover-ST-IND.3SG 1SG mother-yem
 ‘My late mother was still alive then’.

(Duan et al., 2019; nmlch-lfchl1_x_lfchl_00: 96)

In this example, the whole situation happens in the past as it is indicated by the combination of stative marker *-le*, the particle *petú*, and the context. However, the word *ñuke* ‘mother’ carries the marker *-yem*, which shows the mismatch between the propositional time and the time of the noun itself. Hence, the reference of the *-em/-yem* marker is drawn with respect to the utterance time.

At the same time, this observation does not mean that the temporal interpretation is influenced at all. As it was noted for the example (8), *-em/-yem* can be used in contexts where it does not show any temporal influence just paying respect to a deceased person. I believe that deceased referent marking (Dickenson & Epps, 2024) is relevant in the time when it is uttered, and hence, *-em/-yem* can be considered a deceased referent marker that does not encode temporal reference.

3.4. *Mapudungun -em/-yem and the criteria for NT*

As it has already been mentioned earlier, the suffix *-em/-yem* violates almost all the criteria in both Nordlinger and Sadler’s, and Tonhauser’s understanding of nominal tense. Here I provide a summary of their criteria regarding *-em/-yem* and comment on it.

Criterion	Result	Comment
1. Noun group semantics only	+/-	Does not trigger the temporal interpretation of the whole proposition, but at the same time it possibly does not trigger the temporal domain at all.
2. Not (only) predicative	+	Usually occurs on arguments.
3. Productive, not restricted to a small subset of forms	-	Highly lexically selective.
4. Not a transcategorial clitic	+	But note the frustrative clitic <i>em</i> .

Table 1. Mapudungun *-em/-yem*, and the criteria of Nordlinger & Sadler (2004)

Criterion	Result	Comment
A. Occurs on Nom and modifies its semantics	+/-	Does not trigger the temporal interpretation of the whole proposition, but at the same time it possibly does not trigger the temporal domain at all.
B. Form a paradigm, does not co-occur with other markers	+/-	The only NT-like marker in Mapudungun. No statement about paradigmaticity can be made.
C. Not lexically selective	-	Highly lexically selective.
D. Temporal relation between NP-time and deictic/contextual time	+/-	In most cases it does (e. g. 1), but in the case of ‘spirit’, it does not. Also, when combined with possession, the possessive component does not undergo modification, so it is only

		relevant for the existential semantic component.
E. Does not encode change of the state	–	In cases of death, it should be interpreted as ‘is dead now’ which supposes change of state.
F. May be anaphorically resolved in context	NA	No such examples were found.

Table 2. Mapudungun *-em/-yem*, and the criteria of Tonhauser (2008)

4. *Mojeño Trinitario*

Mojeño Trinitario (trin1274; Arawakan, South America) is a Southern Arawak language spoken in Bolivia. It is characterized by rich agglutination (mostly, suffixation) and complex morphophonology (Rose, 2017). The overview of nominal TAME system in Mojeño Trinitario was presented by Rose (2017) where she noticed the following important features of nominal TAME markers: 1) there are nominal tense, aspect, mood and epistemic modality markers; 2) most of them are transcategorial clitics; 3) most of the TAME markers are attested on both verbal predicates, nominal predicates, and noun phrases; 4) they always have narrow semantic scope on noun phrases, i. e., when attached to noun phrases, modify the semantics of nominal components but not the whole proposition; 5) TAME markers are less frequently attached to noun phrases than to predicates, and they participate in stacking much rarer when they mark noun phrases.

In order to understand how nominal tense behaves in Mojeño Trinitario, I used the data from Language documentation reference corpus (DoReCo) of Mojeño Trinitario (Rose, 2024). It was collected by Françoise Rose (32 texts, 18336 word tokens) between 2005 and 2018. The corpus includes oral texts of different genres (traditional and personal narratives, conversations, and stimulus retellings) in Mojeño Trinitario. The texts have English and Spanish translations. Note that I only took into consideration two markers with prevalent tense semantics, namely *=ini* ‘PAST’ and *=yore* ‘FUTURE’, ignoring the ones that express aspect, mood, and epistemic modality.

4.1. Semantics and compatibility of =ini

The marker =ini is a clitic that, according to Rose, occurs only on nominals both in predicative position and in argument position. It should be noted that there is a homonymous marker =ini that is found on verbal predicates. However, Rose classifies it as a frustrative mood (similarly to Mapudungun and other languages in South America, see Dickenson & Epps, 2024). It is often combined with irrealis mood or other TAME markers on the same verb.

In the corpus, =ini was also found both in predicative (11) and argument (see examples below) positions. In the overwhelming majority of examples, =ini occurs on kinship terms and modifies the existential semantic component, i. e. ‘late, dead’ (12). In Mojeño Trinitario, kinship relations are expressed with possession, which is a common typological pattern (Aikhenvald, 2013: 4). Some kinship terms include the particular possessive relation in their root semantics and, respectively, do not need the possession to express this relation (e. g. *tata* ‘my_father’, 13).

(11) ***n-kuñar=eni***

1sg-sister_in_law.S=ini

‘[She] was my sister in law’.

(Rose, 2024; doreco_trin1278_T20: 22).

(12) *ene bueno na-echji-s-'o=nve* *ema ma n-ochk=ini*

and good.S 3PL-speak-CLF.head-ACT=HAB 3M ART.M 1sg-grandfather=ini

‘And well, this is what they were always telling about my grand-father’.

(Rose, 2024; doreco_trin1278_T02: 27).

(13) *te to t-epeno=po ema*

PREP.NH ART.NH 3-die=PFV 3M

ma tata=eni ene majina=po

ART.M my_father=ini and EXIST.NEG.3M=PFV

na-tan-ko=po eno 'chani-ono t-ko-jma-no

3PL-look_for-ACT=PFV 3PL person-PL 3-VBZ-disease-PL

‘When my late father died, and he wasn't here anymore, the sick people looked for them’.

(Rose, 2024; doreco_trin1278_T12: 7).

Besides kinship terms, other words that designate people can be marked with =ini: 'chane 'person', viya 'gentleman', 'chosi 'old (person)'. Interestingly, =ini can also mark proper names referring to deceased people (e. g. 14).

- (14) *nuti n-k-ijare silvia guaji guaji*
 1SG 1SG-VBZ-name S. G. G.
ñi-chicha-nu eñi viya mameet=ini guaji
 3M-child-1SG 3M gentleman M.=ini G.
 'My name is Silvia Guaji Guaji, I am the daughter of the late Sir Mamerto Guaji'.
 (Rose, 2024; doreco_trin1278_T47: 90).

At the same time, in most cases it is impossible to determine whether the person marked with =ini ceased to exist or existed in the past, or, in other words, whether =ini encodes change of the state or the temporal reference of the existential semantic component only (e. g. 15).

- (15) *ene nùti-po na-ke=po eno 'chanio-no na-ke=e'i to*
 CONJ 1SG-ADD 3PL-say=PFV 3PL person-PL 3PL-say=IPFV ART.NH
p-it-ko p-it-ko=ripo p-ipruj-ri-ko
 2SG-know-ACT 2SG-know-ACT=PFV 2SG-medicine-PLURACT-VBZ
porke ma p-tya=eni mu-et-ko t-ipruj-ri-ko
 because.S ART.M 2SG-father=ini 3M-know-ACT 3-medicine-PLURACT-VBZ
 '...and "it's your turn" said the people, they were saying "you know, you have learnt to cure because your **late father** knew how to cure (people)".
 (Rose, 2024; doreco_trin1278_T12: 8).

No examples of =ini are found for the modification of the existential component of inanimate or not highly animate (animals) entities.

Apart from the existential component, =ini can occasionally modify possessive relations, namely, ownership (2 examples in the corpus). In both examples, =ini occurs on the word *peno* 'house', and is used to describe the house where someone used to live, i. e. that someone used to own (16).

- (16) *ne esu-po su n-chicha n-era'i-k=ri'i*
 CONJ 3F-ADD ART.F 1SG-child 1SG-leave-ACT=IPFV
te to m-peno=ri'i=ni kalie machetero
 PREP.NH ART.NH 1SG-house=IPFV=ini street M.

‘And I left my daughter where I lived before (where my home was), in Machetero street’.

(Rose, 2024; doreco_trin1278_T36: 8).

It can be seen from the comparison between kinship relation and ownership that in the former case the possessive relation does not undergo the temporal modification, and what is triggered by *=ini* is the existential component of a nominal, while in the latter case *=ini* triggers the possessive relation of ownership. According to (Aikhenvald, 2013: 4), kinship relations (especially through blood) on a par with part-whole relations are characterized by their inalienability or obligatory possession. As what is expected to be possessed cannot be lost, the temporal modification of possession is impossible in case of kinship relations.

Apart from the aforementioned semantic modifications (existential and possessive components) and lexical characteristics of nouns *=ini* attaches to, Rose (2017) also mentions ‘past identity’ uses, that I would interpret as modification of the status semantic component (e. g. 17) akin to English *ex-* or *-to-be* (for more detail, see section 7). However, no examples of status modification have been found in the corpus data.

- (17) *ema koregieroru=ri'i=ini*
3M corregidor=IPFV=ini
‘the previous/past corregidor (chief magistrate)’.
(Rose, 2017: 5).

4.2. Semantics and compatibility of *=yore*

As well as *=ini*, *=yore* is a highly productive clitic that can be found both on noun phrases and on nouns in the predicative position (18). The most notable distinction between *=ini* and *=yore* is that *=yore* is the most prototypical way to express tense also for verbal predicates, while *=ini* on verbs only marks frustrative mood. According to the corpus data it is highly productive and transcategorical: for example, it can even occur on interjections (19). Also, *=yore* can co-occur with aspectual and evidentiality markers no matter if it marks nouns or verbs. When attached to nouns, it does not show any effect on the proposition tense, modifying only semantic components of nominals it attaches to.

- (18) *kasiki-yeno=yo=o'i=ji=ro*
cacique-wife=FUT=IPFV=RPT=UNQ

‘She is going to be the wife of a cacique (chief), they say’.

(Rose, 2024; doreco_trin1278_T29: 38).

- (19) *ene piti manje'e=yore t-komesa-vi-on=yore*
 and 2SG HES=yore 3-make_efforts-2SG-PL=yore
to na-woo-'o to p-echji-k=yore
 ART.NH 3PL-want-ACT ART.NH 2SG-speak-ACT=yore

‘And you, um... they will keep trying to make you speak’.

(Rose, 2024; doreco_trin1278_T19: 156).

