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On the expression of TAM on nouns: Evidence from Tundra Nenets

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Abstract

The paper aims to enrich the database of independent time-related morphology on nouns and contribute to the discussion of its categorization by examining the so-called predestinative forms in Tundra Nenets (Uralic). The basic semantic contribution predestinatives make consists in providing temporal information relevant for the interpretation of possessive NPs: they specify the relation between the time at which the possessive predicate is true of the possessor and the possessed noun, and the time at which the whole NP is true. However, some properties of predestinatives are not easily accounted for by the nominal tense analysis; rather it would be more appropriate to analyze them as nominal mood, in particular, subjunctive or embedded irrealis. The paper concludes that Tundra Nenets presents rather clear evidence for a TAM category on nouns, but whether it is tense or mood ultimately depends on whether nominal tense is defined as a category that affects the time at which the whole NP is true or the time at which the predicate embedded within the NP is true.
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1. Introduction

Noun phrases are known to have a temporal reading that may be dependent either on that of the clause in which they appear or on the salient discourse context. The latter point was first observed by Enç (1986, 1987), who argued that the determination of the temporal dependency between argument nouns and the governing verb is largely arbitrary, and that NPs, like verbs, have their own temporal argument resolved through discourse. Musan (1997, 1999) studied the recurrent regularities in the interpretation of the temporal relations between nouns and verbs and concluded that while non-presuppositional NPs have a temporal interpretation dependent on the temporal interpretation of the predicate, presuppositional NPs appear to be temporally independent of the verb: either the presupposition is already part of the

Abbreviations: A, set A crossreference marker; ABL, ablative; AG, agentive; ACC, accusative; AN, action nominal; A/S, subject; ATTR, attributive; B, set B crossreference marker; CAUS, causative; COMIT, comitative; CONV, converb; DAT, dative; DESIG, designative; DET, definite determiner; F, feminine; FUT, future; GEN, genitive; IMPF, imperfective; INTER, interrogative; LOC, locative; NF, non-feminine; NOM, nominal; NONFUT, non-future; NOM, nominative; OBJ, object; PART, participle; PASS, passive; PERF, perfective; POSS, possessive; PRED, predestinative; PRES, present; PROL, prolative; PURP, purposive; REFL, reflexive; REM.P.REP, remote past reported; RES, resultative; SG, singular; TOP, topic.

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existing context for the hearer or the hearer accommodates the presupposition and makes it part of the context. It was further suggested that even non-presuppositional NPs may be independent of the verbal predication time (e.g. Tonhauser, 2002), and it is now widely accepted that in well-studied languages the time at which the NP is interpreted is established through NP-external sources.

However, there has been a growing body of evidence that in some languages the NP's time can be determined NP-internally, in particular, through some kind of bound markers on nouns. For example, in (1) from Tariana (Arawak, Brazil), cited after Aikhenvald (2003: 186), *etamikiRinuku* literally means 'what used to be the eagle'. The suffix *-miki-* glossed here as NOM.PAST (nominal past) shows that the entity 'eagle' no longer exists at the time of 'throwing'. That is, the time at which the NP *etamikiRinuku* is true of the relevant individual precedes the time defined by the verb.

(1) thepi di-maRe-pidena eta-miki-Ri-nuku
to.water 3SGNF-throw.CAUS-REM.P.REP eagle-NOM.PAST-NF-TOP.A/S
'He threw the remains of the eagle into water.'

The markers indicating that the time at which that NP is interpreted is not identical to either the time at which the verb is interpreted or to any contextually salient time have been referred to as 'nominal tenses' both in the studies of individual languages, see Burton (1997), Demirdache (1997) and Wiltschko (2003) on the Salishan languages (US, Canada), Lecarme (1996, 1999) on Somali (Cushitic, Somalia), Haude (2004) on Movima (isolate, Bolivia), Kroeker (2001) on Nambikwara (Nambikwaran, Brazil), among others, and in typologically-oriented works (e.g. Evans, 2000; Lehmann and Moravcsik, 2000; Raible, 2001).

Among many other questions, this raises the question of categorization: do nominal temporal markers instantiate the 'true' grammatical category of tense and if so, what is the relation between nominal and verbal tenses? An interesting discussion on the categorial status of bound temporal morphology on nouns appeared a few years ago on the pages of *Language* and elsewhere. Summarizing existing evidence, Nordlinger and Sadler (2004) surveyed temporal marking on nominals in about 15 languages from different parts of the globe, and identified two broad functions of such morphology: independent nominal tense and propositional nominal tense. It is the former which is of interest here. Independent nominal tense specifies local information relevant to the nominal itself, independently of the tense or tense-related information relevant for the proposition as a whole; that is why it is also referred to as 'nominal tense with nominal scope'. Nordlinger and Sadler (2004: 778) cite the following definitional properties of the languages with independent nominal tense: (i) nouns (or other NP/DP constituents) show a distinction in the expression of time; (ii) this distinction is productive across the whole word class, not only a small subset of nouns; (iii) it is not restricted to nominals functioning as predicates of verbless clauses, but is encoded on arguments and/or adjuncts, and (iv) the time-oriented marker is a morphological category of the noun and cannot be treated as a syntactic clitic. Since the particular sub-category encoded by such morphology may be comparable to tense, aspect, or mood, depending on the language, a more general term for this phenomenon would be 'nominal TAM'.

Yet, Tonhauser (2007, 2008) claimed that there is currently no reliable evidence from any language for the existence of nominal tenses defined on a par with verbal tenses: the temporal markers on nouns that have been termed 'tense' constitute ''a rather heterogeneous set'' (Tonhauser, 2008: 241). For example, she argued that although time-related markers on nouns in Paraguayan Guaraní (Tupian, Paraguay), the language she analyzed, do affect the temporal information relevant for the interpretation of the NP, they cannot be classified as tense. Moreover, they do not encode any of the familiar TAM categories and therefore should be left unclassified. This conclusion is based on the assumption that calling the nominal temporal markers 'tenses' implies that they should behave like verbal tenses. In particular, they should contribute to the location of time at which the NP is true, just as verbal tenses locate the time at which the verb (or, rather, the associated proposition) is true. But the Guaraní temporal markers do not serve to locate the NP time, that is, to express a relationship between the time at which the property denoted by that NP is true and the time at which the whole proposition is true. The NP time in Guaraní is contextually determined, just like in English and other European languages, whereas time-oriented morphology on nouns has a more specialized meaning: it indicates the relation between the time at which the property or relation denoted by the noun or the NP-internal possessive predicate are true of the individual(s) denoted by the NP, on the one hand, and the NP time itself, on the other. Tonhauser's arguments will be discussed below, but the basic point she makes is this: since the contribution the Guaraní nominal temporal markers make differs from the contribution of the verbal temporal markers, the former do not share sufficient properties with verbal tenses to be called a 'tense'. Redefining the category of tense to encompass both canonical verbal tenses and Guaraní temporal morphemes on nouns would be undesirable from a typological perspective because this would make the category of tense extremely vague and could affect cross-linguistic comparability.

Matthewson (2005) reached a roughly similar conclusion from the syntactocentric perspective which assumes that tense requires the syntactic projection of a T(tense) position. Her paper is largely a response to Wiltschko (2003) who suggested that languages may differ in how they treat T features on nouns: while in languages like English the tense

feature on D(eterminer) is uninterpretable and licenses the nominative Case with all associated effects, a Salishan language Halkomelem possesses interpretable T on D and the category of nominal tense. However, in Matthewson's (2005) analyses of St'a't'imcets, a related Salishan language, the temporal effects of time-oriented morphology on determiners are optional. The relevant markers do not unambiguously induce a past tense interpretation but can have rather different readings. Their main semantic contribution consists in expressing spatial location and the opposition 'visible vs. invisible', while the temporal effect is purely pragmatic. Matthewson (2005) concludes that determiners in Salishan do not contain interpretable tense features, so English and Salishan are in fact quite similar. She further hypothesizes that there will be no languages with interpretable T features on D. This amounts to saying, partly in line with Tonhauser (2007), that time-related morphology on NPs/DPs does not instantiate the true grammatical category of tense associated with consistent semantic contribution, and that the temporal meanings of bound markers on argument nouns are largely secondary and derive from something else.

Objections to this view came from two sides. First, Nordlinger and Sadler (2008) noted that, although nominal tenses may not be standardly defined as they would be for verbs, it is not necessarily inappropriate to use the term 'tense' for a marker expressing a temporal relationship between the NP time and the time at which the property or relation denoted by its head noun is interpreted. That the nominal temporal markers do not have exactly the same properties as those conventionally associated with verbal tenses may be due to the inherent semantic differences between nouns and verbs themselves. This issue was not elaborated on in detail, but presumably the idea here is that applying the same grammatical category to expressions with different categorial semantics can produce different meaning-related effects. Second, time reference in clauses is a universal property of language independently of how it is formally expressed: it is known to come not only from tenses grammaticalized on verbs, but also from temporal adverbs, aspectual information or any combination of the three. This picture could presumably be extrapolated to the nominal domain, and Lecarme (2004, 2008, 2012) argues that, in an exactly parallel fashion, time reference within a nominal domain can be specified by tense, aspect, or lexical modifiers. So the status of time-oriented morphology on nouns may differ across languages, but this does not preclude that at least in some languages the bound temporal markers may actually be inflectional tenses.

The present paper contributes to these debates by examining the so-called predestinative forms of non-predicative nouns in Tundra Nenets (the Samoyedic branch of Uralic).[1] Predestinatives exist in other Samoyedic languages and were discussed at some length for Enets (e.g. Khanina and Shluinskij, 2010; Siegl, 2013) and Nganasan (e.g. Daniel, 2009; Leisiö, 2014), the languages closely related to Tundra Nenets. Some of these studies analyze the predestinative as nominal future tense in the sense of Nordlinger and Sadler (2004). Nganasan was shown to have the most elaborate system of nominal tenses of all Samoyedic languages. According to Helimskij (1994), Goussev (2005) and Leisiö (2014), in addition to the nominal future (the predestinative), this system includes the nominal past and the nominal future-in-the-past or counterfactual. All these tenses are operative both in possessive and non-possessive NPs. As argued in Daniel (2009), in possessive NPs the nominal future scopes over the possessive relation: it does not provide a temporal interpretation for the noun itself, but denotes the time of the relation between the prospective possessor and the possessee.

As for Tundra Nenets, the morphology and distribution of predestinatives are known from a number of previous descriptions, which also revealed that predestinatives encode some kind of temporal information within the NP (for recent English-language descriptions see Nikolaeva, 2009, 2014). However, neither syntax nor semantics of Tundra Nenets predestinatives have been studied in sufficient detail. This paper aims at describing their basic meaning and use. It is not my purpose here to implement my analysis within any particular semantic or syntactic framework and provide rigorous formalization. At this stage my goal is only typological: I hope the paper will enrich the database of independent time-related morphology on nouns and contribute to the discussion of its categorization.

Section 2 introduces the structure and the external syntax of the predestinative forms. In section 3, I show that predestinatives denote a temporal relation with nominal scope: they indicate future possession, that is, specify the relation between the time at which the possessive predicate is true of the possessor and the possessed noun, and the time at which the possessive NP is true. Section 4 argues that predestinatives affect the referential interpretation of the whole phrase, and that predestinative arguments cannot freely occur in any syntactic context and have to be licensed by the properties of the governing verb. Section 5 provides a discussion of categoriality. The conclusion I will make is that we do have a rather clear evidence for an independent TAM category in Tundra Nenets possessive NPs, but whether it is tense

[1] Tundra Nenets is spoken by about 20,000 people in Western Siberia and the Arctic part of European Russia. The data comes from my own fieldwork conducted between 2003 and 2013 in various locations (on the circumstances of the fieldwork see Nikolaeva, 2014). Fieldwork was supported by an ELDP grant awarded to Tapani Salminen in 2003 and a grant from the Academy of Finland awarded to Larisa Leisiö in 2009, project number 125225. As recommended in e.g. Matthewson (2004), the data was collected through controlled elicitation of contextualized sentences and constructed fragments, and further discussion of their felicity and meaning with the language consultants. The context was typically explained in Russian, the language in which the interviews were conducted. The transcription is based on Nikolaeva (2014).

or mood ultimately depends on whether nominal tense is defined as a category that affects the time at which the NP is true or the time at which the predicate embedded within this NP is true. In the former analysis, it would be appropriate to categorize predestinatives as nominal mood because their distribution parallels the distribution of (dependent) verbal moods, in particular, subjunctive or irrealis. In the latter analysis, predestinatives may be compared to embedded tenses on (non-finite) verbs.

