

Nominalizations and aspect

by

Andrés Pablo Salanova

Submitted to the Department of Linguistics and Philosophy
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Abstract

Languages that have aspectually-conditioned ergativity splits generally oppose a “perfect” tense (often called perfective or aorist), with ergative-absolutive case pattern, to an imperfective where case marking follows the nominative-accusative pattern.

The split exists in main clauses in several northern Jê languages, among which Mëbengokre, though in a slightly different form. Mëbengokre opposes two verbal forms that roughly express an aspectual opposition between a “perfect”, and a perfective or unmarked aspect. Rather than being two forms of the verb that differ simply in an aspectual feature, however, these forms (herein referred to as A and B, respectively) differ in many important respects:

1. Form A:

- (a) has a wide range of temporally stative interpretations when not embedded;
- (b) heads ergative-absolutive clauses;
- (c) is the only verbal form that can be embedded;
- (d) when embedded, its temporal and aspectual interpretation depend on that of the main clause;

2. Form B:

- (a) has a perfective interpretation; advances narrative time;
- (b) heads nominative-accusative clauses;
- (c) can't be embedded.

In this dissertation, I propose that the opposition between the A and the B form boils down to an opposition between a truly verbal form (the B form) and a nominal form of the verb (the A form), and that the change in category explains both the ergative marking and the perfect interpretation associated with the A form. I argue that nominalization underlies many aspectually-conditioned splits described in the literature, as well as being at the core of the perfect construction in languages such

as French and Italian. For the analysis to go through, two propositions have to be worked out: (i) that ergativity is a given when there is nominalization, and (ii) that the interpretation of a nominalization used as a main clause is in fact that of the perfect.

To work out (ii), matrix clauses constructed with nominal forms of the verb are treated as a special case of existential sentences, which in Mēbengokre are verbless clauses of the form $[[\text{Location}]_y [\text{NP}]_x]$.

I propose that the interpretation of nominalizations as main clauses, like the interpretation of nominal clauses, is effected by the existential frame “There is an x in y ”, i.e., one where the main “predicate” is the nuclear scope x of an existential, which requires a locative restriction y . In existentials constructed with plain nominals, this restrictor is provided by the locative, dative or possessive PP. In existentials constructed with a nominalization, the restrictor is a time span. This span, which is distinct from topic time, is what gives nominal clauses their “subject-oriented” or “background” interpretation, as opposed to truly verbal clauses, which get linked to topic time and are interpreted perfectly by default.

Thesis Supervisor: Sabine Iatridou

Title: Professor of Linguistics

To Kwỳrkrô, Bepmajti and Ngrejre

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Introduction

Hace diez años bastaba cualquier simetría con apariencia de orden — el materialismo dialéctico, el antisemitismo, el nazismo — para embelesar a los hombres. ¿Cómo no someterse a Tlön, a la minuciosa y vasta evidencia de un planeta ordenado? Inútil responder que la realidad también está ordenada. Quizá lo esté, pero de acuerdo a leyes divinas — traduzco: a leyes inhumanas — que no acabamos nunca de percibir.

J. L. Borges, *Tlön, Uqbar, Orbis Tertius*

When one studies any language in detail, one often finds several traits that stand out as the grammatical system’s identity, so to speak. This study concerns primarily the Mēbengokre language, spoken by the Xikrin and Kayapó nations in central Brazil.¹ In the case of Mēbengokre, we identify the following traits as being central to its grammar: (a) the ambiguity of noun phrases between referential and clausal readings, (b) the pervasiveness of nominalizations, and (c) the ergative split that accompanies a contrast in the aspectual value of verbal predicates. These are exemplified in order in examples (1-3):

- (1) kubē pō kλ
barbarian POSS canoe
a. “The white man has a canoe.”

¹The Mēbengokre language belongs to the northern branch of the Jê family, a language family that is wholly contained within the boundaries of Brazil (though for a period in the 19th and early 20th century the Kaingang, from the family’s southern branch, established villages in the northeastern tip of Argentina). For a family tree of the Jê languages, see Rodrigues (1999).

- b. “The white man’s canoe.”
- (2) a. ba [kute tɛp krɛn] pumũ
1NOM 3ERG fish eat.N see.V
“I saw him eating fish.”
- b. ba [kute tɛp krɛn] mɔrɔri ipej
1NOM 3ERG fish eat.N during do.V
“I did it while he was eating fish.”
- c. kute tɛp krɛn məj
3ERG fish eat.N good
“He eats fish properly.”
- d. kute tɛp krɛn ket
3ERG fish eat.N NEG
“I haven’t eaten the fish.”
- (3) a. ba tẽ
1NOM go.SG.V
“I went.”
- b. ba ku-kwũr
1NOM 3ACC-break.SG.V
“I broke it.”
- c. i-tẽm
1-go.SG.N
“I’ve gone.”
- d. ije kwũrj
3ERG 3.break.SG.N
“I’ve broken it.”