In contrast to the nominal past =*ini*, nominal future =*yore* shows less lexical selectivity, although it still has a preference towards some particular semantic features of the nominals. The most common pattern is modification of possessive relations (14 examples). In such cases, =*yore* can occur either on a nominal itself (20) or on a generic possessive noun (a ‘dummy’ possessee that is followed by a lexical noun that specifies the semantics, e. g. 21). In some cases, the modification of the possessive relation goes along with the modification of the existential component, for example, when a designated possessee is being created with an intention to be owned by a possessor (XX).

- (20) *t-yom=po s-im-'o to mu-epruj=yore*
 3-go=PFV 3F-watch-ACT ART.NH 3M-medicine=yore
ema saema s-emna-k=puka
 3M 3F.husband 3F-love-ACT=DUB

‘She goes and looks for the remedy for her husband, if she likes him’.

(Rose, 2024; doreco_trin1278_T21: 91).

- (21) *tako'e esu n-meto-ko=o'i to p-im-'-a-a'i=ni to*
 therefore 3F 1SG-inform-ACT=IPFV ART.NH 2SG-watch-ACT-IRR=IPFV=PST ART.NH
p-kataji-gi-a-nu ene to na-ye'e=yore livro de ingle
 2SG-do_favor-ACT-IRR-1SG.O CONJ ART.NH 3PL-GPN=yorebook.S.of.S English.S
n-jich=ri'i p-no 'moper-ono=yo
 1SG-say=IPFV DEM-H.PL youngster-PL=yore

‘And that's why I asked her to look for, that she would do me the favor of getting an English book for them as I said, the boys’.

(Rose, 2024; doreco_trin1278_T26: 20).

- (22) *t-k-emptone=yore ñi-nok=yore to ñ-esane=yre to ñi-péno=yo*
 3-vbz-work=yore 3M-put=yore ART.NH **3M-field=yore** ART.NH **3M-house=yore**
 ‘He is going to work, he will prepare his field, his house’.
 (Rose, 2024; doreco_trin1278_T34: 9).

A curious and relatively common case of =yore use (5 examples) is its occurrence in a construction with material semantics. This construction has two constituents: an unmarked one that expresses the material used for making the product, and another one marked with =yore which designates the product of the transformation (e. g. (23); ‘blanket, which is going to be a mosquito net’). In the same example, we can also see another strategy to express the ‘material-to-product’ meaning — simply marking the product with =yore (i. e. ‘what is destined to be pants’) omitting the unmarked noun that designates material. In such cases, =yore modifies the existential component of the nominal it attaches to, since the result of the modification (i. e. blanket or pants) do not exist in the time of the proposition, but is expected to appear in the future as the result of the material transformation.

- (23) *'mui-ri=rich'o to manje'e et-jo=pka v-komnu 'saype*
 all-clf.amorph=still ART.NH HES 3NH-EXIST=DUB 1PL-need machete
ywo-ti kaecha colcha chaku=yore
 axe-NPOSD shovel **blanket.S** **mosquito_net=yore**
muipue-re=yore te Trinra
pants-NPOSD=yore PREP.NH Trinidad
 ‘Everything there could be, we needed: machete, axe, shovel, blanket to make mosquito net, fabric to make pants, in the city of Trinidad’.
 (Rose, 2024; doreco_trin1278_T25: 30).

The example (24) illustrates the case, where =yore arguably expresses both material and future possession: it participates in the material-purpose construction described above with the meaning ‘fabric destined for dress’, but also includes a possessive marker *s-* that refers to the ‘woman that will own the dress’.

- (24) *ty-uuna vino=ri'i eto 'attaji s-mu'i=yo*
 3-be_beautiful thin.S=IPFV 3NH **fabric** **3F-dress=yore**
su 'seno te to piesta
ART.F woman PREP.NH ART.NH festivity

‘The fabric used for the woman’s tipoy (dress) during the festivity was beautiful...’.
(Rose, 2024; doreco_trin1278_T25: 103).

In other cases, =yore is used to refer to events (25) and processes (26) planned for the future, both with and without possession. There are 5 examples of such use of =yore in the corpus. In the case of events, it is the existential component that is modified with =yore, since the planned events do not take place in the present, but they will in the future.

- (25) *ta-ke=e'i=ro* *p-jo-ko* *n-ye'e=yo* *viaje*
3NH-be_like_this=IPFV=UNQ DEM-NH.SG-NAE 1SG-GPN=yore trip.S
‘My future trip has to be like that’.
(Rose, 2024; doreco_trin1278_T07: 16).

- (26) *y-woo-'o* *to* *manje'e=yore* *'motne-ko=yore*
1PL-Want-ACT ART.NH HES=yore work-NPOSD=yore
te *p-jo-ka*
PREP.NH DEM-NH.SG-PROX
‘... we want to... umm... the work to be there’.
(Rose, 2024; doreco_trin1278_T33: 10).

Finally, occasionally (3 examples), =yore can be used with kinship affinal (non-blood) terms, such as *ima* ‘husband’ (27) and *yeno* ‘wife’. In that case, it does not trigger the existential component, it just specifies that the kinship relation expressed with possession will take place in the future. The restriction to non-blood kinship relations might be explained in terms of alienability: =yore can only modify the kinship relations that can be acquired, not the innate ones that are established by birth.

- (27) *wi=pu=iji* *t-a-echo-kore* *s-imo=yre=po* *ñi* *s-ima=yore*
NEG=PFV=RPT 3-IRR-know-NMZ 3F-watch=yore=PFV ART.M 3F-husband=yore
‘She doesn't know, she says, because she is going to look for her husband’.
(Rose, 2024; doreco_trin1278_T26: 32).

4.3. Temporal reference

When it comes to the temporal reference of the two nominal tense markers, it is important to address two problems: 1) whether *tnom* is determined in relation to the proposition time or the utterance time; 2) if there is a relation between the *tnom* and the proposition time, what proposition times the nominal tense markers are compatible with.

In case of =*ini*, consider the examples (15) and (16). In the example (15), the father was already deceased at the moment when people were coming to ask the speaker to cure people, hence, the *tnom* is located before the proposition time which is also in the past, i. e. first, the father of the speaker died, next, the people came to ask for the remedy. However, *tnom* is located before the utterance time as well, because the proposition time precedes the utterance time, i. e. first, people came for the remedy, and after the speaker told this story. Because of that overlap, it cannot be confidently said whether the reference is drawn with respect to the utterance time or propositional time.

In contrast, in the example (16), the speaker left their daughter to live at the place where they used to live at that moment, but not anymore. Respectively, the *tnom* is located in the past, but it does not suppose that they left their former house before leaving their daughter there. It is pragmatically more coherent to expect that these actions happened simultaneously, which let us interpret the *tnom* with respect to the utterance time but not the proposition time. As a result, it can only be noted that =*ini* may have reference to the utterance time, but no conclusion can be made regarding the proposition time.

The opposite pattern can be observed for =*yore*, where we can find the reference to the proposition time, but not the utterance time. For the former statement, consider example 28.

- (28) *na-naek-cho=po* *eto* *to 'lesia=yore*
3PL-start-ACT=PFV 3NH ART.NH **church=yore**
t-epia-re-ko-m=po *to* *'rove* *wo* *rawriy-ina* *'rove*
3-do-PLURACT-ACT-PL=PFV ART.NH adobe NEG brick-IRR adobe
‘They started what will be the church, they did it with adobe, not bricks, it is adobe’.
(Rose, 2024; doreco_trin1278_T24: 84).

The example (28) is taken from a story where the speaker mentions how the church in Trinidad was built. The church exists now, but in relation to the proposition time it was ‘a future church’. Hence, *tnom* is placed in future in relation to the proposition time, not the utterance time, since the church is already built. I found no examples where =*yore* would undoubtedly have a reference to the utterance time. For example, in (25), the utterance time and the proposition time are overlapping, and, again, no claim about the utterance time can be made.

When it comes to the interaction between the proposition time and the *tnom*, the examples for =*yore* do not show any selectivity in what the proposition time should be (see

examples (28) in the past and (22) in the future), while *=ini* is only attested with the proposition time in the past (e. g. 13).

4.4. *Mojeño Trinitario =ini and =yore and the criteria for NT*

Even though the proposed nominal tense markers in *Mojeño Trinitario* are highly productive, especially the future *=yore*, they still do not satisfy all of Tonhauser’s criteria, but — arguably — do qualify those proposed by Nordlinger & Sadler. The main issues arise with the criteria 3 and 4 (Nordlinger & Sadler); C and E (Tonhauser).

In terms of Nordlinger & Sadler, both clitics would scarcely qualify the requirement 3, since they both are compatible with different noun classes (kinship terms VS ownership for *=ini*, ownership VS material VS events VS kinship non-blood relations for *=yore*) and are quite productive, even though not fully. At the same time, both clitics would fail this requirement in Tonhauser’s terms, since they both show lexical preferences (kinship terms > ownership for *=ini*, ownership > everything else for *=yore*). Some of the collocations found in other languages with nominal tense, such as past inanimate status (‘the remains of something’) or future animate existence (‘a child that will be born’), are not attested either in the corpus or in the elicitation material provided by Françoise Rose. As I cannot conclude that either of two clitics is fully productive, Tonhauser’s criterion C is not satisfied.

The marker *=ini* does not satisfy the criterion E, because it can be interpreted as change-of-state modification. However, according to Rose (2017), *Mojeño Trinitario* has separate aspectual morphemes that can be applied both to nouns and verbs regardless of their syntactic status. The ability to form the change-of-state meaning for *=yore* is not obvious: the cases of future trip are more natural to be interpreted as ‘a trip that will take place in the future’ (i. e. localisation in the future) than ‘a trip that I am not in right now, but I will start having in the future’ (i. e. change-of-state), while the opposite can be claimed about possession and material.

Criterion	Result	Comment
1. Noun group semantics only	+	Do not trigger the temporal interpretation of the whole proposition unless in a predicative position.
2. Not (only) predicative	+	<i>=ini</i> occurs on nominals in both

		argument and predicative position, =yore occurs on different parts of speech, including nominals in both argument and predicative position.
3. Productive, not restricted to a small subset of forms	+	Both =ini and =yore have lexical preferences, which are not the same for both of them; and =yore is less selective.
4. Not a transcategorial clitic	+/-	=ini is a clitic, but not transcategorial. =yore is a transcategorial clitic.