2. Basic syntax

The inflectional categories of Tundra Nenets nouns are number, case and possessive. There are three numbers (singular, dual and plural) and seven grammatical cases (nominative, accusative, genitive, dative, locative, ablative, and prolative). The nominative case and singular number are formally unmarked and therefore I do not indicate them in glosses. The possessive category cross-references the possessor by means of person/number inflections attached to the possessed head noun in possessive NPs. Possessive NPs are head-final and can optionally include a free-standing possessor. For example, in (2) the 1SG possessive suffix cross-references the (optional) possessor 'I', while the locative case indicates the syntactic role of the head noun.

(2) [(mən′°) xada-xəna-n′i] yil′eə-d°m
1SG grandmother-LOC-1SG live-1SG
'I live at my grandmother's.'

Depending on whether the pronominal possessor is overtly present or not, the possessive person/number markers can probably be analyzed as either grammatical agreement or incorporated pronouns in the sense of Bresnan and Mchombo (1987), but this distinction is not relevant for the purpose of the paper and I will simply call them 'agreement'. The grammatical case and possessive person/number often cumulate within one suffix, therefore in will not separate them by hyphens in subsequent examples. Definiteness is not a category grammaticalized in articles.

In addition, Nenets has the predestinative forms of nouns, whose meaning can roughly be described either as 'X (meant/destined) for Y' or 'Y's future X', although this initial characterization will be revised later in the paper. The element denoted here as X heads the possessive NP and will be referred to as the 'predestinative' as such. The predestinative hosts the marker *-d°-/-də-* (which is never found on verbs), and may additionally contain a possessive agreement affix which indicates the person/number of Y. The element Y will be referred to as 'beneficiary'. As I argue below, the beneficiary is a true syntactic possessor, but I will keep the term 'beneficiary' to distinguish it from the regular possessor in the possessive NPs where the head noun does not host the predestinative *-d°-/-də-*. The beneficiary may be overtly expressed within the same NP, but is usually absent if it corresponds to a pronoun, for example: (*mən′°*) *s′ay°-də-m′i* (1SG tea-PRED-1SG) 'tea (meant) for me' and (*pida*) *wada-də-da* (3SG word-PRED-3SG) 'a/the word (meant) for him'. Here 'I' and 'he' are beneficiaries, and 'tea' and 'word' are the actual predestinative forms which head the whole phrase and host the predestinative morpheme *-d°-/-də-*, as well as the agreement markers that cross-reference the beneficiary.

When overt, the beneficiary is always NP-internal and cannot be separated from the head noun by clause-level elements. The predestinative NP exhibits complete structural parallelism with the regular head-final possessive NP. The beneficiary stands in the same grammatical case as the possessor: the nominative on pronouns or genitive on lexical nouns. The distribution of agreement affixes on the head is also the same: agreement is obligatory if the possessor or the beneficiary is pronominal, as in (3), but optional when they correspond to a lexical noun, as in (4). Its presence in this instance depends on the pragmatic prominence of the possessor/beneficiary, but this is not relevant for present purposes (for detail see Nikolaeva, 2014).

(3) a. (pidər°) ŋəno-r°
2SG boat-2SG
'your boat'

b. (pidər°) ŋəno-də-r°
2SG boat-PRED-2SG
'boat (meant) for you'

(4) a. Wera-h ŋəno / ŋəno-da
Wera-GEN boat/boat-3SG
'Wera's boat'

b. Wera-h ŋəno-d°/ ŋəno-də-da
Wera-GEN boat-PRED/boat-PRED-3SG
'boat (meant) for Wera'

This distribution is shown here for the nominative head nouns only, but goes through the whole case system.

As described in the previous literature (e.g. Salminen, 1997), the predestinative case paradigm is reduced compared to non-predestinative nouns. If the beneficiary is pronominal, predestinatives exist in three grammatical cases (nominative, accusative and genitive); there are no predestinative forms in the dative, locative, ablative and prolative. Like in regular possessives, case and agreement typically cumulate, as is shown by the partial paradigm for the singular beneficiary:

	1SG	2SG	3SG
NOM	ŋəno-də-w° / ŋəno-də-m′i[2] boat-PRED-1SG	ŋəno-də-r° boat-PRED-2SG	ŋəno-də-da boat-PRED-3SG
ACC	ŋəno-də-w° / ŋəno-də-m′i boat-PRED-ACC.1SG	ŋəno-də-mt° boat-PRED-ACC.2SG	ŋəno-də-mta boat-PRED-ACC.3SG
GEN	ŋəno-də-n° boat-PRED-GEN.1SG	ŋəno-də-nt° boat-PRED-GEN.2SG	ŋəno-də-nta boat-PRED-GEN.3SG

The syntactic functions of these cases are as follows. The predestinative nominative functions as subject (5a) or imperative object (5b), and the predestinative accusative serves as a non-imperative direct object as in (5c).

(5) a. xasawa n′ū-d°-m′i soya°
man child-PRED-1SG be.born.3SG
‘A son was born for me.’
b. r′es°ka-də-w° yabc°-q
cake-PRED-1SG bake-IMP.2SG
‘Bake a cake for me.’
c. ŋəno-də-mt° temtaə-d°m
boat-PRED-ACC.2SG buy-1SG
‘I bought a boat for you.’

These are the regular functions of the nominative and accusative case in Nenets, so predestinatives are not unusual in this respect. Predestinative subjects and objects exhibit most though not all of the behavioural properties of non-predestinative subjects and objects (for detail see Nikolaeva, 2014 and the discussion of some properties of predestinative objects in section 4), and in this sense they are somehow grammatically ‘weakened’. What we probably have here is a change in syntactic properties without the shift of the actual grammatical relation. As will be argued later in the paper, this change is mirrored by variation in the semantic type, therefore it can probably be analyzed as a species of diathesis understood as in Ackerman and Moore (2001). Finally, genitive predestinatives function as predicates in combination with some auxiliary-like verbs as in (6a), or adjuncts meaning roughly ‘as, for, instead’ as in (6b).

(6) a. t′uku° wen′ako mən′aq wen′ako-d°-naq xəya
this dog 1PL dog-PRED-GEN.1PL become.3SG
‘This dog became the dog meant for us.’
b. t′uku° ti-m ŋəmca-də-naq temta-wewaq
this reindeer-ACC meat-PRED-GEN.1PL buy-INFR.1PL
‘We bought this reindeer as meat for ourselves.’ (based on Tereshchenko, 1965: 380)

In contrast to predestinatives that head a pronominal beneficiary, predestinatives that head a lexical beneficiary only have one undifferentiated form employed as subjects or objects, while the comparable genitive meanings are expressed by another unchangeable form, the essive in *-ŋe°*. Such predestinatives show a different distribution and will not be analyzed in the paper, since this requires more data than is currently available. This paper only focuses on the predestinative forms which involve pronominal (and therefore animate) beneficiaries.

The question we might want to ask is this: what kind of grammatical category does the predestinative realize? Predestinatives are clearly inflectional forms, if inflection is understood as a fully productive and semantically regular morphological process, as is usually assumed: they can be derived from every common noun in the language, not only the nouns that include an event as part of their lexical semantics, and I am not aware of any lexical restrictions. Note that inflectional forms with a roughly similar structure and function exist in a number of Tungusic languages such as e.g. Udihe (Nikolaeva and Tolskaya, 2001), Nanai (Avrorin, 1959), Even (Malchukov 2010) and Evenki (Nedjalkov, 1997), where they are referred to as ‘designative’ or ‘destinative’. In these languages the designative/predestinative is analyzed as a

[2] These are free or idiolectal variants.

grammatical case mainly because the designative suffix clearly stands in complementary distribution with the other case suffixes.[3] However, we saw that in Tundra Nenets the syntactic functions of predestinatives are expressed by several grammatical cases co-occurring with the predestinative morpheme. This suggests that grammatical case is indicated by the (cumulated) affix which follows the predestinative marker while the predestinative marker itself does not express case, and raises the question of its categorial status.

It is important to note at the present stage that the beneficiary on the predestinative object of a ditransitive verb can correspond to the recipient argument of this verb. For example, in (7a) the predestinative 'book' bears the 2nd person singular agreement marker which either cross-references the overt beneficiary 'you' or, in the absence of the overt free-standing beneficiary, can be assumed to function as an incorporated pronominal. In both instances it denotes the recipient of the verb 'give' and is its only overt expression in the clause. This construction co-exists with (7b), where we have a non-predestinative object and a dative recipient. The semantic difference between the two constructions will be explained later in the paper.

(7) a. (pidər°) kniga-də-mt° m′iqŋa-d°m
2SG book-PRED-ACC.2SG give-1SG
'I gave you a book.'
b. n′aənt° kniga-m m′iqŋa-d°m
2SG.DAT book-ACC give-1SG
'I gave you a book.'

Ditransitive constructions with predestinative objects were discussed by Malchukov and colleagues (2010) and Malchukov (2010) for Tungusic and Samoyedic. According to Malchukov (2010: 147), in Tungusic ditransitives the recipient argument is ''invariably interpreted as beneficiary''. Malchukov refers to this phenomenon as ''indirect object lowering''. However, in Tundra Nenets at least, the beneficiary on the object does not have to correspond to the recipient argument of the ditransitive verb. The recipient of a ditransitive verb can be expressed as the indirect object in the dative in the presence of the predestinative which satisfies the object requirement of this verb. For instance, the recipient corresponds to the dative NPs 'Masha' in (8a) and 'you' in (8b), while the beneficiary is the 2nd person singular in (8a) and the 1st person singular in (8b).

(8) a. Maša-n°h kniga-də-mt° m′iqŋa-d°m
Masha-DAT book-PRED-ACC.2SG give-1SG
'I gave Masha a book for you.'
b. Wera n′aənt° [(mən′°) ŋəno-də-m′i] taə-s′°
Wera 2SG.DAT 1SG boat-PRED-ACC.1SG give-3SG.PAST
'Wera gave you a boat for me.'

It is also worth mentioning that the beneficiary and the regular possessor are in complementary distribution, so something like 'my gift for you' cannot be rendered by means of the predestinative construction. This entails that when the possessor is referentially distinct from the recipient argument, the recipient cannot correspond to the beneficiary (9a) but must stand in the dative as the regular indirect object (9b).

(9) a. *[(mən′°) kniga-də-mt°] m′iqŋa-d°m
1SG book-PRED-ACC.2 SG give-1SG
'I gave you my book.'
b. (mən′°) kniga-m′i n′aənt° m′iqŋa-d°m
1SG book-ACC.1SG 2SG.DAT give-1SG
'I gave you my book.'

So the coreferentiality relation between the beneficiary and the dative argument is not required.

Furthermore, the beneficiary does not behave syntactically like a verbal argument. The two most distinctive behavioural properties of direct objects in Nenets are passivization and relativization by means of the participial strategy,

[3] Malchukov (2010: 148) argues that the designative case in Tungusic performs a double function because it simultaneously marks the phrase as object and assigns the beneficiary/recipient/goal role to its possessor, but this is in fact more complex. Similarly to Tundra Nenets predestinatives, the designative nouns in Tungusic are not used exclusively as direct objects: they also function as subjects and some kind of adjuncts.

but these processes do not target beneficiaries: the beneficiary cannot assume the subject role as a result of passivization and cannot be relativized by means of a participle, cf. (10), which shows the passivization and relativization of the regular object, and the ungrammatical examples in (11).

(10) a. kniga Maša-n°h m′i-wi°
book Masha-DAT give-PASS.3SG
'The book was given to Masha.'
b. [_ Maša-n°h m′i-wi°] kn′iga-m′i
Masha-DAT give-PERF.PART book-1SG
'the book I gave to Masha'

(11) a. *pidər° kn′iga-də-mt° m′i-wer°
2SG book-PRED-ACC.2SG give-PASS.2SG
'You were given a book.'
b. *[_ kn′iga-d° m′i-wi°] ŋəc′ekem′i
book-PRED.ACC give-PERF.PART child.1SG
'the child to whom I gave a book'

In particular, (10b) shows that when the direct object is relativized, it corresponds to the gap in the prenominal participial relative clause, while the pronominal dependent subject is expressed by agreement morphology on the head noun (1SG in this case). In contrast, (11b), where the beneficiary is relativized using the same strategy, is ungrammatical. The beneficiary can be relativized by means of a different strategy, which is typically employed for the relativization of possessors: the dependent verb takes the form of an action nominal, not the participle, and the possessed noun (or the predestinative noun) must host the 3rd person resumptive pronoun, cf. (12a) and (12b), both of which are grammatical.

(12) a. [ŋəno-mta taxabta-qma] ŋəc′ekem′i
boat-ACC.3SG break-AN child.1SG
'the child whose boat I broke'
b. [kniga-də-mta m′i-qma] ŋəc′ekem′i
book-PRED-ACC.3SG give-AN child.1SG
'the child to whom I gave a book'

While the beneficiary does not behave like a direct object, it does not have the properties of an indirect object either. The regular dative indirect object can provide reference for the missing subject of the dependent control clause headed by the purposive converb. For example, in (13a) the referential identity of the missing subject of the dependent verb 'sew' is established through the main clause: it corresponds to the identity of the indirect object paticipant 'Masha'. However, in (13b) the 2nd person singular beneficiary cannot be interpreted as controlling the missing subject of the dependent purpose clause; the subject of 'make' can only be interpreted as non-coreferential with 'you'.

(13) a. Maša-n°h pəne-m′i [Ø sæd°rəbta-wənc′°] m′iqŋa-dəm-c′°
Masha-DAT coat-ACC.1SG sew-PURP give-1SG-PAST
'I gave my coat to Masha to sew.'
b. (pidər°) ŋəno-də-mt° [Ø s′erta-wənc′°] m′iqŋa-dəm-c′°
2SG boat-PRED-ACC. 2SG make- PURP give-1SG-PAST
'I gave the boat meant for you to be made (by somebody else).'

This discussion shows that the beneficiary does not assume the argument status and does not have any effect on the clausal syntax. Instead it exhibits all the distributional, behavioural and coding properties of regular possessors. Based on these data I conclude that the predestinative phrase is a subtype of the possessive NP. I take the possessive construction to have a purely structural meaning: the entity denoted by the possessed noun bears some relation to the entity denoted by the possessor. In this I follow other literature where possessive constructions are treated in terms of phrase-internal predication, e.g. Szabolcsi (1994) and Laczkó (1997), who analyze the possessive NP/DP as a two-place relation of which the possessor is the 'subject', or Partee and Borschev (2000), who suggested that the possessive construction essentially induces a type-shift in non-relational nouns, whose argument structure does not contain reference to another entity (the possessor), creating a relational predicate 'of Y'. The relation 'X of Y' is virtually unrestricted semantically and represents a rather general association between two entities established on pragmatic

grounds. It has long been argued in the literature that the interpretation of non-relational (alienable) possessives can be determined by their context of use which specifies the nature of the association holding between the possessor and possessed by encouraging some construals and discouraging others. The context can be characterized in terms of the speakers' encyclopaedic knowledge of the usual relation(s) that obtain between the entities participating in the relation, as well as the specific discourse situation that might mediate and modify this relation. Barker (2011) refers to such unspecified association between the possessor and the possessed as 'pragmatic', while Partee and Borschev (1998) call it a 'free' reading. Following Higginbotham (1983), Partee (1997), Partee and Borschev (1998, 2003), Kathol (2002), Nikolaeva and Spencer (2012), Ackerman and Nikolaeva (2013) and others, this vacuous possessive relation will be symbolized here as the semantically empty predicate $\mathfrak{R}$, so that the meaning of e.g. *John's house* can roughly be represented as $\lambda x.\mathfrak{R}(\text{John}, x) \wedge \text{house}(x)$. As in Ackerman and Nikolaeva (2013), I will be assuming that the possessed noun denotes this two-place relation $\mathfrak{R}$.

I propose that predestinative nouns also express a two-place NP-internal relation, '(meant/destined) for Y', where Y is the beneficiary (the prospective possessor) which structurally belongs to the same phrase. That the recipient argument of a ditranstive verb is typically interpreted as coreferential with the beneficiary is not inherent to the semantics of the predestinative construction (not the 'encoded meaning' of the predestinative), but rather some kind of implicature which can be cancelled. The recipient and beneficiary may be referentially distinct. For example, (7a) above can be construed as an answer to *What did you give to Masha?* In this instance it can be translated as 'I gave (Masha) a book for you'. The recipient argument remains unexpressed here, as is independently allowed in Nenets grammar. Example (14) demonstrates that the recipient can correspond to a referential null when it is recoverable from the context. (14) can be uttered as an answer to *What did you give to Masha?* or in some other context where Masha is saliently present.

(14) kniga-m m′iŋa-d°m
book-ACC give-1SG
'I gave (Masha) a book.'

This semantics will be elaborated in more detail in the following two sections, before I turn to the discussion of categoriality in section 5.

3. Properties related to the expression of time

This section describes the meaning of the predestinative marker in relation to the expression of time. It argues that the main semantic contribution of the predestinative consists in placing the possessive relation, which I denoted above as $\mathfrak{R}$, in the future, whereas in the absence of the predestinative the time of the possessive relation is typically interpreted at the time at which the verb (i.e. the proposition) is interpreted.

We have seen above that predestinative phrases are possessive NPs. In non-possessive NPs temporal modifiers locate the time at which the property denoted by the head noun is true of an individual denoted by that NP. In contrast, in possessive NPs there are two semantic predicates, the property denoted by the head noun and the possessive relation $\mathfrak{R}$ itself, and it has been known at least since Larson (1998) that the latter can be modified in a temporal sense independently of the former. Languages seem to fall into two types depending on how time is interpreted in possessive NPs. In the first type, time-oriented items can scope over either of the two relevant predicates, so there is the potential for two temporal interpretations within the same possessive NP. Larson and Cho (2003) studied the distribution of temporal adjectives such as *former* or *old* in a number of languages. These adjectives modify a noun (N) and create a predicate true of objects that once had the property described by N, but do not have it at the time at which the main predication holds. Possessive NPs with such temporal adjectives are genuinely ambiguous, and Larson and Cho (2003) refer to the two possible interpretations as the 'N-Modifying Reading' and 'POSS-Modifying Reading'. These readings are demonstrated below for the English sentence *That is John's former house*:

(15) a. N-Modifying reading: John's and former (house)
b. POSS-Modifying reading: former (John's and house)

In (15a) the phrase *John's former house* refers to the object that John possesses and that was formerly a house, for instance, the ruins which remained after John's house was destroyed by a tornado and which still belong to John. On this reading only N is in the scope of the past. In (15b), which is a more salient reading in English, both N and the possessive relation are in the scope of the past: the phrase refers to the house that formerly belonged to John. It may still be a house no longer owned by John or, in fact, not even a house, but importantly, it used to be John's house. Such ambiguity of

temporal modifiers in possessive NPs is found in numerous languages, including languages where time is expressed by bound morphology.[4] For instance, in Halkomelem the possessive constructions are ambiguous in the past: *tel xeltel-elh* 'my pencil-PAST' can mean 'my destroyed/broken pencil' (that is, something that belongs to me but is not a pencil any longer) and 'my former pencil, the pencil that used to be mine but is no longer mine' (Burton, 1997: 67–68). In the former case the past morpheme *-elh* indicates that the referent 'pencil' no longer exists; in the latter case the phrase denotes the pencil that the speaker owned in the past but does not own in the present.

Similar facts are observed in Paraguayan Guaraní. Tonhauser (2007) defines three types of situation times relevant for the temporal interpretation of the NP. In her conventions, t*np* is the time at which the NP itself is interpreted. It by default coincides with the time of the verbal predicate, although in some instances the more salient context may support a different interpretation. T*nom* is the time at which the property denoted by the noun is true of the individual(s) denoted by the NP (cf. 'predication time' in Musan, 1997), while t*poss* is the time at which the possessive relation which holds within the possessive NP (in my terminology, relation $\mathfrak{R}$) is true. In Guaraní if a noun does not host time-oriented morphology, the nominal time t*nom* and possessive time t*poss* are identical to the NP time t*np*. If the nominal time t*nom* or the possessive time t*poss* differ from t*np*, this is indicated by special markers *-kue* and *-rã.* They express that t*nom* or t*poss* either precede (*-kue*) or follow (*-rã*) the NP time t*np*. Similar to the English temporal adjectives, in non-possessive phrases they only have one interpretation: the temporal markers establish t*nom*, that is, the time at which the property expressed by the noun is true of the individual denoted by the NP. For example, the t*np* of *peteĩ chokokue-rã* 'one farmer-RA' in (16) is the situation time since the child is a future farmer at the situation time, while the nominal time t*nom*, which is here the time at which the child is a farmer, is in the future of the NP time: t*np* < t*nom*.

(16) che-memby, peteĩ chokokue-**rã,** o-ho gueteri eskuela-pe
B1SG-child one farmer-RA A3-go still school-PE
'My child, a future farmer, still goes to school.' (Tonhauser, 2007: 846)

However, we saw that in possessive NPs there may be two interpretations of temporal morphemes: they can affect either the time of the nominal referent itself (t*nom*) or the time of the possessive relation (t*poss*). This creates ambiguity, for example:

(17) ko'agã a-hecha che-róga-**kue**
now A1SG-see 1SG-house-KUE
'I am seeing my former house.' (Tonhauser, 2007: 838)

On the first reading, the speaker is seeing a house that s/he used to own. Here the marker *-kue* locates the possessive time t*poss* prior to the NP time, while the nominal time is located at the NP time: t*poss* < t*np* = t*nom*. This corresponds to the POSS-Modifying reading in (15). On the second interpretation, the speaker is seeing something that s/he owns but that is no longer a house. The possessive time t*poss* coincides with the NP time, but *-kue* locates the nominal time t*nom* prior to the NP time: t*nom* < t*np* = t*pos*s. This corresponds to the N-Modifying reading. So Guaraní appears to be like Halkomelem and English in this respect.

In languages of the second type, temporal markers in possessive NPs do not create such ambiguity. In Somali, the nominal past in possessive NPs unambiguously locates the possessive relationship, not the nominal property (Lecarme, 1999, 2004, 2008). Thus, the Somali *ardáy-d-ay-dii* (students-F-1SG-DET.F.PAST) 'my former students' can only mean 'the students who used to be mine, but are no longer mine' but cannot mean 'the entities that are mine but are no longer students'. Lecarme suggests that the difference between Somali and e.g. Halkomelem may be due to the different status of the temporal morpheme: while in Somali it is a true grammatical tense that takes scope over the possessive relation,[5] in Halkomelem the time-oriented morpheme may have some kind of adjectival/adverbial status with inherent lexical semantics similar to the English *former* (cf. Matthewson, 2005), which allows it to apply to either events, including possessive events, or non-event individuals.

Turning now to Tundra Nenets, as suggested in Daniel (2009) for closely related Nganasan, only the possessive relation is relativized with respect to time: the predestinative only locates t*poss* if we employ Tonhauser's conventions.

[4] Larson and Cho (2003) explain the ambiguity of temporal adjectives in possessive constructions in configurational terms: it is said to arise from the availability of two different positions for the attachment of adjectives. The N-Modifying reading arises when the adjective attaches to the NP, whereas the POSS-Modifying reading arises when the adjective attaches to the locative PP, whose object semantically corresponds to the possessor and subsequently raises to the Spec position of the possessive DP. However, under the word-based view of morphology, languages with bound temporal morphemes provide a counter-argument to the claim that ambiguity is purely structural.

[5] But see Saeed (2011) for a critique of this position with respect to Somali.

So Tundra Nenets, like Somali, belongs to the second type and, provided Lecarme's argument is taken seriously, it possesses true grammatical tense in possessive NPs. The predestinative indicates that the time of ℜ or t*poss* follows the time at which the NP is interpreted and which is normally the time of the event/situation denoted by the verb (t*sit*). For instance, in (18) the time at which the NP *knigadəmt°* 'your future book' is true is either in the past or future with respect to the speech time. In (18a) the object denoted by *knigadəmt°* was 'your future book' when the book was given yesterday, and in (18b) it will be 'your future book' tomorrow. In both instances the time at which the possessive relation ℜ is supposed to hold between 'you' and 'book' is subsequent to the situation time and, consequently, the NP time. The book is only meant to become 'yours' after the event of giving takes place.

(18) a. t′ey° yal′a-h kniga-də-mt° m′iqŋa-d°m
that day-GEN book-PRED-ACC.2 SG give-1SG
'Yesterday I gave you a book.'
b. xūn′ana kniga-də-mt° m′iqŋa-t°ə-d°m
tomorrow book-PRED-ACC.2 SG give-FUT-1SG
'Tomorrow I will give you a book.'