Table 3. Mojeño Trinitario =ini and =yore, and the criteria of Nordlinger & Sadler (2004)

Criterion	Result	Comment
A. Occurs on Nom and modifies its semantics	+	Do not trigger the temporal interpretation of the whole proposition unless in a predicative position.
B. Form a paradigm, does not co-occur with other markers	+	The markers do not co-occur and can (though not have to) be considered to be members of the same paradigm, although the compatibility properties of =ini and =yore are different.
C. Not lexically selective	+/-	Both =ini and =yore have lexical preferences, which are not the same for both of them; and =yore is less selective. See Discussion.
D. Temporal relation between	+	=ini arguably shows temporal relation

NP-time and deictic/contextual time		to the deictic time, and =yore arguably shows the relation to the contextual time.
E. Does not encode change of the state	–/?	=ini in most cases does encode change of the state (‘late person’, ‘what I used to own’). With =yore it is less obvious. Mojeño Trinitario has separate morphemes for purely change-of-the-state morphemes (nominal aspect, see more in Rose, 2017).
F. May be anaphorically resolved in context	NA	No such examples were found.

Table 4. Mojeño Trinitario =ini and =yore, and the criteria of Tonhauser (2008)

5. Even (*Tungusic, Siberia*)

Even is a Northern Tungusic language (even1260, Tungusic, Siberia) that is spoken in the Russian Far East (Sakha Republic, Magadan Oblast and Kamchatka Krai). Even has three markers that convey semantics interpretable as nominal tense: *-mija* (‘old, former, dilapidated’), *-ŋat* (‘material’), and *-ga-* (‘destined for someone’). As markers *-mija* and *-ŋat* are not common in the corpus (Pakendorf et al., 2007–2012), their semantics and lexical compatibility cannot be robustly analyzed in this study. What should be noted is that, according to previous research (Tsintsius, 1947; Pakendorf & Krivoschapkina, 2014), both have quite restricted compatibility. On the contrary, the destinative *-ga-* is highly productive and frequent. In this chapter, I am going to observe the properties of the destinative *-ga-* in more detail.

The destinative category is found in a number of Tungusic languages (Even, Udihe, Oroch, Oroch, Nanai; for more detail, see. Kazama, 2012; Baklanov, 2023). Traditionally, *-ga-* is described as a special case (Rus. *prednaznachitelny padezh*; Tsintsius, 1947; Malchukov, 1995; 2008) because in a word form it takes the case slot and cannot co-occur with other cases. At the

same time, its behavior suggests that it has semantic properties of nominal tense, namely, future possession, similarly to Tundra Nenets predestinative (Nikolaeva, 2014; 2015). Like in Tundra Nenets, destinative in Even can mark subject, direct object, and functive adjunct ('X in the quality of Y'), with the main difference that in Tundra Nenets predestinative combines with case markers in one word form (Nominative for subject, Accusative for direct object, and Genitive for functive adjunct function). Also, both Tundra Nenets predestinative and Even destinative require possessive marking, and modify the temporal component of possession locating it in the future.

5.1. Semantics and compatibility of the destinative -ga-

At first glance, the destinative does not show much lexical selectivity. It can be attached to various noun classes. In 50% of examples (32 examples), -ga- attaches to inanimate objects that are either made in order to be owned by a future possessor (29), or are expected to be transferred to a future possessor (30).

- (29) *omen kantora-ga-r o-ča-l ta-la*
 one office.R-ga-poss.3PL make-PF.PTC-PL DEM.DIST-LOC
 'They built an office for themselves there...'.
 (Pakendorf et al., 2007–2012; Krivoschapkina_AX_Seb_history: 4).

- (30) *tet-u-d-du=si giaki*
 put.ON-CAUS-PROG-NONFUT.1PL.EXC=EMPH various
čapuki-ga-n egd'e-m sorok tretij-u
 boots.R-ga-poss.3sg big-ACC forty.R third.R-ACC
tet-u-ri-w-un, telogrejka-ga-n ejd-u
 put.ON-CAUS-PST-1PL.EXC warm.coat-ga-poss.3sg all-ACC
aw-ŋa-n=da ukči bi-si-n
 hat-ga-poss.3sg=ADD heat be-PST-3sg
 'We gave her our 43rd size boots, a warm coat for her, a hat, she warmed up.'
 (Pakendorf et al., 2007–2012; Solodikov_AA_tabun_2_020709: 4)

Another common pattern is marking on names of animals, e. g. *kabiw* 'partridge', *učak* 'reindeer', *olla* 'fish', etc., either alive or hunted (~30%/19 ex., 31). Much more rarely, -ga- marks abstract entities (~6%/4 ex., 32) and humans (~6%/4 ex., 33). In such cases, destinative nominals are usually used as functive adjuncts. Abstract entities that can take the destinative usually designate actions that were formed from verbs by nominalization (32).

- (31) *tar=ka* *taɲara go-ni-n* *min-teki*
 DEM.DIST=EMPH god.Y say-PST-3SG me-ALL
hatar ***ed'ek-ke-h*** *bu-diɲe-wu*
 PTCL.Y **sacred.reindeer-ga-poss.2sg** give-PTC.FUT-1sg
 ‘God told me that he would give me a sacred reindeer.’
 (Pakendorf et al., 2007–2012; Top07_Golikova1.Ed-'ek_1: 43)

- (32) *pol-le* *ečɪn* *girke-ri-ten*
 floor.R-LOC such.way spread-PST-3PL
ukle-k-ke-kun *ta-la*
 sleep-NMZ-ga-poss.1sg DEM.DIST-LOC
 ‘They spread bedding for us on the floor like this.’
 (Pakendorf et al., 2007–2012; Amganov_leaving_Twajan_interlinear: 94)

- (33) *e-te-n* *e-te-n* *hor-re*
 NEG-FUT-3SG NEG-FUT-3SG go-CVB.NEG
ge-ga-j *mende-d'i-n*
friend-ga-poss.refl.sg search-FUT-3SG
 ‘He [a deadman] won’t leave, he will look for a friend for himself’.
 (Pakendorf et al., 2007–2012; RDA_TPK_death: 159)

That the destinitive is productive is additionally supported by the observation that it is compatible with recent borrowings from Russian, e. g. *limit* ‘limit’, *buran* ‘snowmobile’. Destinitive is also found on loanwords that have Even equivalents: *ryba* ‘fish (Russian)’ (Evn: *olla*). Cf. the following examples:

- (34) ***limit-ke-ku*** *bu-wet-te*
 limit-ga-poss.1sg give-FREQ-NONFUT.3PL
ilan-mia-r-u *tik* *ere-w* *tugeni-w*
 three-ten-PL-ACC now DEM.PROX-ACC winter-ACC
egepe-ɲ-ge-ku *bu-ri-ten*
 sable-NCP-ga-poss.1sg give-PST-3PL
 ‘Some quota is given to me, now 30 sables were destined to me this winter.’
 (Pakendorf et al., 2007–2012; Solodikov_Artem_Nikolaevich_Managic_180609: 15)

- (35) *d'ugan-on* *ryba-ŋ-ga-wur*
 summer-ACC.POSS.3SG **fish.R-AL-ga-POSS.REFL.PL**
giakin-čan-ga-wur *kime-sči-d'-ot-te*
 various-DIM-ga-POSS.REFL.PL prepare-CON-PROG-HAB-NFUT.3PL
 ‘The whole summer they tried to prepare fish and other stuff for themselves’.

(Pakendorf et al., 2007–2012; Solodikov_Artem_Nikolaevich_Managic_180609: 51)

When it comes to the properties of future possessors, in the overwhelming majority of examples, destinative occurs with animate human possessors (~90%/59 ex., e. g. 31). In most cases, the future possessor is expressed with reflexive endings, singular or plural. However other possessive endings (especially 3SG, 1SG, and 2SG) are also attested. When the future possessor is human, the possessive relation is usually used to express the ownership relations between the possessor and the possessee. Another relation observed in the corpus and supported with the elicitation data² is kinship or social relations like *asi* ‘wife’, *ge* ‘friend’, etc. (33)

In only one example in the corpus (36) where the future possessor is inanimate, possession expresses part-whole relation. The elicitation data confirmed that part-whole relations can be modified with the destinative as long as it is pragmatically justified, e. g. a leg that is made for chair (37).

- (36) *n'an gon on=n'an ere-w tik okat*
 and say how=EMPH DEM.PROX-ACC now river
uŋ-u tembeke-w okat-čaka-m
 something-ACC soft-ACC river-DIM-ACC
n'an daw-d'i-r n'an e-te-r tik-re
 and cross.river-FUT-3PL and NEG-FUT-3PL fall-CVB.NEG

‘And they say: How will they cross the river, the stream, won't they fall?’.

(Pakendorf et al., 2007–2012; Amganov_EI_first_tractor: 007)

- umekič n'an gon mosta-ga-n o-gara*
 ... and say.NONFUT.3SG **bridge.R-ga-POSS.3SG** make-HOR

‘Well, let's make a bridge for it [river]’.

(Pakendorf et al., 2007–2012; Amganov_EI_first_tractor: 8)

² The elicitation was conducted during the field trip to the villages Esso and Anavgaj in Bystrinsky district of Kamchatka Krai in July 2021 organized by HSE University.

- (37) *bi o-ri-wu tiginmej budel-ga-n*
 I make-PST-1SG chair leg-ga-POSS.3SG
 ‘I made a leg for a chair’.
 (fieldwork, 2021; BKV_20210705@LB: 3)

Besides nouns, destinative is also compatible with the interrogative *ja-* ‘what’. In this case it is followed by a reflexive ending yielding ‘why? what for?’ (38).

- (38) *Keneli=de no bi-he-nni*
 bad=PTCL younger.sibling be-NONFUT-2SG
ja-ga-j detle-w bo-nni
 what-ga-POSS.REFL.SG wing-ACC give-2SG
go-niken hira-l-ča
 say-CVB.SIM be.angry-INCH-PF.PTC
 “You’re a bad brother, why did you give her the wings?” he said angrily’.
 (Pakendorf et al., 2007–2012; Kirillina_KK_emcheni: 67)

Unlike Tundra Nenets predestinative, Even destinative is occasionally compatible with plural marking and cardinal numerals. That suggests that the Even destinative is not modal-oriented in the way as it has been claimed for Tundra Nenets by Nikolaeva (2015), and the nouns marked with the destinative refer to real-world entities rather than an imaginary prototypical concept of such entity.

This brief overview of *-ga-* suggests that the destinative is fully productive. In fact, the destinative does have indirect lexical restrictions. First of all, since the destinative modifies temporal characteristics of the possessive semantic component, its use is restricted to nominals that can be possessed. In other words, if a noun cannot participate in possessive relations due to its semantic, grammatic or pragmatic properties, it cannot take destinative marking. Even more, not any possessive relation licenses destinative marking. It is only allowed in situations that imply the process of creation of an entity or the transfer of an existing entity to a future possessor. Thus, example (39) does not permit the use of destinative in the direct object position, because the direct object is neither being created nor transferred. The importance of this observation will be discussed in Section 8.1.