Both in (18a) and (18b) the t*nom*, that is, the time at which the relevant entity is a book, coincides with the situation time and the time of the NP. In other words, examples (18) cannot have the reading 'I gave/will give you the object that is already yours but is not (yet) a book'. For example, according to the comments of my consultants, (18) cannot be used in the context in which *knigadəmt°* refers to a manuscript owned by the beneficiary at the situation time, even though this manuscript is meant to be turned into a book after the event of transfer. These examples are only acceptable if the manuscript belongs to the speaker at the time of transfer and is meant to become the beneficiary's book after this event. We can schematically represent this as follows: t*sit* = t*np* = t*nom* < t*poss*.

Predestinative forms can in fact be ambiguous, but this ambiguity is not the same as the ambiguity observed in temporally modified possessive NPs in Guaraní or English. Guaraní temporal markers can place t*nom* in the future leaving t*poss* unmodified, but this is impossible in Nenets. In Nenets predestinatives the interpretation of t*poss* must be affected. Ambiguity arises because t*nom* is either located in the future with respect to the NP/situation time, together with the possessive relation, or it can coincide with t*np* while the possessive relation is in the future. To see this, consider (19).

(19) l′ekarə-d°-waq to°
doctor-PRED-1PL come.3SG
'A doctor (meant) for us arrived.'

The NP *l′ekar°dəwaq* is temporally interpreted at the time of the situation (T*sit* = T*np*). That is, the property 'our future doctor' is true at the situation time. The utterance can refer to the individual who is already a doctor but not 'our doctor'. This corresponds to the POSS-modifying meaning: T*sit* = T*np* = T*nom* < T*poss*. For non-relational nouns like 'doctor' this reading is a preferred interpretation. The second interpretation is in principle possible too, albeit it occurs quite rarely: the individual is not a doctor at all at the situation time and consequently not 'our doctor'. For example, (19) can refer to a student who is studying to be a doctor and we know that when he/she becomes a doctor, he/she will be 'our doctor'. So the property of being a 'doctor' is not true of the individual referred to by the predestinative NP at the time at which this NP is true, but it will become true subsequent to this time, just like the possessive relationship: t*sit* = t*np* < t*poss* = t*nom*. This is also the case when predestinative objects are governed by verbs of creation, at least in non-past tenses. In (20) the dress is in the process of being made at the time of speech and does not yet exist as such:

(20) yimpitə-d°-m′i sǣdəba°
dress-PRED-ACC.1SG sew.3SG
'She is making a dress for me.'

For relational nouns this second interpretation, in which t*nom* coincides with t*poss* and both are subsequent to t*np*, is in fact a preferred reading because their semantics (the property of 'being X') crucially depends on the existence of the two-place possessive relation, such as, for instance *husband-of* (x,y):

(21) wǣsako-d°-m′i to°
husband-PRED-1SG come.3SG
'A husband for me/my future husband arrived.'

Unlike in (19), the salient interpretation in (21) is that the individual is not anybody's husband at the situation time, so the relation 'husband' is not true of any entity. It will be true of the speaker and the individual denoted by the NP at the time subsequent to the situation time: t*sit* = t*np* < t*poss* = t*nom*. The second interpretation t*sit* = t*nom* = t*np* < t*poss* is possible too and will imply that the individual is already somebody's husband at the situation time, although not the speaker's husband, but it is rather pragmatically stretched:

(22) wǣsako-d°-m′i moskva-xəna yad°bta-dəm-c′°, walakəda pida n′e-sawey° ŋǣ-wiə-s′°
husband-PRED-ACC.1SG Moscow-LOC meet-1SG-PAST but 3SG woman-COMIT be-INFR-PAST.3SG
'I met my future husband in Moscow, but he was married (then).'

As can be seen in (20) and (21), there are examples that favour the interpretation under which the nominal t*nom* is located subsequent to t*np* = t*sit*. However, it is important to emphasize again that temporal modification of t*nom* is not the encoded meaning of the predestinative: the predestinative leaves t*nom* unspecified, so that it is interpreted depending on the context and the lexical semantics of the head noun. It cannot indicate that t*nom* is located in the future of t*np* when t*poss* is not. For instance, example (19) cannot refer to an individual who stands in some kind of possessive relationship to the beneficiary 'we' but is not yet a doctor. This means that the predestinative does not have a N-Modifying reading of the type observed in English or Guaraní, where the possessive relation can escape the scope of the temporal marker. Whatever the interpretation of t*nom*, only the possessive relation must be located in the future with respect to t*np*, so, like Somali, Tundra Nenets predestinatives exhibit the POSS-Modifying reading only.

Since placing the possessive relationship in the future is the encoded meaning of the predestinatives, they cannot denote an entity which is not intended to be possessed by the beneficiary. Thus, both (23a) and (23b) mean 'I gave you a book', but only (23b), that is, the dative construction, can be produced in the situation when the book is not meant as the addressee's possession after the event of transfer, as can be seen from the continuation in (23c).

(23) a. kniga-də-mt° m′iqŋa-d°m
book-PRED-ACC.2SG give-3SG
'I gave you a book'
b. n′aənt° kniga-m m′iqŋa-d°m
2SG.DAT book-ACC give-3SG
'I gave you a book'
c. kniga-m n′aənt° m′iqŋa-d°m, t′uku° mən′° kniga-m′i
book-ACC 2SG.DAT give-1SG this I book-1SG
/ *kniga-də-mt° m′iqŋa-d°m, t′uku° mən′° kniga-m′i
/ book-PRED-ACC.2SG give-1SG this I book-1SG
'I gave you a book, (but) it's mine.'

Equally unacceptable would be the Nenets equivalents of the following sentences if they contain a predestinative NP: *I gave you a book to keep* or *I gave you a library book*. They would be in contradiction with the requirement that the relationship ℜ between the beneficiary and the predestinative entity must be predicated by the speaker to hold at a time subsequent to t*np* = t*sit*.[6] This requirement is not an implicature and cannot be cancelled: it is entailed by the predestinative semantics. However, the future is always indeterminate. Although the possessive relationship between the beneficiary and the possessed noun is meant to come true at a time subsequent to t*np* if all things go as planned, it may in fact never become true. This can be seen from the following example, which may be uttered in the situation when the relevant individual died without ever getting married and the speaker is aware of that.

(24) wǣsako-d°-m′i yūd°-h po-h t′ax°na yad°bta-dəm-c′°, walakəda n′ī-n′i-s′° n′el′e-q
husband-PRED-ACC.1SG ten-GEN year-GEN ago meet-1SG-PAST but NEG-1DU-PAST get.married-CONNEG
'I met my husband-to-be 10 years ago, but we didn't get married.'

[6] These examples also demonstrate that ℜ has more restricted interpretation in predestinatives than in regular possessives. The regular possessive NP *kniga-m′i* (book-1SG) 'my book' can refer to the book which the speaker is currently reading but which technically belongs to another person or institution, e.g. the library. So predestinatives do not license unbounded interpretive flexibility of ℜ and cannot recover all relations between the beneficiary and the predestinative noun that have been made salient in their context of use. The conditions on the acceptable construals of ℜ are yet to be explored. I thank Michael Daniel for the discussion of this point.

In other words, predestinatives entail that the possessive relationship is true at *t* in a possible world, as is assumed in many semantic analyses of the verbal future tense that treat it as inherently modal (e.g. Palmer, 1986; Enç, 1996; Hornstein, 1990; Ludlow, 1999).

So the main semantic contribution of the predestinative consists in fixing the time of one of the two semantic predicates available within the possessive NP, the possessive relation ℜ which holds between the possessed noun and the beneficiary, as subsequent to the NP time, even though ℜ may come to never hold in the actual world. This kind of time-related semantics has been referred to as 'precedence meaning property' in Tonhauser (2007). The second 'meaning property' suggested for Guaraní is the 'change-of-state property'. The nominal temporal markers in Guaraní do not only locate the nominal or possessive time prior or subsequent to the NP time t*np*, but also express that they are not true at t*np*. This also holds for the Nenets predestinatives, with the proviso that this property is only relevant for the possessive time t*poss*. This means that, as already mentioned above, there is no possessive relationship between the predestinative entity and the beneficiary at the t*np* time and the time of the situation denoted by the verb. The following examples illustrate that the predestinative requires the possessive relation to be false at the time at which the NP is interpreted.

(25) a. pasport°-də-r° to°
passport-PRED-2SG come.3SG
'A passport for you arrived.'

b. n′abako-d°-m′i təw°ra°
sister-PRED-ACC.1SG bring.3SG
'He brought a sister for me.'

c. ŋəmca-də-mt° p′ir′eə-d°m
meat-PRED-ACC.2SG cook-1SG
'I cooked some meat for you.'

d. ŋəno-də-mt° ŋol′ep′adaə-d°m
boat-PRED-ACC.2SG paint-1SG
'I painted a boat for you.'

These examples were supplied in several contexts and language consultants were invited to comment on the appropriateness of each utterance in each context. One context supplied for (25a) described the situation in which a new passport was issued for the addressee by the passport office, while in the second situation an old passport has arrived by post with a new visa. Example (25a) was only judged appropriate in the former context but the consultants found it unacceptable in the latter. Similarly, it was confirmed that (25b) can only mean that the speaker is going to adopt someone as sister subsequently to the described event; it cannot refer to his/her actual sister. In (25c) the meat is the meat which the speaker has just brought and is going to cook, but cannot be the meat which he/she had found lying on the addressee's kitchen table when he/she arrived. (25d) means that the boat is meant for the addressee as his/her future possession, but it cannot refer to a boat which was already in the addressee's possession at the situation time. In all these examples the interpretation is such that the possessive relationship is true at t*poss*, but false prior to it, at the time of the verbal event. For the same reason the Tundra Nenets equivalents of the following English sentences cannot be rendered by means of the predestinative construction: *I brought your book which I had borrowed back to you* and *I met my old/last year's doctor*. These examples entail that the beneficiary stood in the possessive relation with the relevant entity at some time prior to t*sit* and, consequently, to t*np* and t*poss*. Another consequence of this semantics is that predestinatives are very infrequent, although not completely excluded, on relational nouns that denote entities that stand in a permanent possessive relationship with the beneficiary, such as body parts and some kinship terms ('lifetime properties', in the terminology of Musan, 1997). When the predestinative co-occur with such nouns, this indicates that the entity was not orignally associated with the beneficiary. For instance, the mother in (26a) is not a biological mother of the referent 'I' but someone who is going to adopt the child, while (26b) means that 'I' painted somebody's arm which 'you' will use as an artificial limb, but cannot mean 'I painted your arm for you.'

(26) a. n′eb′a-da-m′i to°
mother-PRED-1SG come.3SG
'A mother for me arrived.'

b. ŋuda-də-mt° ŋol′ep′adaə-d°m
arm-PRED-ACC.2SG paint-1SG
'I painted an arm for you.'

Finally, the third meaning property of temporal morphemes in Guaraní is 'existence meaning property'. Tonhauser (2007: 843) notes that languages with nominal temporal markers may differ in whether they have this property and, if they

do, how exactly it is interpreted. For the past marker *-kue* in Guaraní existence meaning property requires that both the nominal/possessive time t*nom*/t*poss* and the NP time t*np* fall within the time of existence of the individual(s) denoted by the noun phrase. The time of existence of an animate entity is taken to be the entity's lifetime, that is, the time during which it is alive, whereas for the nouns denoting inanimate artefacts existence time is the temporal extension of their 'spaciotemporal path' (Tonhauser, 2007: 844). According to this property, if a person died as a priest, he cannot be referred to in Guaraní as *pa'i-kue* (priest-PAST) 'former priest' after his death because the property of being a former priest was never true of him during his life time, so t*np* does not fall within this person's lifetime. But the nominal past in Halkomelem can have the meaning 'late' when hosted by a noun denoting a permanent or final-stage property such as 'father', and so it appears not to exhibit the existence meaning property or interprets it differently. The existence meaning property is not relevant for Tundra Nenets either, at least in any obvious form, as follows from example (27).

(27) Wera m′a-tə-mt° ta°
Wera yurt-PRED-ACC.2SG give.3SG
'Wera brought you your future yurt.'

The most likely interpretation of this example is that Wera brought the objects necessary for making a traditional yurt, namely, reindeer skins and wooden poles that are usually transported from one camping site to another during the seasonal migration. Here both t*poss* and t*nom* are placed in the future with respect to t*np*, but the entity 'yurt' does not yet exist at the time of the event and the time of NP. This means that neither t*poss* nor t*nom* nor t*np* fall within the existence time of the yurt.