- (39) *bi ew-ri-wu akin mašina-wa-n / *mašina-ga-n*
 I wash-PST-1SG father car-ACC-POSS.3SG / *car-ga-POSS.3SG

‘I washed my dad’s car’.

(fieldwork, 2019; BML_20210706@LB: 13)

5.2. *Temporal reference*

Even destinative shows the pattern of temporal reference similar to that described for the predestinative for Tundra Nenets (Nikolaeva, 2015). The Even destinative also indicates that the time of possession follows the time of NP that matches the proposition time. It should be noted that the relation is determined with respect to the proposition time (i. e. contextually-determined time) and not the utterance time (i. e. deictic time).

5.3. *Even destinative and the criteria for NT*

Since the derivations *-mija* (‘old, former, dilapidated’) and *-ɲat* (‘material’) were not found in the corpus (Pakendorf et al., 2007–2012), I only apply the criteria to the destinative *-ga-*. The presence of *-mija* and *-ɲat* is nevertheless crucial to understand the paradigmatic status of possible nominal tense markers in Even.

The change-of-state interpretation can be applied to Even destinative as well: at the time of proposition the marked entity is not possessed, but the possession is expected in the future.

Criterion	Result	Comment
1. Noun group semantics only	+	Does not trigger the temporal interpretation of the whole proposition.
2. Not (only) predicative	+	Not attested on nouns in predicative position
3. Productive, not restricted to a small subset of forms	+	Can be applicable to different lexical classes of nouns, its compatibility being restricted only by applicability of possessive marking.
4. Not a transcategorial clitic	+	Occurs only on nouns and interrogatives, is not a clitic.

Table 5. Even *-ga-*, and the criteria of Nordlinger & Sadler (2004)

Criterion	Result	Comment
A. Occurs on Nom and modifies its semantics	+	Occurs only on nominals and interrogatives, and modifies only the possessive relation.
B. Form a paradigm, does not co-occur with other markers	+/-	Ambiguously: 1. Destinative takes the case slot and cannot co-occur with other cases, and is a member of the case paradigm; 2. At the same time, no examples where destinative co-occurs with <i>-mija</i> ('old, former, dilapidated') and <i>-ɲat</i> ('material') are found, so one may argue for a paradigm; 3. However, <i>-mija</i> and <i>-ɲat</i> show different behavior, and are expected to have different compatibility properties which is unexpected for a paradigm.
C. Not lexically selective	+/-	Can be applicable to different groups of nouns, its compatibility being only restricted by applicability of the possessive relation.
D. Temporal relation between NP-time and deictic/contextual time	+	Determines possession in relation to the contextual time, similarly to Tundra Nenets predestinative.
E. Does not encode change of the state	-	Can be interpreted as 'not currently possessed, but is designated be possessed in the future'

F. May be anaphorically resolved in context	NA	No such examples were found.
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Table 6. Even *-ga-*, and the criteria of Tonhauser (2008)

6. Bora (Boran, South America)

Bora (bora1263; Boran, South America) is a language from Boran language family that has only two languages (Bora and Muinane) spoken on the Colombia-Peru border. According to Ethnologue (Ethnologue, 1982–2008), it is currently endangered and is not transferred to children.

Nominal tense in Bora is represented by a single marker *-úvu*. In the grammar of Bora (Thiesen & Weber, 2012), the semantics of *-úvu* is described as ‘maximal, finalized state’. According to the grammar, for animate entities it encodes their final state, which is death.

(40) *níivúwa-úvu*

deer-úvu

‘a dead deer’.

(Thiesen & Weber, 2012: 207)

(41) *táá-cáani-úvu*

POSS.1SG-father-úvu

‘my deceased father’.

(Thiesen & Weber, 2012: 207)

The reason why Thiesen and Weber described *-úvu* as ‘maximal, finalized state’ might be its behavior when attached to verbs or some abstract nouns (e. g. *ájyaba* ‘hunger’). In such cases, instead of showing that an action or an event took place in the past, *-úvu* indicates the high intensity of the action. Besides nouns and verbs, *-úvu* was also attested on adjectives, where, again, it expresses high intensity of the property denoted by the adjective. High promiscuity (Zwicky 1987: 136) of the marker suggests classifying *-úvu* as a clitic rather than an affix (Haspelmath, 2023).

For the corpus analysis of semantics and compatibility of *-úvu*, I used the Bora DoReCo dataset (Seifart, 2022). The corpus includes 38 texts of about 25,000 words in total. The marker *-úvu* was attested 98 times in total; in 54 cases it was used with nouns in argument position with semantics close to nominal tense.

6.1. Semantics and compatibility of *-úvu*

Even though, according to the grammar, the compatibility of *-úvu* was expected to be quite restricted, the corpus data shows that its use is not restricted to deceased people and dead animals. It is true that the most common pattern found in the corpus (41 examples) is the occurrence of *-úvu* with nouns that denote people (42), especially, family members (e. g. (43), 34 examples in the corpus).

- (42) *ehdu patyé-híjcyá-ne tsúúcaja múnáa-úvu*
 like.that PASS-REP-INAN old.days **people-úvu**
 ‘All these things happened to our ancestors’.

(Seifart, 2022; DoReCo_doreco_bora1263_ovehe_1: 80)

- (43) *i-du=va=haáca=pe tsííju-úvu naavé-ne*
 this-CMPV=QUOT=CONT.EVID=REM **mother-úvu** spirit-INAN
 ‘It was the spirit of his deceased mother’.

(Seifart, 2022: DoReCo_doreco_bora1263_llijchu_ine_I: 370)

Occasionally, however, *-úvu* can mark personal pronouns (2 occurrences in the corpus, e. g. (44)). In both examples, *-úvu* is hosted by a third person singular animate masculine pronoun. Such behavior is not expected of a nominal tense marker. Personal pronouns do not include a semantic predicate that can undergo temporal modification, because they simply refer to entities.

- (44) *aa-ne=va=pe tee-du di-Vbe hallu*
 CONN-INAN=QUOT=REM 3-CMPV 3-M.SG on
di-te di-Vbe-úvu tsííme micá-Vve-ró-me
 3-PL **3-M.SG-úvu** children surround-SG.INTR-FRUS-PL
 ‘And when around the deadman’s house his children surrounded him...’.

(Seifart, 2022; DoReCo_doreco_bora1263_mEEva_ran: 46)

Also, *-úvu* is frequently used to modify the nouns that describe the remains of dead animals (6 examples, e. g. 45–46). For example, one narrative tells a story about an old woman who collected the bones of different animals as relics. The narrator was asking her about what animals the bones were taken from.

- (45) *juú nivúwáyu-úvu bájcu*
 okay **deer-úvu** bone

‘Yes, a bone of a dead deer’.

(Seifart, 2022; DoReCo_doreco_bora1263_taava_meewa: 69)

(46) *juú llihp̃ye-úvu bájcu*

okay guinea.pig-úvu bone

‘Yes, a bone of a dead guinea pig’.

(Seifart, 2022; DoReCo_doreco_bora1263_taava_meewa: 76)

The cases where *-úvu* is found on inanimate entities are much less common (8 examples) and less homogeneous. There are two examples where *-úvu* occurs on nouns that denote plants. In (47), the narrator tells about a person who gathered the irapay (*Lepidocaryum tenue*) leaves in order to make a bed in maloca (traditional Amazonian longhouse). The leaves lost their function as leaves of the irapay tree, and became ‘what used to be leaves’. Similarly, what used to be a liana in example (48) is no longer a living liana plant. Now it is used as a rope.

(47) *aa-ne=va=pe nee-Vbe ichii=re ó cuwa-V*

CONN-INAN=QUOT=REM say-M.SG here=REST 1SG sleep-FUT

nee-Vbe-re=va=pe ehdu tee-tsi

be-M.SG=REST=QUOT=REM like.that 3-CLF.place

aji-ji-ne-úvu ijcyá-ne-tu tee-ja

irapay-CLF.disc-PL-úvu be-INAN-ABL 3-CLF.cover

lliĩñe-vu ehdu

beneath-ALL like.that

‘And then he said to himself: “I’m not going to sleep here anymore, I’m tired,” and then he gathered sheets of leaves and made a bed and slept under the maloca hut’.

(Seifart, 2022; DoReCo_doreco_bora1263_llijchu_ine_II1_16-END: 243)

(48) *aa-tsi-du=va=pe iite-cunu-Vbe e-ne di-te*

CONN-CLF.place-CMPV-QUOT-REM look-MULT.INTR-M.SG that-INAN 3-PL

mĩĩl-mu-ke e-ne ehdu móóho-u-ri

dragonfly-PL-ACC that-INAN like.that liana-CLF.place-OBL.INAN

di-te móóho-u-úvu-ri

3-PL liana-CLF.string-úvu-OBL.INAN

‘Then he also sees some dragonflies perched on the old rope’.

(Seifart, 2022; DoReCo_doreco_bora1263_llijchu_ine_II1_16-END: 278)

Other examples of use with inanimate entities support the interpretation of *-úvu* as the expression of the loss of function: a container for macambo beans that was damaged and lost its function (49); a dough press that is no longer in use (50); the ashes of the candle left behind by their owners that do not look like ashes any longer (51); and, possibly, an idiomatic insult in example (52) that can be interpreted as ‘son of a no-longer-functioning penis’.

- (49) *i-áácoho-mu-paáji-ne-úvu* *e-ne-ne* *cuíve*
POSS.3-container-PL-CLF.hole-INAN-úvu that-INAN-REC evening
me-taju-du *nee-paáji-hji*
 1PL-MIX-CMPV be-CLF.hole-PL
 ‘His macambo containers, just as we mixed the macambo beans last night, got holes in them’.

(Seifart, 2022; DoReCo_doreco_bora1263_nEjke_kuriota: 63)

- (50) *aa-ró-hulle-va=pe* *ihdyu* *ite-cunu-Vbe*
 CONN-FRUS-CLF.further_place-PL=REM like.this look-MULT.INTR-M.SG
e-ne *di-te* ***mamu-ihcyu-ne-úvu***
 that-INAN 3-PL **dough.press-CLF.frame-PL-úvu**
níjcau-ri *e-ne* *di-te* *chiihyé-mu*
 end-OBL.INAN that-INAN 3-PL cicada-PL

‘He sees some cicadas at the ends of dough presses left by their owners’.

(Seifart, 2022; DoReCo_doreco_bora1263_llijchu_ine_II1_16-END: 276)

- (51) *tsúúca* ***i-bá-llijyu-ne-úvu***
 already **POSS.3-ash-CLF.powder-INAN-úvu**
tsúúcaja-juco-va-haáca *di-te* *ijcya-hijcya-ne*
 old_days=FOC=QUOT=CONT.EVID 3-PL be-REP-INAN
 ‘The ashes of the candle that its owners had left no longer looked like ashes’.