We can now formulate the basic contribution of the predestinative in relation to the expression of time. This is clearly a semantic contribution in the sense that it reflects the actual knowledge of the speaker rather than some kind of implicature deriving from the speaker's communicative intentions. The use of the predestinative construction is obligatory if the speaker needs to convey this meaning. It can be informally represented as the following requirement:

> For an entity x denoted by the predestinative NP, the possessive relation $\Re$ is meant by the speaker to become true of x at a time t*poss* subsequent to the NP time t*np* but is false at any time prior to t*poss*.

This requirement imposes constraints on the temporal interpretation of the NP-internal possessive relation.

4. Referential properties

In this section I argue that the predestinative, in addition to placing the possessive relationship in the future with respect to the time at which the NP is true, affects the referential properties of the NP.

4.1. Predestinatives as non-specifics

The main claim of this subsection is that predestinatives are non-specific possessives. While various understandings of specificity exist in the literature (for overviews see Farkas, 1994; von Heusinger, 2002, 2011), the one which I will be assuming here and which seems to be fairly widely accepted is defined in terms of discourse linking, presuppositionality and/or referential anchoring (Pesetsky, 1987; Enç, 1991; Diesing, 1992; Lambrecht, 1994; Portner and Yabushita, 2001, among others). Essentially, a specific NP introduces a discourse item that is referentially anchored to/functionally dependent of another referent (anchor). According to von Heusinger (2011), the anchoring relation must be sentence bound, that is, a specific NP is anchored to a discourse item that is explicit within the same sentence. Von Heusinger informally defined anchoring as follows:

A specific [. . .] *N* is represented by an anchoring function *f* from an anchor to an individual and this individual is *N*. Both the anchor as well as the anchoring function must be given in the context:
a) anchor is speaker- and hearer-given
b) content of anchoring function is hearer-new

I take this to mean that the speaker has a mental representation of a functional association between a referent of a specific NP and an already established referent, while non-specific NPs introduce an unanchored entity in the sense that it has no functional association with another referent in the speaker's mind. Understood this way, specificity is orthogonal to definiteness, and von Heusinger (2002) makes a distinction between four types of NP: specific definite (discourse-old, referentially anchored), non-specific definite (discourse-old, referentially unanchored), specific indefinite (discourse-new, referentially anchored), and non-specific indefinite (discourse-new, referentially unanchored).

The non-specific status of predestinatives can be seen, first, from the fact that they are incompatible with modifiers and quantifiers which require a specific head noun such as *mal°q* 'all' or *xən′aŋi°* 'which', and, second, from the fact that they cannot stand in a subset relation.

(28) a. *Wera xar°-də-m′i mal°q ta°
Wera knife-PRED-ACC.1SG all give.3SG
'Wera gave me all the knives.'

b. [I bought five guns and
ŋopoy° tu°n′i-m n′aənt° m′i-t°ə-w° / *ŋopoy° tu°n′i-də-mt° m′i-t°ə-d°m
one gun-ACC 2SG.DAT give-FUT-1SG> SG.OBJ /one gun-PRED-ACC.1 SG give-FUT-1SG
'will give you one (of the guns).'

Partitives and hidden partitives are known to be specific (Enç, 1991), but in (28b) the predestinative phrase cannot be used if the entity referred to as 'gun' is construed as part of the set of guns introduced in the previous context.

The syntactic distribution of predestinatives also confirms that they are non-specific. We saw in Section 2 that genitive predestinatives have a non-referential interpretation: they are only available as predicates or 'as'-type adjuncts, whose meaning does not presuppose referentiality because they function as some kind of secondary predicates rather than referring expressions. Nominative and accusative predestinatives are subjects and objects, respectively, and can in principle refer, but crucially, their availability is restricted. It is often claimed that only specific indefinites can be interpreted as topics (Lambrecht, 1994; Portner and Yabushita, 2001; Erteschik-Shir, 2007, among others), and predestinatives are totally excluded from syntactic constructions which, by their nature, require topical arguments.

Tundra Nenets has differential object marking: object agreement in number is 'optional' on the verb in the sense that only a subset of objects agree. Roughly, agreement is triggered by 3rd person topical objects (for a more detailed discussion see Darlymple and Nikolaeva, 2011; Nikolaeva, 2014), but predestinative objects never agree. In (29a) the acceptable form of the verb is *s′ertaəd°m*, which only indicates subject agreement, whereas *s′ertaəw°*, which cross-references both the 1st person singular subject and singular object, is robustly ungrammatical. This contrasts with the regular possessive object in (29b), which can trigger object agreement if topical.

(29) a. ŋəno-də-mt° s′ertaə-d°m / *s′ertaə-w°
boat-PRED-ACC.2SG make-1SG/ make-1SG>SG.OBJ
'I made you a boat.'

b. ŋəno-mt° taxabtaə-d°m / taxabtaə-w°
boat-ACC.2SG break-1SG/ break-1SG>SG.OBJ
'I broke your boat.'

Predestinative accusatives do not passivize either since passivization in Nenets is triggered by the topicalization of the object argument. In the default case the subject corresponds to the (primary) topic, but a regular (non-predestinative) object can be promoted to subject via passivization if its referent is under discussion and more pragmatically salient than the subject referent. However, a predestinative object cannot become a nominative subject in the presence of the passive morphology on the verb, as shown by the following example.

(30) kniga-r° / *kniga-də-r° pad°-wi°
book-2SG/ book-PRED-2SG write-PASS.3SG
'Your book is written/*A book for you is written.'

Finally, unlike regular possessives, predestinatives cannot be modified by a past tense relative clause headed by perfective participles, which denote relative past, cf. (31a) and (31b):

(31) a. [mən′° s′erta-wem′i] pidər° ŋəno-r°
1SG make-PERF.PART.1SG 2SG boat-2SG
'your boat which I made'

b. *[mən′° s′erta-wem′i] pidər° ŋəno-də-r°
1SG make-PERF.PART.1SG 2SG boat-PRED-2SG
'the boat for you which I made'

This requirement cannot be structural because imperfective participles do modify predestinatives, as illustrated in (44b) below. But it is well known that in a number of languages, most notably in Romance, specificity has an effect on the mood

choice within the modifying relative clause: subjunctive forces a non-specific reading of the modified noun. Tundra Nenets appears to stand close to Romance in this respect: specificity of the head noun affects the form of the verb in the relative clause. There are no designated subjunctive forms of modifying verbs, but imperfective participles can convey subjunctive meanings and modify predestinatives. In contrast, perfective participles only have non-modalized semantics and are not compatible with non-specific nouns.

If predestinatives are non-specific, the sentence cannot contain an entity to which they are referentially anchored as defined above. This entails, among other things, that the beneficiary, which is an obligatory component of the predestinative construction, cannot serve as anchor. Indeed, as follows from the change-of-state meaning property discussed in section 3, the beneficiary cannot stand in an established relationship $\mathfrak{R}$ with the predestinative at t*np*, as this relationship is only supposed to come true at a certain time *t* subsequent to t*np* but is false prior to *t*. Since $\mathfrak{R}$ is here understood as any pragmatically plausible relationship between two entities and t*np* typically coincides with the situation time, this means that there is no functional association between the beneficiary and the predestinative at the situation time.

What is more, beneficiary is not even committed to the existence of the predestinative entity at the time of the event. This is confirmed by the fact that there are heavy restrictions on the lexical semantics of the verbs which select predestinative subjects and objects: they must denote an event that not only brings about the relation $\mathfrak{R}$ between the beneficiary and the predestinative entity, but also describes the first ever encounter between them.

Although the detailed exploration of the lexical semantics of Tundra Nenets verbs goes beyond the scope of this paper, it is important to observe that different classes of verbs behave differently with respect to their ability to take predestinative arguments. For some verbs predestinatives appear to be totally excluded. Predestinative subjects are impossible with transitive verbs, and with intransitive verbs that denote the termination of existence and therefore cannot describe the beginning of a possessive relationship:

(32) a. l′ekar°-waq / *l′ekar°-də-waq yəŋkuma
doctor-1PL / doctor-PRED-1PL die.3SG
'Our doctor died / *Our future doctor (= a doctor meant for us) died.'
b. ŋəno-r° / *ŋəno-də-r° taxara°
boat-2SG /boat-PRED-2SG break.3SG
'Your boat broke / *A boat meant for you broke.'
c. l′ekar°-waq / *l′ekar°-də-waq ŋəno-m temta°
doctor-1PL /doctor-PRED-1PL boat-ACC buy.3SG
'Our doctor bought a boat / *Our future doctor bought a boat.'

The use of predestinative subjects is equally ungrammatical in the Nenets equivalents of the following sentences: *A bag (meant) for us is heavy, A medicine (meant) for you works well, Your future wife left, A doctor (meant) for me is still studying*, and *Your future husband smokes*. The selecting verb is here such that the beneficiary is expected to be committed to the existence of the referent before it makes pragmatic sense to predicate the relevant event of this referent. Predestinative objects are excluded with verbs of destruction and manipulation which do not bring about $\mathfrak{R}$ but imply that the beneficiary already stands in a pragmatically defined relationship with the predestinative entity at the time of the event, such as *I sold the house meant for you to Wera, I tore the shirt meant for you*, and *The child broke the cup meant for you* or, for instance, the following:

(33) *wæsako-də-mt° men′eə-n°
husband-PRED-ACC.2SG love-2SG
'You love your future husband.'

To my knowledge, there are no verbs that only take predestinative arguments, but there are verbs that can take either predestinative or non-predestinative arguments, depending on the intentions of the speaker. Predestinative subjects predominantly occur with intransitive verbs of appearance such as 'enter', 'come', 'arrive', 'appear', 'be born', and the like (but not with other unaccusatives such as 'exist'). As shown below, these verbs also take non-predestinative subjects.

(34) l′ekar°-waq / l′ekar°-də-waq m′at-h° t′u°
doctor-1PL /doctor-PRED-1PL yurt-DAT enter.3SG
'Our doctor entered a yurt / Our future doctor entered a yurt.'

We have already seen other examples such as *A grandson was born for me* and *A doctor arrived for us*. Predestinative objects are typically licensed by verbs of creation (e.g. 'make, 'sew', 'build', 'write', 'cook', etc.), change of location/

possession ('give', 'bring', 'buy', 'send', etc.), transfer of information ('read, sing, tell something to someone'), or discovery ('find', 'meet', 'show', etc.). This class is virtually identical to the class of verbs that take the object marked with the future *-rã* in Praguayan Guaraní giving rise to a benefactive reading (Tonhauser, 2006: 303–305).[7] This is illustrated in (35), as well as in a number of the examples already cited above, e.g. (18), (20) and (22).

(35) ləx°nako-də-mt° tolaə-d°m
fairytale-PRED-ACC.2SG read-1SG
'I read a fairytale to you.'

Some verbs of destruction and manipulation can take predestinative objects if the object referent is perceived as novel by the beneficiary because the beneficiary has not encountered it prior to the event described by the sentence, and if it is meant to become the beneficiary's possession after this event and as the result of it.

(36) a. p′a-da-mt° mədaə-d°m
tree-PRED-ACC.2SG cut.down-1SG
'I cut down a tree for you'.
b. te-da-mt° xadaə-d°m
reindeer-PRED-ACC.2SG kill-1SG
'I killed a reindeer for you.'

All these verbs take non-predestinative objects if no benefactive interpretation is intended.

This brief discussion demonstrates that predestinatives are only licensed to appear in particular environments. The selecting verb either describes the desired beginning of the possessive (=anchoring/functional) association between the beneficiary and the predestinative entity, or at least its semantics must be compatible with this interpretation. If this requirement is violated, predestinatives are excluded. To conclude, predestinatives are non-specific and cannot be functionally associated with the beneficiary prior to the situation in question. This point will be further discussed in section 5.2.

4.2. Predestinatives as property-denoting expressions

In this section I argue that predestinatives are opaque property-denoting expressions, that is, they denote any object of a particular class defined by a unique property. Opacity can be viewed as a special case of non-specificity: some non-specific expressions are given property-type interpretation (see e.g. Van Geenhoven and McNally, 2005). As is known from earlier literature, verbs can systematically combine with property-type complements, but the grammatical and semantic conditions differ across languages since opacity may be due to the semantics of the nominal complements such as bare plurals, a particular construction such as noun incorporation, and/or the lexical semantics of the verb itself (Ladusaw, 1994; Dobrovie-Sorin, 1997; Van Geenhoven, 1998; Landman, 2004; Van Geenhoven and McNally, 2005; Pereltsvaig, 2006, among others).