(Seifart, 2022; DoReCo_doreco_bora1263_llijchu_ine_II1_16-END: 270)

- (52) *aa-né-vá-a* *ee-ne* *goocó-júcoo-lle*
 CONN-INAN-QUOT-REM that-INAN laugh-AFIR-F.SG
jíjjíjjíjjí *duhcú-ju-ubé* ***dórríu-úvú-j*** *tsiiméne*
 INTJ weak-CLF.tube-M.SG **penis-úvu-POSS** child

‘She began to laugh: “Hahahaha, what a son of a dead penis (*insult*)!’.

(Seifart, 2022; DoReCo_doreco_bora1263_llijchu_ine_II1_16-END: 439).

One may notice that some of the translations of the previous examples contain the clarification ‘left by their owners’ which may imply that the entities were previously possessed and abandoned rather than lost their function. In examples (53–54) the house and the fields are not destroyed or abandoned, because the character’s wife still lives in this house. It can be interpreted as either past possession, i. e. what was previously owned, or as loss of function for a particular person, i. e. this house is no longer home to that person. This does not seem to possibly apply to all cases where *-úvu* marks inanimate entities because it also occurs on unpossessed nouns (50, 52). Also, (49) can hardly be interpreted as indicating previous ownership, as the character still owns the container; the point is that it is broken and thus dysfunctional.

- (53) *aa-né-vá-a* *tsúúca* *teene*
 CONN-INAN-QUOT-REM already 3-INAN
í-úmihé-ne-úvú-j *píihí-rí-jyuco* *di-bye* *péé-neé*
POSS.3-field-PL-úvu-POSS proximity-LOC-AFIR 3-M.SG go-INAN
 ‘And he was already close to his fields’.

(Seifart, 2022; DoReCo_doreco_bora1263_vuurihii: 126)

- (54) *aa-bé-vá-a* *péé* *á-ijyú-vá-a* *dii-lle*
 CONN-M.SG-QUOT-REM go CON-CLF.time-QUOT-REM 3-F.SG
méwa-ñíihyó *ihdyu* *ih-jyá-úvu-ri* *ícyá-híjcyá*
 wife-CLF.mother like_this **POSS.3-house-úvu-LOC** be-REP
ih-jyá-rí *ícyá-híjcyá*
 POSS.3-house-LOC be-REP

‘He was leaving, and his wife was staying in his old house’.

(Seifart, 2022; DoReCo_doreco_bora1263_vuurihii: 127)

To sum up, the marker *-úvu* is compatible with both animate and inanimate entities. When attached to animate objects, whether human or non-human, it expresses the semantics of ‘dead, deceased’. In case of inanimate entities it usually expresses the loss of expected function, e. g. a liana that is no more a liana tree but a rope (48), or a dysfunctional container (49). In all these cases, the scope of *-úvu* covers the existential semantic component of nominals, identifying

the period of their existence in the past. In case of (53) and (54), the possessive semantic component may also be affected.

6.2. Temporal reference

In most of the examples, *tnom* is located prior to the proposition time, i. e. the entity marked with *-úvu* is already dead or defunct at the moment when the situation takes place (e. g. 44). Since in most (but not in all, see example 45–46) cases, the situation time is located in the past in relation to the utterance time, *tnom* precedes both the utterance time and the proposition time which is either expressed with tense clitics, e. g. remote past =*pe* marked on connectors in examples (50) or recent past =*ne* (49); or just determined contextually (42). In example 55, it can be seen that even though the whole clause takes the remote past marker, the father died after he was beaten, so at that moment when he was beaten he was not deceased, but he is deceased in relation to the utterance time. That can be interpreted as that *-úvu* indeed locates *tnom* the relation to the utterance time.

- (55) *uu-vá-a* *llihíyo-úvu-ke* *íhdó-ne-ri* *dsíjíve-ébe*
 2SG-QUOT-REM father-úvu-ACC bite-INAN-INST die-M.SG

‘You said my late father died because of your bite’.

(Seifart, 2022; DoReCo_doreco_bora1263_llijchu_ine_I: 123).

In addition, in examples (45–46) a narrator quotes an old woman who was confirming bones of what animals she has in the process of the conversation, i. e. the temporal reference of *-úvu* was also determined with respect to the utterance time.

6.3. Bora *-úvu* and the criteria for NT

Bora *-úvu* does not show much lexical selectivity, as it can be compatible with different lexical classes of nouns. At the same time, it indicates the final state, i. e. death or dysfunction, rather than existence and functioning in the past, which contradicts the definition of nominal tense in terms of Tonhauser.

Criterion	Result	Comment
1. Noun group semantics only	+	Does not trigger the temporal interpretation of the whole proposition. In most cases, the marker scopes over the existential semantic component.

2. Not (only) predicative	+	Not attested on nouns in the predicative position.
3. Productive, not restricted to a small subset of forms	+	Is compatible with both animate and inanimate entities, although most common with kinship terms.
4. Not a transcategorial clitic	+/-	Can be compatible with different word classes (nouns, verbs, adjectives), however on verbs and adjectives it indicates the intensity of action or property.

Table 7. Bora *-ívu-*, and the criteria of Nordlinger & Sadler (2004)

Criterion	Result	Comment
A. Occurs on Nom and modifies its semantics	+	Occurs on different word classes, including nouns. Temporal properties are affected when the marker occurs on nouns only. In most cases, the marker scopes over the existential semantic component.
B. Form a paradigm, does not co-occur with other markers	+/-	The only NT-like marker in Bora. No statement about paradigmaticity can be made.
C. Not lexically selective	+	Can be applied to different lexical classes, however has a preference to be used with kinship terms.
D. Temporal relation between	+	Determines possession in relation to

NP-time and deictic/contextual time		the
E. Does not encode change of the state	–	The marker can be interpreted as ‘is dead/destroyed now’ and not ‘was alive/functional before’.
F. May be anaphorically resolved in context	NA	No such examples were found.

Table 8. Bora *-úvu-*, and the criteria of Tonhauser (2008)

7. *English (Indo-European)*

Even though English derivations *ex-* and *-to-be* are usually ignored in discussion on nominal tense or, even more, are given as examples of what is not nominal tense (Bertinetto, 2020: 314), I am going to observe these markers in this chapter, because their semantic effect is rather similar to what is expected from nominal tense, namely, they are also used to determine the temporal properties of host nouns. In Biber et al. (2021), *ex-* is described as ‘former’, while *-to-be* is not mentioned at all.

For this study, I used the Corpus of Contemporary American English (COCA; Davies 2008-) so the results I have received are only relevant for American English. The corpus consists of more than one billion words in Modern American English (1990–2019). The texts in the corpus represent eight different genres: oral, fiction, magazines, newspapers, academic articles, subtitles, blogs, and other web-sources.

7.1. *Semantics and compatibility of English ex-*

The previous research on compatibility of English *ex-* (in comparison to Russian loan prefix *eks-* and German loan prefix *Eks-*; Karaban, 2021) showed that *ex-* tends to occur with kinship terms, where the use of *ex-* is preferred over the adjective *former*. Other common cases of *-ex*’s use are professions (e. g. *policeman, banker*), toponymics (e. g. *Yugoslavia, Leningrad*), and some other inanimate entities (e. g. *colony, school*). Occasionally, *ex-* can mark whole noun groups including adjectives (e. g. *prime minister, political prisoner*), but frequency of such occurrences is significantly lower than for noun groups hosted by the same nouns without adjectives.

The data from COCA supported Karaban's assumptions: *ex-* is most commonly found with non-blood kinship terms (e. g. *wife, husband, boyfriend, girlfriend*, etc.). Most commonly, *ex-* is found with possessed kinship terms (e. g. 56) indicating that one particular kinship relation (e. g. *marriage, relationships*) is over. Though, non-possessive contexts are also common (57), and in that case, *ex-* shows that a person has a property of no longer being in kinship relations. Besides kinship relations, some other personal social relations are also frequent (e. g. *friends*, 58).

(56) *His **ex-wife** cheated on him.*

(Davies, 2008-; thestir.cafemom.com, 2012)

(57) *Granted, I was a nightmare **ex-wife**.*

(Davies, 2008-; xojane.com, 2012)

(58) *I'm not your **ex-friend**!*

(Davies, 2008-; My Little Pony: Friendship Is Magic, 2017)

Another common pattern with a bigger variety of lexemes *ex-* is able to attach to is social function. This diverse category includes professions (e. g. *model, secretary*, 59), government positions (e. g. *president, senator*, 60), religion identity (e. g. *Mormon, Catholic*, 61), temporary achievements (e. g. *champion*, 62), or affiliation to any other social group (e. g. *smoker, client, athlete*, etc., 63). What is essential here is that the social affiliation has to be temporary and not permanent, and, respectively, one should be able to lose the affiliation in order to become an *ex-*. The contexts of social function are usually non-possessed.

(59) *But the director of the office, a 46-year-old **ex-model** and political appointee named Mary George, did nothing.*

(Davies, 2008-; CBS_48Hours, 2008).

(60) *He would prefer to be an **ex-President** like Clinton.*

(Davies, 2008-; chicagoboyz.net, 2012).

(61) *As an **ex-Catholic** I have to say, bravo.*

(Davies, 2008-; scienceblogs.com, 2012).

(62) *The big bay window of the 260-pound **ex-champion**, that is.*

(Davies, 2008-; Houston, 1993).

(63) *He is an **ex-smoker**, having quit 4 years ago, with a 40-pack year history.*

(Davies, 2008-; PracticeNurse, 2012).

There are some peculiar cases when an arguably temporary characteristic is modified with *ex-*. Such are the cases of sexual orientation (e. g. *ex-gay*, *ex-lesbian*) or skin color (e. g. *ex-black*). Thus, example (64) was produced in the context of an Ex-Gay movement that claims that an individual is able to change their sexual orientation with the help of conversion therapy. Respectively, in this context, sexual orientation is assumed to be temporary, and not inherent and permanent. Similarly, in example (65), a black pop-singer Michael Jackson was branded *ex-black* after he was accused of whitening his skin color.

(64) *I myself was once a gay. Now I'm **an ex-gay**, Megan.*

(Davies, 2008-; But I'm a Cheerleader, 1999)

(65) *The piece branded Jackson an '**ex-black ex-superstar**', a 'freak' and a 'twisted individual' and called for his children to be taken into care.*

(Davies, 2008-; huffingtonpost.com, 2012)

As it was mentioned above, the cases of *ex-* modifying social function are rarely possessed. When it happens, possession indicates the associative relation of one person to another, and it is the associative relation that is modified by *ex-*, not the social function per se. For example, in (66), the gardener does not stop functioning as a gardener. He has rather got out of the associative relation 'gardener — employer' that is marked with possession, and that indicates that *ex-* modifies the associative relations rather than the social function.

(66) *I'm at Beth's soccer game with my ex-wife who's here with **my ex-gardener**.*

(Davies, 2008-; Music and Lyrics, 2007)

Apart from animate entities, *ex-* can sporadically mark some inanimate entities too. The corpus data includes multiple examples where *ex-* occurs on political states that used to exist in the past. Notably, the prefix *ex-* is not used for referring to the time period when the state existed. Au contraire, it points to the modern states that formerly were part of formerly existent countries, e. g. Yugoslavia (67) and USSR (68).

(67) *We are seeing this take place with respect to what happened in Rwanda and **ex-Yugoslavia**, in Cambodia, Sierra Leone and also in El Salvador.*

(Davies, 2008-; NPR_Saturday, 2004)

(68) *Most tourists come from other **ex-Soviet nations** like Russia, Ukraine, Belarus, Armenia and Azerbaijan.*

(Davies, 2008-; Denver, 2012)

Since in case of animate entities *ex-* does not modify the existential component, I would assume that the same is fair for political states too. In fact, the states do not completely disappear from the map, the territories and people remain the same. It is only the political division that changes, or, in other words, former states stop functioning as independent states, and new ones start functioning instead.

Sometimes, as a word play, *ex-* can be duplicated. In that case, its behavior is somewhat similar to English *great-* in *great-great-grandparents* or *pra-* in *pra-pra-babushka* in Russian — it indicates not the last *ex-* but the one that was an *ex-* before (69).

(69) *He's back with his ex-wife... or **his ex-ex-wife**, given I'm his ex-wife... not that we're officially divorced, so I don't even know what my official title is, but I am single.*

(Davies, 2008-; Brothers & Sisters, 2007)

Finally, it should be mentioned, that the prefix *ex-* metonymically extended its semantics and can be used as an independent noun *ex* ‘former partner (either husband/wife or boy-/girlfriend)’. There are a few examples when the prefix *ex-* appears on the noun *ex* (70).

(70) *But you and **your ex-ex** need to face what went wrong the first time if you're going to move forward, says couples therapist Robert Buchicchio, author of Taking Space, and then let it go, once and for all.*

(Davies, 2008-; Cosmopolitan, 2009)

All in all, the marker *ex-* in English is applicable to multiple noun classes: kinship relations, various cases of social functions, countries. However, all of these cases fall under some universal restrictions of *ex-* use. First of all, *ex-* cannot modify the existential semantic component (except for an arguable case of countries, which I commented on above). Unlike other languages I mention in this paper, the meanings like ‘dead, deceased’ or ‘destroyed, defunct, dilapidated’ cannot be expressed with English *ex-*. Neither can *ex-* modify most of the possessive relations (e. g. ownership): the only two cases when it is possible is kinship and associative relations, which basically contain the relation of one person to another (e. g. ‘wife — husband’, ‘gardener — employer’) and the social status (e. g. ‘being a wife’, ‘working as a gardener’).

Another restriction is that the social statuses and functions, as well as the kinship relations, cannot be permanent, or at least are not considered permanent by a speaker. In other words, a feature that is not expected to be lost in the scope of one’s lifetime, cannot be modified

by *ex-*. In some rare cases, the period of an individual's function can end simultaneously with their life as in example (71), where Saparmurat Niyazov ended his presidential position when he died of heart attack in 2006, but normally *ex-* is only used when the social function is over before the individual's death.

(71) *The **ex-president** Niyazov who died in 2006 was a tad eccentric/insane...*

(Davies, 2008-;).

7.2. Semantics and compatibility of English *-to-be*

According to the corpus data, the marker *-to-be* is mostly found on various kinship terms, both possessed (72) and unpossessed (73). Unlike *ex-*, *-to-be* does not have a restriction on permanent kinship relations, but instead it is only compatible with the relations that one acquires during the lifetime. Thus, no examples of *-to-be* occurring with such blood innate kinship relations as 'sisters' were found, and the examples on 'brothers' (e. g. 74) only contain the metaphorical use of it, i. e. blood kinship relations 'brothers' are reinterpreted as a close non-blood affinity, like brotherhood or fraternity. The most frequent words found in the COCA are *bride*, *husband*, *mother*, *wife*, and *parents*. A curious case of *-to-be* use is represented with example (75), where *Buddha-to-be* designates a person that goes through *bodhisattva* — the path of becoming Buddha by compassion.

(72) *The Prince, and **his** beautiful, brilliant **bride-to-be**.*

(Davies, 2008-; Supergirl, 2017)

(73) *You wouldn't attack **a mother-to-be**, now, would you?*

(Davies, 2008-; Once Upon a Time, 2015)

(74) *Typically, these **Brothers-to-be** were raised in religious families and came across the organization in the course of their study.*

(Davies, 2008-; Foreign Affairs, 2011)

(75) ***The Buddha-to-be** is also faced with a heartbreaking choice: stay with his wife and son, or go off and seek enlightenment.*

(Davies, 2008-; PsychToday, 1996)

Similarly to *ex-*, the marker *-to-be* is widely used for social functions that, again, can be acquired during life. Such are jobs and positions (especially the prestigious ones, e. g. *king*, *president*, *chairman*, etc., 76), also the use of *-to-be* with words that designate students of different years is common (e. g. *junior*, *senior*, etc., 77). Unlike *ex-*, *-to-be* is not found on

achievements like *champion*, which makes sense since it is impossible to predict whether one would become a champion or not.

(76) *The **king-to-be** must inspect nine golden cups and find out which one has the lemon in it.*
(Davies, 2008-; BkSF:SplitHeirs, 1993).

(77) *It will come down to two-year starter Jalen Hurts or the **sophomore-to-be** who replaced him in last season's title game, Tua Tagovailoa.*
(Davies, 2008-; Minneapolis Star Tribune, 2018).

As it has been described earlier, *-to-be* has a strong preference towards animate entities, modifying the semantic component of social function, while the existential component usually remains untouched. An exception to this tendency is when *-to-be* occurs on words like *child* or *baby*. In such cases, *baby-to-be* means an unborn child, which is expected to be born in the future (for example, during the pregnancy, 78-79). Notably, this collocation can be used even in case of planned abortion (80). It can be interpreted in the following fashion: before the birth, a fetus is not a baby yet, but the expected scenario is that after giving the birth, a newborn baby will exist in the future.

(78) *She's the mother of your **child-to-be**.*
(Davies, 2008-; Ind_Springer, 1997)

(79) *Tyrion genuinely wants to give his sister — and **her baby-to-be** — a chance to live.*
(Davies, 2008-; Gizmodo, 2019)

(80) *If girls are going to be required to notify their parents before getting an abortion, then they should also be required to notify the father of **the baby-to-be** and the father's parents.*
(Davies, 2008-; NPR_TalkNation, 2005)

Much less frequently, *-to-be* can mark inanimate entities. The COCA has only a few examples when the *-to-be* marker appears on inanimate nominals. In most of the examples, *-to-be* modifies the existential component of a nominal's semantics. Thus, when attached to material inanimates, it is supposed that the entities are in the process of being created and yet cannot fully function the way they are expected (81–82).

(81) *Ricky was swinging a level I had found on the second floor of **a house-to-be**, one of the last houses being built, on the far end of a *cui de sac* that marked the back of the*

neighborhood.

(Davies, 2008-; AntiochRev, 2011)

- (82) *Secondary stems sprawled laterally over **the garden-to-be**, sending tendrils up every dry old goldenrod stem and milkweed stalk they encountered.*

(Davies, 2008-; MotherEarth, 1998)

The modification of the existential semantic component is also found for abstract inanimate entities, namely, for organisations (83), campaigns, states (84), or other abstract entities that are either driven by people or consist of people. I believe that in that case there might be a metonymic shift from people to the entity they are related to: for example, the *government-to-be* in (83) consists of *governors-to-be*.

- (83) *The sticking point is whether the **government-to-be** will offer a real alternative.*

(Davies, 2008-; AssocPress, 2010)

- (84) *Yet when the United Nations partitioned Palestine in that year, **the Jewish state-to-be** received 53 percent and the Arab state-to-be received only 47 percent of the land.*

(Davies, 2008-; alhewar.com, 2012)

Finally, example (85) illustrates the case, where a place (Appledore Island) is designated to become home for a particular person. Here what undergoes temporal modification is both the possessive and the function components — the place is going to function as a home to a particular person, and this person is going to have the associative relation expressed with the possessive pronoun *my*.

- (85) *"It's going to be the best summer of your life!" enthused Sarah MacLean as we drove toward Portsmouth, New Hampshire, to take a boat out to Appledore Island, **my home-to-be** for June and July of 2012.*

(Davies, 2008-; birds.cornell.edu, 2012)

All in all, as well as *ex-*, *-to-be* has a strong preference towards kinship relations and social function, but also occasionally allows the modification of the existential component for inanimate entities.

7.3. Temporal reference

The prefix *ex-* shows similar temporal behavior to other aforementioned markers from other languages that locate the temporal characteristic of a nominal in the past — the temporal relation is either unambiguously determined by utterance time, or cannot be identified due to the

overlap of utterance and propositional time. Thus, in example (56), the *ex-wife* cheated on him before she became an *ex-wife* (otherwise, I guess, it would not be considered cheating). Hence, the fact of being *ex-* is determined in relation to the utterance time, i. e. first she cheated on him, then they divorced, and now she is his *ex-wife* who cheated on him when they were married. The opposite case, where the temporal reference cannot be fully determined because of the overlap, is illustrated by the example (57). She was a nightmare *ex-wife* after they divorced and she became an *ex-wife*, otherwise she could only be a nightmare wife. That means that she was an *ex-wife* not just in relation to the utterance time, but also in relation to the proposition time, i. e. the time when she was behaving badly towards her ex-husband.

The examples on *-to-be* indicate that it can draw the temporal reference either with the utterance time or the proposition time depending on the context. In most of the examples I observed, *-to-be* is defined regarding the utterance time. Such is the example (83), where the *government-to-be* will offer the alternative after it becomes the actual government, and in the moment of speech the alternative cannot be offered, because yet it is still the *government-to-be*. However, there are some examples, where it is proposition time that defines the *-to-be* temporal reference. Thus, the context of example (82) is the following: a year before the moment of speech, the author decided to clear a meadow patch in order to make a kitchen garden, and accidentally discovered a wild grape vine, whose secondary stems sprawled over the territory of the *garden-to-be*. Now, in the moment of speech, the author has already built a kitchen garden on that patch, so the garden is no longer a *garden-to-be*, and, respectively, the temporal reference is drawn with respect to the proposition time.