In this connection it is worth considering a distinct type of relative clause in Modern Greek (Indo-European) first analyzed by Agouraki (2003), future free relative clauses with wh-words.

(37) a. eho aghorasi [ti tha foreso sto parti]
have.1SG bought what will wear.1SG at party
'I have already bought what I am going to wear at the party.'
b. *aghorasa [ti foresa sto parti] apo ati vostoni
bought.1SG what wore.1SG at party from the Boston
'I had bought what I wore at the party in Boston.'

These future free relatives are introduced by question words used as complementizers, whose form is determined by the dependent verb. They share a number of properties with canonical free relatives but represent a different construction, and Agouraki describes their properties at length. One relevant property is that the dependent clause is formally marked

[7] However, in Guaraní transitive verbs can combine with *rã*-marked objects even if no benefactive interpretation is intended. The difference between the two languages is due to the fact that t*poss* does not have to fall within the scope of *-rã*, whereas in Nenets t*poss* cannot escape the scope of the predestinative.

as the future tense and other tenses are strictly ungrammatical, as demonstrated in (37b). Unlike regular irrealis free relatives, which are standardly limited to existential and possessive syntactic environments introduced by *have* or *there be* (Grosu and Landman, 1998, among others), the future free relatives in Greek are selected by a small class of accomplishment predicates such as 'buy', 'bring', 'take', 'find', 'cook', 'sew', 'elect' and some others. These are all transitive verbs and the relative clause functions as a direct object. Other relevant properties include incompatibility with specific wh-question words ('which'), and resistance to passivization and topicalization. Agouraki (2003) analyses such future free relatives as opaque, that is, DPs that have a non-presuppositional property interpretation. Opacity is attributed to the selecting predicates, which are said to have opaque/intensional uses and transparent/extensional ones. In addition to licensing the opaque future free relatives, in Greek these 'dual' predicates can also select for an extensional object in combination with an *as*-type adjunct that denotes a property with future orientation.

(38) aghorasa ena forema hthes [ya kalo]
bought.1SG a dress yesterday as good
'Yesterday I bought a dress as my Sunday dress (lit. as a good one).'

In other words, the ability of the verb to appear in constructions such as (38) signals that it can also appear in (37a). However, a sentence cannot simultaneously contain a future free relative (an opaque intensional object) and an *as*-phrase because the latter must modify an extensional object.

These properties of Greek future free relatives appear to mirror what we saw above in predestinatives. Both Greek relatives and Nenets predestinatives have a more restricted distribution compared to other non-specific expressions, and the class of verbs that select for future free relatives in Greek considerably overlaps with the class of transitive verbs that select the predestinatives. As in Greek, the verbs that take predestinative subjects or objects can alternatively combine with non-predestinative arguments accompanied by a future-orientated *as*-type adjunct, see (6b) above. Such arguments can correspond to a referential null, as in (39).

(39) a. Ø ŋəno-də-nt° s′ertaə-w°/*s′ertaə-d°m
boat-PRED-GEN.2SG make-1SG>SG.OBJ/make-1SG
'I made this as a boat for you.'
b. Ø kniga-də-nt° pad°-wex°h
book-PRED-GEN.2SG write-PASS.3DU
'These two are written as books for you.'
c. [ŋəno-də-nt° s′erta-wem′i] Ø
boat-PRED-GEN.2SG make-PERF.PART.1SG
'the thing which I made as a boat for you/what I made as a boat for you'

That in (39a) the actual object is null can be seen from the fact that object agreement is required: in the absence of an overt object, object agreement morphology on the verb is obligatory and functions pronominally. In (39b) an overt subject is absent and agreement on the passive verb is dual, which again suggests that agreement is interpreted pronominally ('these two'). Finally, in (39c) we have a null-headed relative clause: the regular relative clauses precede the relativized head noun, but in this instance the modified noun is absent and the participle heading the relative clause assumes the role of its morphosyntactic locus, as is typical of headless relatives in Nenets. In all these examples the predestinative must stand in the genitive and function as an optional *as*-type adjunct similar to the *as*-type PP in Greek. Such adjuncts modify extensional complements. This predicts that they will not be compatible with intensional complements. The prediction turns out to be correct both for Greek future relative clauses and Tundra Nenets predestinatives, cf. (6b) above and the ungrammatical example in (40).

(40) *t′uku° te-d°-waq ŋəmca-də-naq temta-wewaq
this reindeer-PRED-ACC meat-PRED-GEN.1PL buy-INFR.1PL
'We bought this reindeer as meat for ourselves.'

Following Van Geenhoven and McNally (2005), we can assume that the relevant verbs are assigned two lexical representations, with one possibly derived from the other. In one representation the verb itself contributes existential force associated with the opaque property-denoting object, and the other yields a transparent reading that describes a relation between individuals.

There is another parallel between Tundra Nenets predestinatives and Greek future free relatives. Although Agouraki (2003) does not comment on this point, Greek future free relatives appear to be impossible if they contain a subject gap.

This can be seen in the contrast between (37a) and (41), which relativize a non-subject element, on the one hand, and the ungrammatical or at best very marginally acceptable examples (42), on the other.

(41) a. eho vrei [me poion tha pao sto parti]
have.1SG found with whom will go.1SG to.the party
'I have found with whom I will go to the party.'
b. vrika [pu tha mino sti Lefkosia]
found.1SG where will stay.1SG in.the Nicosia
'I have found where I will stay in Nicosia.'

(42) a. *eho aghorasi [ti tha vrisketai sto trapezi avrio]
have.1SG bought what will be.3SG on.the table tomorrow
'I have bought what will be on the table tomorrow.'
b. */? eho vrei [ti tha erthei sto magazi avrio]
have.1SG found what will come.3SG to.the store tomorrow
'I have found what will come to the store tomorrow.'

The restriction only applies to the future free relatives of this particular type. Free relatives that are introduced by the free-choice complementizer *oti* 'whatever' and can be either future or non-future (Agouraki, 2003: 11) easily allow the relativization of the subject.

(43) eho aghorasi [oti (tha) vrisketai sto trapezi]
have.1SG bought whatever will be.3SG on.the table
'I have bought what is/will be on the table.'

This distribution shows analogy with Nenets. What these data appear to show is that future free relatives in Greek must express a minimally two-place relation, that is, the relation between the subject of the relative clause and a non-subject element represented linguistically by the wh-word, e.g. 'I' and the object that will be worn in (37a), 'I' and the individual with whom the speaker will go to the party in (41a), and 'I' and the place where the speaker will stay in (41b). This relation is lexically specified by the dependent verb and morphosyntactically restricted to the future tense. Crucially, as was discussed in section 2, I analyze Tundra Nenets predestinatives as possessed nouns, and possessed nouns are understood here as two-place predicates commonly bearing a vague associative relation $\mathfrak{R}$ between two arguments, the possessor and possessed. This implies that non-subject relative clauses and possessive constructions, of which predestinatives are a subclass, share one fundamental semantic property: they represent a two-place relation.[8] The difference between the two languages is that in non-subject relatives this relation is lexically mediated by the verbal form, while in possessives it remains unspecified and can be construed as a variable assuming a different value in different discourse situations (see Ackerman and Nikolaeva, 2013 for a detailed discussion of this point). This situation is mirrored by morphosyntax: while in Greek the dependent predicate is overt and its temporal specification is explicitly expressed by a free-standing future verb *tha* defining a clausal domain, in Nenets the relational predicate $\mathfrak{R}$ has no lexical expression. Its temporal interpretation is modified by a bound morpheme on the head noun, which obviously does not have a clausal status.

So both constructions convey a two-place relation that happens to be lexically specified in Greek and is semantically vacuous and therefore ambiguous in Nenets. Both constructions contain a temporal modifier internal to the relevant syntactic domain, which takes scope over the two-place relation and locates its reference in the future with respect to the time of the main event. Both constructions are selected by a restricted class of verbs and have a non-specific interpretation. Based on these remarkable parallelisms and following Agouraki's (2003) analysis, I propose that, like Greek future free relative clauses, predestinatives are property-denoting. Their basic meaning is the predication of the property 'is X of Y' for the future. For example, the predestinative phrase in (5c) above expresses the property 'is your boat', so the meaning of (5c) can be paraphrased as something like 'I bought (you) what will be your boat'. The predicates that select predestinatives are used intensionally, although they allow for extensional reading when combined with non-predestinative arguments. This proposal is strengthened by the fact that predestinatives do not exhibit a number opposition. They are the only inflectional forms of Tundra Nenets nouns

[8] We saw that in Nenets the subject of this relation (the beneficiary) is not committed to the pragmatic existence of the argument denoted by the predestinative noun itself prior to the event, but it remains to see whether this also holds for Greek.

in which the expression of grammatical number is banned, presumably because they denote a property of indeterminate number.[9]

One question that arises at this point is that of definiteness. Agouraki (2003) argues that Greek future free relatives are definite intensional DPs, but it appears to be more complicated for Nenets, as predestinatives can be either definite or indefinite. Recall that definiteness is not a grammatical category in Tundra Nenets, and without additional clues most NPs are ambiguous between definite and indefinite readings. In certain contexts the property-denoting function of predestinatives forces them to be interpreted as indefinites. A semantically indefinite predestinative is shown in (44b).

(44) a. səwaw°na xanʹe-na wenʹako-m / *wenʹako-d°-mʹi$_i$ pʹurŋa-d°m. Ø$_i$ ŋarka
well hunt-IMPF.PART dog-ACC/ dog-PRED-ACC.1SG search-1SG big
'I am looking for a dog, which hunts well. It is big.'

b. səwaw°na xanʹe-na wenʹako-d°-mʹi$_i$ pʹurŋa-d°m. Ø$_i$ ŋarka ŋə̄-b°-ta tara°
well hunt-IMPF.PART dog-PRED-ACC.1SG search-1SG big be-COND-3SG needed.3SG
'I am looking for a dog that would hunt well. It must be big.'

In (44a) reference is made to a specific dog. In (44b) the speaker does not have a particular dog in mind, but is looking for an object that satisfies the predicate 'is a dog that will be mine', that is, there is no entailment that the referent exists. The absence of such an entailment is compatible with the non-specific property-denoting semantics of predestinatives. This is made clear by the anaphoric context: a definite anaphor is known to refer back to non-specific indefinites only in modalized contexts (Zimmermann, 1993, Moltmann, 1997, among others). However, in other contexts predestinatives appear to be definite.

(45) a. lʹekarə-d°-waq to°. nʹum-ta Iwan
doctor-PRED-1PL come.3SG name-3SG Ivan
'The doctor (meant) for us arrived. His name is Ivan'

b. Wera knʹiga-də-mʹi temta°. nʹum-ta Wojna i mir
Wera book-PRED-1SG buy.3SG name-3SG war and piece
'Wera bought me a book. It's called ''War and Peace''.

The test in (45) demonstrates that some predestinatives support definite anaphora in non-modalized contexts, as is also observed in Greek future free relative clauses. This is expected of intensional definite NPs, which have been shown by Moltmann (1997) to exhibit different behaviours from intensional indefinites. Thus, there is no correlation between predestinatives and definiteness: predestinatives are non-specific but semantic definiteness appears to be an independent parameter.

In summary, while it is certainly true that the core meaning of the predestinative in Tundra Nenets consists in localizing the time of the possessive relation, this section has argued that it also changes the referential status of the NP by contributing a non-specific property interpretation.

5. The question of category

I have demonstrated that predestinatives make a consistent semantic contribution which, on the one hand, has effect on the interpretation of the possessive NP by providing a temporal specification of the NP-internal possessive relation, and, on the other hand, interacts with a larger syntactic domain. These two points were discussed in sections 3 and 4, respectively, and it is now time to look at them together and return to the question raised at the beginning of the paper: what kind of category does the predestinative instantiate?

5.1. The predestinative as nominal tense

In my own earlier work (Nikolaeva, 2009) I suggested that predestinatives in Tundra Nenets express the future tense with nominal scope because they satisfy all definitional properties of nominal tenses proposed by Nordlinger and Sadler

[9] In other Northern Samoyedic languages Nganasan (Leisiö, 2014) and Enets (Khanina and Shluinskij, 2010), predestinatives occur in the non-singular. The number opposition may have been present in the older variety of Tundra Nenets (Tereshchenko, 1977: 98–99), but it does not exist in the modern language. There are other grammatical and semantic differences between Tundra Nenets predestinatives and predestinatives in Enets and Nganasan.