7.4. English *ex-* and *-to-be*, and the criteria for NT

The case of English derivations is quite notable, because they violate some of the criteria in an interesting way. First of all, it is debatable whether the markers in question are lexically selective. Both *ex-* and *-to-be* have a strong preference towards some particular lexical classes, namely, kinship terms and words of social function, although they occasionally allow the compatibility with some but not all inanimate entities. In case of *ex-*, the marker can be used as long as it is able to modify the semantic component of function, so the cases when only the existential component can in theory undergo the temporal modification are banned. All in all, both markers have lexical preferences, but are in fact compatible with multiple lexical classes.

Another point that does not fit the criteria of Tonhauser is whether the markers that encode temporal relations form a paradigm. According to Tonhauser (2008), tense markers cannot co-occur, and they must constitute a single paradigm. In turn, there have been found a few examples where *ex-* and *-to-be* actually do occur together on the same nominal. For example, in (86), Gordon met Miss Winston before she became his wife and, then, ex-wife. This observation supposes that English *ex-* and *-to-be* cannot be treated as examples of nominal tense in terms of Tonhauser. On the other hand, unlike Even, *ex-* and *-to-be* have pretty similar compatibility properties, and if they did not co-occur, they would have been treated as two items of a single paradigm.

(86) *When Gordon met **his ex-wife-to-be**, she was a Miss Winston (far left) and he'd just won at Daytona.*

(Davies 2008-; SportsIll, 2003)

Finally, the semantic impact of both *ex-* and *-to-be* can be interpreted as change-of-state. In the former case, an individual loses their status or kinship relation and acquires an *ex-* status, while in the latter case, an individual expects to acquire a new status, or an unfinished entity is expected to become finished.

Below you can find the summary of *ex-* and *-to-be*'s features in comparison to the criteria of Nordlinger & Sadler, and Tonhauser.

Criterion	Result	Comment
1. Noun group semantics only	+	Do not trigger the temporal interpretation of the whole proposition
2. Not (only) predicative	+	Usually occur on verb arguments.
3. Productive, not restricted to a small subset of forms	+/-	Not restricted to a particular lexical class, but have a strong lexical preference towards kinship terms and social function words. Cannot occur with nouns where the temporal modification can only apply to the existential semantic component.

4. Not a transcategorial clitic	+	Not transcategorial, but <i>-to-be</i> can participate in collocations like <i>soon-to-be</i> .
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Table 9. English *ex-* and *-to-be*, and the criteria of Nordlinger & Sadler (2004)

Criterion	Result	Comment
A. Occurs on Nom and modifies its semantics	+	Do not change temporal interpretation of the proposition, modifying a nominal's semantics in the temporal domain. Cannot occur with nouns where the temporal modification can only apply to the existential semantic component.
B. Form a paradigm, does not co-occur with other markers	–	Ambiguous: <i>ex-</i> and <i>-to-be</i> can co-occur. At the same time, they have pretty similar compatibility.
C. Not lexically selective	–	Have a strong preference towards kinship terms and social function words, but not completely restricted to them.
D. Temporal relation between NP-time and deictic/contextual time	+	The choice of the time point that determines the <i>tnom</i> (utterance VS propositional time) is contextually determined.
E. Does not encode change of the state	–	Both <i>ex-</i> and <i>-to-be</i> modifications can be interpreted as change-of-state.

F. May be anaphorically resolved in context	NA	No such examples were found.
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Table 10. English *ex-* and *-to-be*, and the criteria of Tonhauser (2008)

8. Discussion

After taking a closer look at five non-related languages that can modify nominal semantics in the temporal domain by morphological means, we observe a wide variety of morphological markers with different lexical selectivity properties. At the same time, only some of them qualify as nominal tense in terms of Nordlinger & Sadler (2004), and none of them fully satisfy all the criteria in Tonhauser (2006). In this section, I would like to focus in particular on Criterion 3/C (lexical selectivity), and Criterion B (paradigmaticity). Based on this discussion, I will propose a new approach to the classification of nominal tense markers.

The criteria for nominal tense proposed by Tonhauser were previously disputed by Bertinetto (2020) from the perspective of verbal tense, since some of the examples of what is traditionally called ‘tense’ on verbs would not satisfy all Tonhauser’s criteria for tense either. In other words, contra Tonhauser Bertinetto supports the idea that verbal tense and nominal tense are related phenomena. In this section, I will explain why I think nominal and verbal tenses are different phenomena that should be analyzed separately, and why this approach may seem more productive for future cross-linguistic research.

8.1. Lexical selectivity (*Criterion 3 in Nordlinger & Sadler, and criterion C in Tonhauser*)

The examples in different languages show that lexical selectivity cannot be treated as a binary value of being ‘lexically selective’ or ‘lexically restricted’. On the contrary, the markers observed in this paper show how much productivity of nominal tense markers can vary. The opposition ‘productivity VS selectivity’ should rather be thought of as a continuum (Figure 1).

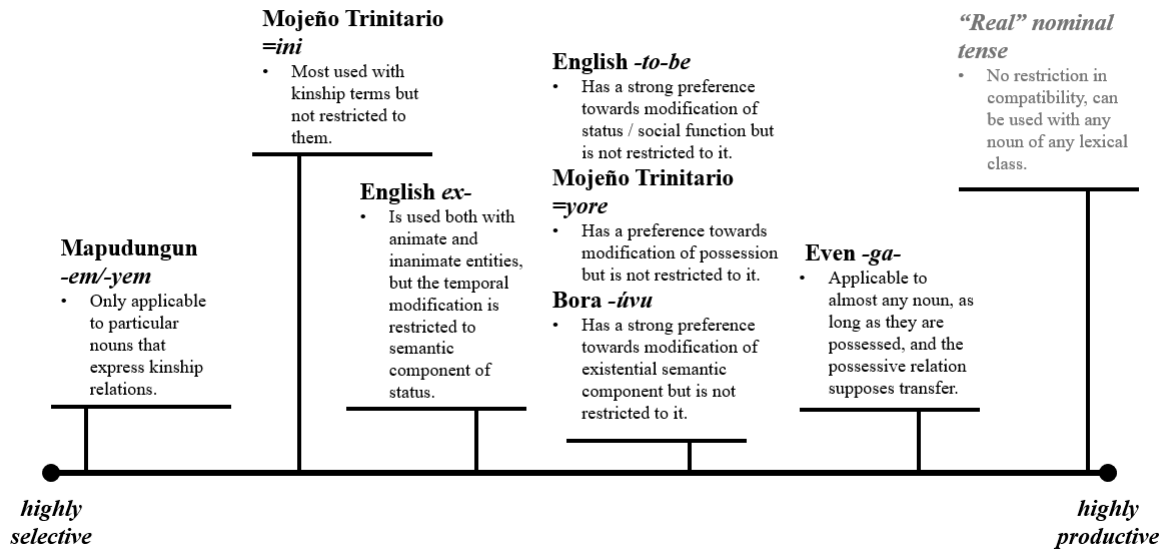


Figure 1. Languages in the study on the productivity scale.

On one side of this continuum, we have Mapudungun *-em/-yem* which occurs on a highly restricted lexical class of nominals, namely, kinship terms. On the opposite side, Even destinate *-ga-* occurs on a variety of nouns and does not seem to be restricted to a particular lexical class. Even in the case of Even, it has to be noted that the destinate cannot be treated as ‘fully productive’. Its use is indirectly restricted by two parameters: 1) a noun has to be possessed, and the use of possession may in theory be lexically or pragmatically restricted; 2) the possessive relation has to suppose possible transfer to the expected possessor, so not all of the possessive relations can be modified with destinate. I doubt that all nominal lexemes in a language can take possessive inflection due to the pragmatic reasons, and that is why Even destinate cannot be treated as fully productive across all lexical classes of nouns. Between the two extreme values, we have all other markers, which are more or less selective. Such are the cases of 1) Bora *-úvu* that tends to occur on animate entities (both human and non-human) and modify their existential component, 2) English *ex-* and *-to-be* that overwhelmingly prefer nouns of social function or kinship relation, while *-to-be* has a wider compatibility; 3) Mojeño Trinitario *=ini* that is mostly used to denote dead relatives; and 4) Mojeño Trinitario *=yore* that most commonly modify the semantic component of possession. All of these cases have a preference towards one or several lexical classes and disprefer others, even though they may occasionally be used with

the dispreferred ones. In this sense, none of the markers I observe in this study would fully satisfy the criteria 3 and C.

Another important note on compatibility is that grammaticality does not mean naturalness of use. This is where the method used for the research is essential. Nikolaeva (2015) used elicitation as her method for data collection; as a result some of her examples seem pragmatically unnatural while being grammatically correct. Depending on the method of data collection, a researcher might end up with higher or lower degree of productivity for the same language. On the other hand, corpus data may not include some pragmatically acceptable examples, which can result in postulating restrictions that are too strict. For instance, Mapudungun *-em/-yem* may turn out to be more productive than it was observed in the corpus.

To sum up, this criterion seems to be controversial and complex, and attempts to use it as a definitional parameter for nominal tense, as suggested by Tonhauser (2006, 2008), is only possible under oversimplification and ignorance of peculiar cases. The evidence from languages observed in this paper shows that the opposition ‘lexically selective’ versus ‘lexically restricted’ is not binary and cannot be treated as a criterion for nominal tense.

8.2. Paradigmaticity (Criterion B in Tonhauser)

Another criterion that turns out to be complex is Tonhauser’s Criterion B. Tonhauser describes it in the following way: the set of nominal tense markers has to form a grammatical paradigm, and the items of this set cannot co-occur, i. e. a noun can only take one nominal tense marker. Taking this definition at face value, some of the languages in the study violate the criteria, while in others this criteria cannot be properly applied.

Direct violation of this criterion is observed in English. As has been mentioned in Section 7.4, the markers *ex-* and *-to-be* can occur on the same word form. In such cases, they both modify the semantic component of *status*. Two examples found in the COCA (86 and 87) illustrate that *ex-* scopes over the root ‘wife’ only, while *-to-be* scopes over both *ex-* and the root ‘wife’. In other words, *ex-wife-to-be* can be interpreted as ‘a woman who will become a former wife in the future’ ([[*ex-wife*]-*to-be*] rather than [*ex*-[*wife-to-be*]]]. That observation is an argument against the paradigmaticity of *ex-* and *-to-be* in English, and thus, for Tonhauser, against the status of nominal tense.

- (87) *The prize money already anticipated several years before had been promised to **his ex-wife-to-be** as a sort of alimony.*

(Davies 2008-; Mercury, 1991)

Other languages in this paper do not show the direct violation of criterion B. On the other hand, it is not clear whether it can be applied in the first place. First of all, the would-be nominal tense systems of Bora and Mapudungun only include one marker that in both cases encodes past tense. Hence, no conclusion can be made about the co-occurrence of nominal tense markers, as well as about a nominal tense paradigm in general. In general, the grammatical category is not expected to be represented by a single marker that can either be present or absent, because grammatical categories are traditionally claimed as obligatory, which forbids the absence of marking. One may postulate a paradigm that consists of an overtly expressed past tense versus a non-expressed non-past tense that would cover all other types of temporal reference. However, that would suppose that overtly expressed markers cover all possible cases when an entity existed in the past, which means unrestricted productivity, which is not true for neither Mapudungun nor Bora. Moreover, in that case, we need to confirm that zero-marking never occurs on entities that existed in the past, which is also not true.

Unlike Bora and Mapudungun, Mojeño Trinitario has two possible nominal tense markers, past =*ini* and future =*yore*. The corpus has no examples where these two markers would occur on the same nominal, therefore the criterion B seems to qualify. However, =*ini* and =*yore* have completely different semantics and compatibility properties. While past =*ini* tends to modify the existential semantic component, and prefers animate entities as hosts, =*yore* is predominantly used with inanimate entities in order to encode future possession or material-to-product modification. That seems quite unexpected for items of the same paradigm, although it does not mean that they do not constitute one. While lexical preferences for different cells of the paradigms can be found in other categories — e.g. ergative with animate rather than inanimate and locative with inanimate rather than animate, in this case the "preferences" are drawn to the extreme. What is more suspicious is that most of the lexemes that occur with possible nominal tense markers in the corpus are found with only one of them, so that nouns can be grouped semantically into ones that only occur with =*ini* and not with =*yore* (e. g. blood kinship terms), and those that only occur with =*yore* but not with =*ini* (e. g. possessed inanimate entities). Hence, it is likely not just lexical preferences of lexemes but lexical restrictions, and

that is not what is expected from markers that constitute a paradigm. While in the case of nominal cases lexically divergent values (ergative vs. locative) are aligned with the other values (genitive, nominative etc), in this case — i.e. in the lack of any other NT values — it seems more appropriate to talk about two independent categories.

Finally, destinative *-ga-* in Even challenges the criteria B in two different ways. Firstly, it occupies the case slot of a word form and does not co-occur with other cases. Destinative is used instead of Nominative in Subject position or Accusative in Direct Object position in cases when the participant is designated to someone. This makes the destinative member of the case paradigm in the first place, so that its potential membership in the possible nominal tense paradigm is not even envisageable. Also, as I mentioned before, Even has two more derivations with the semantics close to that of nominal tense that do not occur in the corpus at all: *-mija* ('old, former, dilapidated'), and *-ɣat* ('material'). Even though I could not make a proper analysis of their semantics and compatibility in this study due to the limitation of the method (working with corpus data), structurally they behave differently from destinative *-ga-*. The two markers do not occupy the case slot, and do not require concomitant possessive marking. Therefore, it would be precipitous to postulate a nominal tense paradigm that includes destinative *-ga-*, *-mija*, and *-ɣat*.

To sum up, criterion B faces serious problems when applied to languages with candidates for nominal tense markers, because it is not applicable to languages with a single nominal tense marker, or with multiple markers with different compatibility properties.

8.3. A different comparative concept of nominal tense?

The analysis of the data from five genealogically unrelated languages suggested above shows that only Even destinative *-ga-* comes close to satisfying all of the criteria for nominal tense by Nordlinger and Sadler. None of the observed markers satisfy all of Tonhauser's criteria. What it means is that none of the markers possess all the characteristics of the comparative concept of tense — *if* the latter is defined based on the features of verbal tenses. In this sense, and in concordance with Tonhauser's outcomes, these cases represent a category different than tense, and cannot be used in cross-linguistic comparison along with verbal tenses. Even considering the critique by Bertinetto that Tonhauser's criteria are too restrictive even for verbal tenses, the cases observed in this paper do not fully satisfy even less restrictive criteria by

Nordlinger and Sadler. As a result, these cases should not be treated as nominal tense in any of these understandings.

However, all of these markers have a range of common features. All of them can modify different components of nominal semantics in the temporal domain using inflectional or derivational morphology, similarly to what is obtained by the use of independent lexemes like Russian *byvšij* and *budušij*, or English *former* and *future*. Some additional characteristics that the markers observed have in common are as follows: some of the markers from non-related languages have the comparable lexical preferences, other modify the same semantic components like existence, status, or possession, and relate temporal reference to the utterance time, the proposition time or either of them based on the context. The presence of similar structural and semantic patterns invites cross-linguistic generalizations. And that is why a comparative concept that would unite all of such cases is needed (Haspelmath, 2010: 670).

According to Haspelmath (2010), comparative concepts are based on universal semantic concepts, and are used for cross-linguistic comparison of morphosyntactic features. The comparative concept of nominal tense should be formed based on its main semantic function: temporal modification of nominal semantics. Following Nordlinger and Sadler (2004), it should not include the markers that only modify nouns in the predicative position, because in that case the semantic modification scopes over the whole proposition and not specifically the noun phrase. As a result, the definition of nominal tense as a comparative concept is the following:

Nominal tense is a morphological category that modifies the nominals in the temporal domain.

The presence of this comparative concept — new and distinct from verbal tense — would solve the classificatory problem of markers that do not completely fit the definition of tense, because it represents a separate comparative concept for nominals that does not rely on verbal tense. Following Nordlinger and Sadler (2008), and Nikolaeva (2015), I believe that since nouns and verbs represent canonically different semantic concepts and have different syntactic functions, there is no need to build the definition of nominal tense based on the verbal tense. Instead, it should rather reflect the most prominent properties of its own behavior.

The comparative concept of nominal tense would cover almost all the cases considered above. The only possible exception is the case of Mapudungun *-em/-yem*. As it was mentioned in

section 3.4, Mapudungun *-em/-yem* has an extremely restricted use with kinship terms, and example (8) illustrates that it is rather a way to express an attitude towards a deceased person rather than an indicator of their existence in the past. In that case, it does not modify the semantics temporally, and, therefore, cannot be considered nominal tense in the current definition.

9. Conclusion

This paper presents a corpus-based study of morphological markers with semantics close to nominal tense in five non-related languages: Mapudungun (Araucanian, South America), Mojeño Trinitario (Arawakan, South America), Even (Tungusic, Siberia), Bora (Boran, South America), and American English (Indo-European, North America). The analysis aimed to describe the properties of lexical compatibility and semantic effect that the markers in question perform. Additionally, all the markers were compared to the criteria for nominal tense, previously presented by Nordlinger and Sadler (2004), and Tonhauser (2006, 2008).

The study showed that the markers in question do not completely fulfill all the criteria for nominal tense, and, respectively, cannot be treated as nominal tense in its most prototypical understanding. The main points of conflict with the criteria were compatibility restrictions, preferences towards particular lexical classes of nouns, and the issues connected to the definition of paradigm.

As a result, a new comparative concept for nominal tense was presented. This comparative concept is based on the ability of nominal categories to modify host nouns in the temporal domain without the necessity to satisfy all of the criteria postulated based on the verbal tense. It would cover almost all of the cases observed in this paper (besides Mapudungun *-em/-yem*). I believe that the comparative concept of nominal tense will contribute to the future cross-linguistic comparison of similar markers in languages all around the world, because it will make it possible to analyse the markers bearing temporal semantics that do not fully satisfy the definition of tense ‘as it would be for verbs’.

After having the comparative concept of nominal tense defined, the future work in this area can be dedicated to finding generalisations or maybe even linguistic universals that are common for markers within this comparative concept. In order to do so, a more indepth research of markers described in this paper is needed, as well as the data on other languages (e. g. Kalaallisut) that have similar markers in their inventories.

Abbreviations

1, 2, 3	person	GPN	generic possessive noun (MT)
ACC	accusative case	HAB	habitual aspect
ACT	active voice	HES	hesitation interjection (MT)
ADD	additive	Hh	hither (Mapudungun)
AFIR	affirmative	HOR	hortative (Even)
ALL	allative case	IDO	internal direct object (Mapudungun)
ART	article	INAN	inanimate
CAUS	causative	INCH	inchoative aspect (Even)
CF	constant feature (Mapudungun)	IND	indicative mood
CLF	classifier	INST	instrumental case
CMPV	comparative (Bora)	INTJ	interjection
COLL	collective	IPD	impeditive (Mapudungun)
CON	conative (Even)	IPFV	imperfective aspect
CONJ	conjunction	IRR	irrealis mood
CONN	thematic connective (Bora)	LOC	locative
CONT.EVID	continuative evidentiality (Bora)	M	male gender
CVB.SIM	simultaneous converb	MIO	more involved object (Mapudungun)
CVB.NEG	negative converb	MULT.INTR	multiple intransitive action (Bora)
DEF	definite article	NAE	non-assertion of existence (MT)
DEM	demonstrative pronoun	NCP	non-canonic possessor (Even)
DIM	diminutive	NEG	negation
DIST	distant	NH	non-human (MT)
DISTR	distributive	NMZ	nominalization
DS	dative subject (Mapudungun)	NONFUT	non-future tense
DUB	dubitative	NPOSD	non-possessible derivation (MT)
EDO	external direct object (Mapudungun)	OBL	oblique case
EMPH	emphatic particle (Even)	PASS	passive voice
EXC	1st person plural exclusive (Even)	PF.PTCP	perfective participle (Even)
EXIST.NEG	non-existence (MT)	PFV	perfective aspect
EXIST	auxiliary ‘to be’ (MT)	PL	plural number
F	feminine gender	PLURACT	pluractionality
FOC	focus (Bora)	POSS	possessive ending
FREQ	frequentative (Even)	PREP	preposition (MT)
FRUS	frustrative	PROG	progressive aspect (Even)
FUT	future tense	PROX	proximate

PST	past tense	RPT	reportative (MT)
PTCL	particle	SG	singular number
PTC.FUT	future participle (Even)	SG.INTR	singular intransitive action (Bora)
PX	verbal proximity (Mapudungun)	ST	stative (Mapudungun)
REC	recent past tense (Bora)	UNQ	unquestionable (MT)
REFL	reflexive ending	VBZ	verbalization
REM	remote past tense (Bora)	R	Russian language
REP	repetitive action (Bora)	Y	Sakha (Yakut) language
REST	restrictive clitic (Bora)	S	Spanish language

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