(2004) and listed in section 1: they express temporal information relevant to the NP, they represent a fully productive inflectional category on arguments and adjuncts, they apply to the whole class of nouns, and are expressed by a suffix rather than a syntactic clitic. Since Nenets does not have nominal tense in non-predestinative constructions, this analysis implies that nominal tense is morphologically expressed only in possessive NPs. However, Nenets is not unique in this respect. While in some languages (e.g. Guaraní), time-oriented markers locate the time of the nomininals independently of the possessive relation, in other languages (e.g. Hixkaryana; Cariban, Brazil) 'nominal tense with nominal scope' is only active in possessive constructions and is not expressed on non-possessive NPs. According to some literature, this may be due to the intrinsic link between possession (person) feature and tense: tense is assumed to play a crucial role in the licensing of the possessor (Lecarme, 1999; Alexiadou et al., 2007: 276–280). The exact nature of this argument is irrelevant for the present paper. The important point here is that the nominal tense in Tundra Nenets–if the predestinative is a nominal tense–is only found in possessive NPs, but this occurs in a number of other languages.

Tonhauser (2007) took a more elaborate approach to nominal tense and tested the nominal temporal markers in Guaraní against canonical verbal tenses. As mentioned above, she concluded that they do not share a sufficient number of properties. As for Tundra Nenets predestinatives, it is immediately clear that they pass two relevant tests: they do not exhibit any lexical restrictions and do not co-occur with other tenses within the nominal domain. In this respect their behaviour does not differ from the behaviour of verbal tenses. Another property of tense is that temporal modifiers may constrain its semantic contribution. If a time-oriented marker on nouns is to be called a 'tense', its interpretation must be modifiable by NP-internal temporal modifiers. In Guaraní the location of the nominal/possessive time denoted by time-oriented morphology cannot be restricted by such modifiers.

(46) [mbo'e-ha-ra-kue ochenta-gua] o-vy'a
teach-NOM-AG-KUE eighty-of A3-happy
'The former teachers of the eighties are happy.'

In (46) the NP-internal modifier 'of the eighties' does not constrain the location of t*nom*: the example refers to the individuals who were already former teachers in the eighties, not the teachers of the eighties, so the modifier locates the NP time t*np*, but not the nominal time t*nom*. Since the location of t*nom* (and t*poss*) in Guaraní cannot be further specified, Tonhauser takes it to mean that the past marker *-kue* cannot be analyzed as nominal tense. In Nenets, however, temporal modifiers referring to the future can restrict the temporal meaning of the predestinative. This can be seen in (47), where *ŋan′i poxi°* 'next year's' explicitly locates the time of the possessive relationship: (47) expresses that the individual referred to as 'our future doctor' will only be our doctor next year (e.g. a medical student who is in his/her last year of study at the time of speech), not immediately after the time of the main event ('yesterday'), that is, t*poss* is further specified by the NP-internal temporal modifier.

(47) t′en′ana [ŋan′i po-xi° l′ekarə-d°-waq] to°
yesterday other year-ATTR doctor-PRED-1PL come.3SG
'Our next year's doctor arrived yesterday.'

Past-oriented NP-internal modifiers are not compatible with the predestinative, but this contradicts its semantics. Example (48) is ungrammatical if the predestinative is used: here the NP-internal temporal modifier *n′eboy°* 'last year's' locates the t*poss* at the time prior to the t*sit* = t*np*. The relevant meaning can only be expressed by a non-predestinative possessive NP.

(48) t′en′ana [n′eboy° l′ekarə-waq / *l′ekarə-d°-waq] to°
yesterday last.year.ATTR doctor-1PL/ doctor-PRED-1PL come.3SG
'Our last year's doctor arrived yesterday / *The last year's doctor for us arrived yesterday.'

Thus, according to these three properties, the predestinative behaves like tense. Yet, the other two properties are less straightforward, and I suspect that ultimately Tonhauser's (2007) argument would not let her classify the predestinative as tense because the semantic contribution it makes turns out to be different from the semantic contribution of verbal tenses. First, canonical verbal tenses do not exhibit the change-of-state meaning property discussed above: they encode that the eventuality is true at a certain time *t* but do not entail that it is false at *t′*. But we saw in section 3 that, like Guaraní time-oriented markers on nouns, predestinatives do not only require t*poss* to be true subsequent to t*np*, but also require it to be false at t*np*. Second, verbal tenses are known to resolve the reference time to a contextually determined time. Indeed in Tundra Nenets the denotation of the verbal future may be contextually restricted, as shown by the two simple examples below.

(49) a. t′en′ana Wera ma-s′°, ŋəmca-m p′ir′e-ŋku
yesterday Wera say-PAST.3SG meat-ACC cook-FUT.3SG
'Wera said yesterday that he would cook the meat.'
b. xūn′ana Wera ŋəmca-m temta-ŋku, t′ika-xəd° ja-m p′ir′e-ŋku
tomorrow Wera meat-ACC buy-FUT.3SG this-ABL soup-ACC cook-FUT.3SG
'Tomorrow Wera will buy some meat and cook soup out of it.'

The future tense on the verb *p′ir′eŋku* is interpreted with respect to a reference time provided by the context: in (49a) the reference time is 'yesterday' when Wera said that he would cook the meat, and in (49b) it is 'tomorrow' after Wera buys some meat. If the predestinative behaved like the verbal tense with respect to this property, one would expect the possessive time t*poss* to be restricted by the larger context too. However, t*poss* is not contextually determined: it is always evaluated with respect to the NP time and cannot be fixed with respect to another salient time in discourse. This can be illustrated using an example parallel to (49a).

(50) t′en′ana Wera ma-s′°, l′ekarə-d°-waq to-wi°
yesterday Wera say-PAST.3SG doctor-PRED-1PL come-INFR.3SG
'Wera said yesterday that our future doctor had arrived.'

In (50) the reference time t*ref* established by the first clause is 'yesterday'. The inferential form *towi°* denotes the time t*sit* which precedes t*ref*: t*sit* < t*ref*. The phrase 'our future doctor' is true at the situation time in the second clause, that is, t*np* = t*sit*, whereas the possessive relationship denoted by the predestinative must follow the NP time: t*np* < t*poss*. The possessive time is not evaluated with respect to the reference time: the predestinative noun refers to someone who is meant to became 'our' doctor subsequent to the event of 'arriving', not the event of 'saying'. Example (50) can be uttered in the situation when the doctor arrived a week ago and the speaker is aware of the fact that the doctor was supposed to start working immediately upon arrival.

So according to Tonhauser's argument, predestinatives do not behave like verbal tenses in two relevant respects: they entail that t*poss* is false at a certain time, and t*poss* cannot receive a contextual interpretation because it is always evaluated with respect to t*np*. What is more, they do not conform to her definition of nominal tense in the first place: ''calling the markers nominal tenses suggests that they behave like verbal tenses in that they contribute to the location of the time at which a noun phrase is interpreted'' (Tonhauser, 2007: 833). This definition is based on the idea that the category of tense grammaticalized on verbs locates the time at which the property or relation denoted by the verb is true of the individuals involved in the predication. By analogy then, tense grammaticalized on nouns locates the time at which the NP is true of the individual it refers to, that is, t*np*. To argue that time-oriented morphology on Guaraní nouns is not tense, Tonhauser shows in detail that t*np* itself is not affected by temporal markers: these only indicate the relationship between t*np* and t*nom*/t*poss*. t*np* in Guaraní is interpreted identically in phrases with or without temporal markers and is contextually determined, just like in English and many other languages which lack grammaticalized nominal tense. This appears to be true for Tundra Nenets too: the predestinative does not restrict the time at which the NP is interpreted (t*np*). As we saw above, t*np* is typically established through the situation time (t*np* = t*sit*), but consider (51).

(51) n′e-d°-m′i n′eboy° po-h yad°bta°-dəm-c′°
wife-PRED-ACC.1SG last.year.ATTR year-GEN meet-1SG-PAST
'I met my future wife last year.'

Sentence (51) cannot be produced if the speaker married the relevant woman at some point between 'last year' and the moment of speech (t*sp*); it is only appropriate to utter (51) in the situation when the speaker and his fiancée are not yet married. This shows that the NP 'my future wife' must be true at the situation of speech. The NP time t*np* is here evaluated with respect to t*sp* rather than t*sit* but the predestinative marker does not have a direct effect on it, and the time of the possessive relation $\Re$ is still interpreted with respect to t*np*.

However, together with Nordlinger and Sadler (2008), I am not entirely convinced that it is necessarily inappropriate to use the term 'tense' for a marker that expresses a relationship between t*np* and t*poss*. Nordlinger and Sadler do not specify what semantic predicate may be tensed by nominal temporal makers, but it appears that on their definition these markers can target either t*np* or t*nom* or t*poss*. The most important condition is that they do not affect the temporal interpretation of the clause and express temporal information relevant to the NP itself. On their analysis then the predestinative would still qualify as nominal tense.

As mentioned above, Nordlinger and Sadler (2008) suggest that the imperfect parallels between nominal and verbal tenses may be due to the categorial difference. Temporal modifiers are not intrinsic to nouns because nouns

denote individuals, and individuals are known to be inherently more temporally stable than situations, which must hold at a given time. Another important difference, I believe, is related to syntactic role: unlike for verbs, the canonical syntactic function of nouns is known to be argument function (Croft, 1991, 2001; Malouf, 2000: 124ff.; Spencer, 2005, among others), that is, embedded predication. A canonical nominal tense then is embedded tense (cf. Alexiadou et al. 2007: 276). Embedded tenses are known to have different interpretations from their non-embedded indexical counterparts, because in at least some types of dependent clause tense must be evaluated with respect to the main clause time, as is typical of e.g. propositional attitude complements evaluated with respect to the time of the main event (Enç, 1987; Arregui and Kusumoto, 1998; Gennari, 2003; Ogihara and Sharvit, 2012, among many others).

This is exactly what we saw in Tundra Nenets predestinatives. Predestinatives cannot be expected to make a semantic contribution fully identical to that of tense on main predicates due to the embedded syntactic environment in which they occur. The possessive relation $\mathfrak{R}$ which the predestinative localizes in time is never the main predication, see (52).

(52) *ŋəno-də-w° ŋa
boat-PRED-1SG be.3SG
'The boat is for me.'

So the time of $\mathfrak{R}$ is not evaluated with respect to the perspective (speech) time or the reference time supplied by the wider discourse. It is fixed in relation to the immediately embedding syntactic context, the NP (t*np*). Therefore if the category which predestinatives instantiate is to be compared to the grammatical categories of verbs, the best analogy would be verbs that occur predominantly or exclusively in embedded contexts, e.g. non-finite forms employed by many languages in dependent clauses. In some languages, including Tundra Nenets, non-finite verbs take tense which is interpreted in relation to the time supplied by the main clause and is often called 'relative tense' (e.g. Comrie, 1985: 16), by analogy with relative tenses in root clauses interpreted relatively to a reference point provided by the context. The properties of the predestinatives must then be tested against the properties of such embedded relative tenses, in particular, tenses on non-finite verbal forms, rather than the properties of tenses that characterize main verbs, but I leave this task for future research.

Categorizing predestinatives as embedded relative future will of course imply that Tundra Nenets exhibits a two-way tense contrast on possessed nouns: non-future Ø vs. future *-də-/-d°-*. This goes against Nordlinger and Sadler's (2004: 790) typological observation that ''if a language has independent nominal TAM at all, it will encode minimally a distinction between past and nonpast tense''. Obviously, there are no typological generalizations without ''exceptions'', but we saw above that the situation is in fact more complicated. Predestinatives have other properties which cannot easily be explained even under the embedded tense analysis.

5.2. The predestinative as nominal mood

I showed in section 4 that predestinatives have a significant effect on the interpretation of the whole NP, albeit not in the temporal sense, and that their syntactic distribution appears to be restricted because it depends on the selecting verb. This is reminiscent of the distribution of some polarity items and opaque complements in other languages (Van Geenhoven and McNally, 2005; Israel, 2011, among others). Indeed, we saw that predestinatives do have an opaque property-denoting reading. But we also saw that, unlike regular opaque complements, predestinatives are relational predicates and must denote a two-place relation $\mathfrak{R}$. In this sense they rather behave like dependent verbal categories that must be licensed by the properties of the embedding context (the higher verb), in particular, the dependent subjunctive or irrealis.

I am assuming here that the subjunctive and irrealis are largely associated with the same functional domain, but differ in terms of their prototypical syntactic functions: the primary function of the subjunctive is subordination, while the irrealis is more broadly used in independent clauses (cf. Palmer, 2001: 1ff.). In complement clauses the dependent subjunctive is typically selected by a class of embedding predicates that share particular semantic characteristics, and therefore the widespread assumption is that it must be licensed. The characterization of the licensing context is a complex area with a variety of theoretical positions, the detailed discussion of which would be outside the scope of this paper (see Portner, 2011 for an overview). I will be assuming that the grammatical patterns involving dependent subjunctives have to do with the presupposition or entailment of truth, which is sometimes formulated in terms of (non)veridicality (Giannakidou, 1998, 2009, and other work). A propositional operator *F* is veridical iff from the truth of *Fp* we can infer that *p* is true according to some individual *x* (the 'epistemic agent' or individual anchor, as in Farkas, 1992) within this individual's set of beliefs ('epistemic model' or 'evaluation model').

Giannakidou applies this notion to explain the selectional properties of embedding verbs in Modern Greek complementation.[10] If a propositional attitude verb expresses that at least one epistemic agent is committed to the truth of the complement, the verb is veridical and selects the indicative. In Greek these are assertives (e.g. 'say'), epistemics ('believe'), fiction verbs ('imagine'), factive verbs ('regret'), and semifactives ('discover'). If there is no commitment on the part of at least one epistemic agent, the verb is strong intensional non-veridical and selects the subjunctive. Typical examples are volitionals ('want'), directives ('order'), modals ('must'), permissives ('allow'), negatives ('avoid'), and verbs of fear ('be afraid'). The epistemic agent for the evaluation of complement clauses is not defined with respect to the speaker's model of reality; rather it is supplied by the subject participant of the main clause who conceptualizes the dependent proposition as true. Quer (1998) extended this model to mood alternations in relative clauses (albeit with a different implementation) and showed that in Romance relative clauses the indicative is the overt marker of veridical environments, while subjunctive relative clauses have a non-specific/attributive reading and are evaluated within a non-veridical model.

I propose that, similar to subjunctive complements and relative clauses, predestinatives are only licensed in non-veridical contexts, that is, contexts that require no commitment to the truth on the part of the epistemic agent. For NPs this translates to the unavailability of the existence inference: the epistemic agent is not committed to the existence of the entity denoted by the predestinative noun prior to the event of question. Like subjunctives in complement clauses, predestinatives are not evaluated within the epistemic model of the speaker, as is consistent with the fact that they do not occur as subjects of existential predicates such as 'be' or 'exist' which assert existence within the speaker's model. The epistemic agent is fixed NP-internally and corresponds to the beneficiary. This is confirmed by the fact that, as discussed above, predestinatives cannot be functionally associated with the beneficiary at the time of the utterance. We can say informally that they do not carry the pragmatic presupposition of existence within the beneficiary's epistemic model, and that the pragmatic existence of the predestinative entity is asserted by the same utterance in which it appears and is predicated as the beneficiary's future 'possession' relative to the situation time.

As argued in 4.1, predestinatives are selected by the class of verbs that entail or implicate the beginning of a functional association, understood here as a contextually defined relationship $\Re$ between the predestinative and the beneficiary. The decisive factor here is the lexical semantics of the verb, which seems to incorporate an existential component. There are also instances where the relevant construal of the situation is not supplied by the verb per se, but comes from a larger situational context. For example, my consultants did not accept the predestinative subject in (53) in the situation when the speaker is telling the addressee that the latter cannot use the broken mug *(A/the mug meant for you fell down)*, but it is still possible to construct a suitable context here. The predestinative subject would be acceptable in a context that makes it clear that the mug fell down from the shelf into the addressee's hands and that the addressee was supposed to use it afterwards (*A mug fell down for you*).

(53) xidʼa-də-r° mən°tey°q
mug-PRED-2SG fall.down.3SG
'A mug fell down for you (to use).'
'A/the mug meant for you fell down.'

This shows that the availability of predestinative arguments is not determined uniquely by the lexical properties of the selecting predicate, but rather depends on the interaction of semantic and pragmatic factors. So predestinatives can convey information about the model in which the entity must be interpreted. A similar perspective on subjunctives was taken by Quer (2001) and most authors in Quer (2009), where subjunctives are not associated with a rigid meaning, but mood shifts are treated as the overt marking of a change in the evaluation model in discourse.

Some verbs demonstrate alternations in meaning depending on the type of the argument. For instance, *məneq-* can be translated as 'see (an observable entity)' when combined with a non-predestinative object, but with a predestintive object it rather means 'choose' and can be used in contexts which imply that the beneficiary is choosing his/her future possession.

(54) a. ŋəno-mt°/*ŋəno-də-mt° mənе-ca-n°?
boat-ACC.2SG/boat-PRED-ACC.2SG see-INTER-2SG
'Did you see your boat/*Did you see your future boat?'

[10] It is worth noting that for Giannakidou (1998, 1999, and elsewhere) veridicality also provides a definition of the contexts that license a class of polarity and free-choice items, so the subjunctive appears analogous to some types of indefinite NP and is understood in terms drawn from the same semantic theory. The central idea here is that the choice of mood marks an opposition parallel to one of those observed in the nominal domain.

b. ŋəno-də-mt° mәne-ca-n°?
boat- PRED-ACC.2SG see-INTER-2SG
'Did you choose a boat for yourself?'

Semantic alternations further support the analogy with the dependent subjunctive because across languages certain verbs, e.g. *hope*, are known to take either the subjunctive or indicative, and mood shifts are usually accompanied by a subtle change of the verb's meaning related to the change of the model for the evaluation of interpretation (Giannakidou, 1995; Quer, 1998, among others).

So predestinatives indicate the lack of existential presupposition relative to the epistemic world of the individual denoted by the beneficiary. The meaning predestinatives contribute to the interpretation of the possessive NP is therefore comparable to the meaning of the dependent subjunctive/irrealis, which indicates the lack of commitment to the truth of the proposition associated with the dependent clause on the part of the epistemic agent, although, unlike in predestinatives, in the latter case the epistemic agent is not expressed within the same syntactic domain.

5.3. Final remarks

In have argued that predestinatives are comparable to the embedded tense which scopes internally to dependent clauses and is fixed relative to the time of the main clause. However, they affect the interpretation of the whole NP, even though they do not change the time at which it is true. Distributionally, they behave as embedded subjunctives because they are licensed by the properties of the selecting context and because they crucially depend on the lack of commitment to their truth on the part of the epistemic agent. Does this mean that they are nominal tense or mood, or neither?

I believe the answer ultimately depends on definition, in particular, whether TAM on nouns is taken to look 'inside' (modify the NP-internal predicates) or 'outside' (modify the interpretation of the whole NP with respect to its syntactic context). As was alluded to above, there seem to be two positions here. For Tonhauser (2007) true nominal tense must indicate the time at which the NP is true. Since predestinatives do not affect the time of the NP, they cannot be labelled tense. However, they do affect the interpretation of the whole NP in a different sense: they supply a non-specific property-denoting meaning and are non-veridical. This semantic contribution is comparable to the meaning of the irrealis/subjunctive in the clausal domain. Predestinatives therefore may be labelled nominal TAM even on Tonhauser's definition, although the specific category they instantiate appears to be modal rather than temporal in nature. With this understanding, Tundra Nenets possessed nouns demonstrate a two-way distinction grossly similar to the distinction between indicative/realis and subjunctive/irrealis. This is not untypical of verbs: a number of languages exhibit a two-way TAM system on verbs which essentially draws an opposition between realis and irrealis. Examples of tenseless languages with the binary grammaticalization of mood include Burmese (Tibeto-Burman, Burma), Dyirbal (Pama-Nyungan, Australia) and Manipuri (Indo-Aryan, India) (Comrie, 1985: 50–52; Poudel, 2007, among others).

In contrast, in Nordlinger and Sadler's (2004, 2007) account, there is no reason why nominal tense cannot be understood as modifying the predicate that holds inside an NP, including the possessive predicate in possessive NPs. An essentially similar understanding is found in the works of Lecarme (1996, 1999, 2004, 2008, 2012), who in fact does not even list t*np* among the times that are potentially involved in the temporal interpretation of noun phrases. Lecarme argues for the parallelism between nominal and clausal domains and takes the basic structure of DP to be parallel to that of CP. On her view, there is no special type of tense which could be called 'nominal tense'; rather, tense is a general category related to the expression of time which applies to expressions of different grammatical type with the result that ''we cannot appeal to the linguistic notion of tense to explain the differences between sentences and noun phrases'' (Lecarme, 2012: 697). Nominals and clauses define two independent but parallel systems of temporal interpretation. Assuming that time reference is associated with the T position, which may be silent in the phonetic output but must be present for interpretation, and that the structure of syntactico-semantic objects like sentences and noun phrases is essentially alike, with the category D formally parallel to C, the T node occurs equally in the representation of DPs and CPs (see also Wiltschko, 2003; Matthewson, 2005; Alexiadou et al., 2007). But, although the temporal systems are essentially similar in nominals and clauses, the actual TAM-related categories are grammaticalized on a language-particular basis. Somali and, presumably, Tundra Nenets have tense morphemes that are realized on T. Salishan languages do not have grammaticalized nominal tense but exhibit optional temporal modifiers such as St'át'imcets *tu7* and possibly the Halkomelem bound marker *-elh.* Time modifiers express essentially the same information as the English temporal adjectives *former* and *future* when it comes to the time at which the nominal predicate holds, and co-occur with a phonologically null T, just like time modifiers on verbs. Finally, Guaraní possibly has the category of nominal aspect, as was initially argued in Tonhauser (2006). The aspectual markers in Guaraní define a bounded interval when aspect merges with the covert tense (Lecarme, 2012).

The domain of T associated with DP can only be understood as taking scope over the DP-internal predicates. The question then is whether the temporal information associated with the T node has impact on the interpretation of D node itself. Both Nordlinger and Sadler (2004) and Lecarme (2008, and other work) show that in languages with overt determiners tense is encoded on definite or indefinite articles. In Lecarme's framework, the D-T relation is construed as a Tense chain (parallel to the C-T chain in clauses). Since D is known to be responsible for referentiality, the D-T relation combines referentiality with temporal interpretation. For example, in Somali non-referential (i.e. non-specific, quantified or predicative) NPs are temporally indefinite or tenseless, whereas tensed nominals are unambiguously specific, which leads Lecarme to propose that a noun is specific if and only if it is outside of the scope of the verbal T-operator and the time is bound DP-internally (Lecarme, 1999). Thus, specificity and tense appear to be inherently linked: specificity effects in nominals are viewed as manifestations of T on D. Tundra Nenets predestinatives also show a close connection between temporal location of the NP/DP-internal predicate, on the one hand, and the referential interpretation of the whole phrase and ultimately its integration into a larger syntactic context, on the other. However, they contrast with temporally marked DPs in Somali suggesting that the reverse implication is not necessarily true: non-specific nominals may have their own internally-fixed time, although the temporal opposition they express appears to be future vs. non-future rather than past vs. non-past as in specific DPs in Somali.

The data presented in this paper have another impact on the discussion of the modal effects associated with tense morphology in nouns. The essential modal distinctions in nominals which have been discussed in the literature are evidential in nature (assuming evidentiality, the linguistic expression of a speaker's source of information, is a kind of modal category). Evidentiality on nouns is expected to translate into the visible vs. invisible opposition, since nominal expressions typically refer to observable entities. In languages where determiners encode temporal distinctions visibility is usually associated with the present tense and non-visibility with the past tense (Nordlinger and Sadler, 2004). Lecarme (2008, 2012) extensively argues that in Somali the past tense on nouns can be used as a perceptual (non-visual) evidential because both categories share the exclusion/dissociation feature whose meaning involves a temporal or modal displacement from actuality (cf. Izvorski, 1997; Iatridou, 2000): past tense excludes the topic time from the actual world and therefore establishes the implicature of counterfactuality. Tundra Nenets provides evidence for another case of tense-mood relationship within the nominal domain: the relation between the future that takes scope over the NP-internal predicate and the irrealis property-denoting interpretation of the phrase. As was shown above, this relationship has an exact parallel within the clausal domain represented by Modern Greek future free relative clauses.

The more general point is of course that of Tonhauser's: time-oriented markers that have been categorized as nominal tenses may have very different properties from a cross-linguistic viewpoint. The detailed exploration of their meaning promises to lead to many crucial insights into the temporal and modal distinctions that may be expressed on nouns.

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