Example (1) straightforwardly shows that a noun phrase can stand by itself, and have a clausal meaning. The examples under (2) show that nominalizations are called for in various contexts, including negation, modification by a manner predicate, and eventive complements of perception verbs. That these are nominalizations has of course to be taken on faith for now.

Finally, the examples under (3) show that two alignments coexist in the language, and are related to some aspect of verbal meaning (which we have translated rather vaguely as a contrast between a simple past and a perfect).

In this dissertation, we have endeavored to explain this last trait of Mēbengokre by recourse to the other two. Hence, for expository reasons, we begin by advancing a puzzle that pertains to split ergativity, and work our way back to the other traits, which we consider more fundamental. The puzzle is as follows.

0.1 The puzzle

The initial motivation for our inquiry is a contrast between the form and interpretation of the two forms in a verb's paradigm in Mēbengokre. The distribution and interpretation of these forms, which we temporarily label A and B,² can be summarized as follows:

1. Form A:

- (a) has a range of temporally stative interpretations, among which the perfect described above, when not embedded;
- (b) heads ergative-absolutive clauses;
- (c) is the only verbal form that can be embedded;
- (d) when embedded, its temporal and aspectual interpretation depend on that of the main clause;

2. Form B:

- (a) has a perfective³ simple past interpretation; advances narrative time;
- (b) heads nominative-accusative clauses;
- (c) can't be embedded.

The question is simply whether there is reason to believe that such disparate traits as characterize the two forms of the verb come together for a principled reason. Our answer is of course yes, and the reason we advance is based on the following claims:

²Form A is exemplified above in (3c) and (3d), and all of the embedded sentences in (2). Form B can be seen in (3a) and (3b), and the matrix verbs in (2a-b).

³This aspectual label should be considered provisional.

- Form A of verbs is nominal.
- Ergativity in nominalizations is a given.
- Embedded clauses and matrix clauses with Form A have the same structure (and denotation) at their core.
- The interpretation of matrix clauses with Form A arises from independent principles governing the interpretation of all nominal matrix clauses.

An obvious objection could be raised at this point: wouldn't it be simpler to say that Forms A and B just differ in a particular feature value, i.e., [+/-perfective]? Such an analysis would be unsatisfying for the following reasons:

1. No connection would be made between all the contexts where Form A is used.
2. It would say nothing about the contrast in aspectual meaning between main clause and embedded uses of Form A.
3. The ergative pattern that accompanies A Forms would remain unexplained.

In addition, with our work on Měbengokre we wish to show that nominalization can be plausibly argued to be at the core of aspect-driven ergativity splits in a wide array of languages.

0.2 Road map

In chapter 1 of the dissertation, we give a general outline of the verbal morphology of Měbengokre, and of the morphological manifestation of different case categories in the language. In chapter 2, we introduce ergativity and ergativity splits, and propose a theory of how nominative-accusative and ergative-absolutive alignments arise which gives a central role to the category label of the main predicate's extended projection. In chapter 3, we propose a general structure and semantics for nominal projections in Měbengokre. Finally, in chapter 4, we show how the structures introduced in chapter

3 are put together with higher clausal projections to yield sentences, and in particular how the aspectual meaning of such nominal clauses gets to be what it is.

0.3 A note on methodology

The majority of the examples presented in this dissertation correspond to structures which we have heard as spontaneous utterances in our eleven years of work with Mēbengokre speakers. Establishing their precise meaning is however a tricky problem. For the most part, we have based ourselves on the following methodology: we presented consultants with a discourse context in Mēbengokre, constructed by us, and culminating in the sentence whose semantics we were interested in. We asked consultants for judgements on the felicity of sentences in the given contexts, and for a translation of the narrative (and the culminating sentence) into Portuguese. Where relevant, we have given indication of the context in which particular sentences can be uttered. Though often for simplicity we just provide translations, it should be borne in mind that these are translations that one arrives at by considering what would be felicitous in a particular context, rather than by taking down a consultant's translation *ipsis verbis*.

The method was repeated with certain variants, to confirm our results: (a) presenting the context in Portuguese (with the culminating sentence still being presented in Mēbengokre), and (b), presenting the context and the culminating sentence in Portuguese, and asking for the most adequate translation of the culminating sentence into Mēbengokre.

Chapter 1

Mëbengokre verbal morphology, clause structure and case

The goal of this chapter is to provide a description of some core aspects of Mëbengokre morphosyntax and define some notions that will be employed in later chapters. The assumptions and conclusions in this chapter are generally in line with those of previous work on Mëbengokre and other Jê languages. A brief survey of this work is provided in §1.1.

The description is divided as follows: §1.2 deals with the basic structure of main clauses and the classification of predicate types; §1.3 examines the morphological makeup of verbal stems; §1.4 discusses the manifestation of morphological case in Mëbengokre, a prerequisite for the discussion of its split ergative system, which is the subject of chapter 2.

1.1 Previous work

Though previous work on Mëbengokre that is relevant to our present purposes is limited to Reis Silva and Salanova (2000) and Reis Silva (2001), several languages of the northern branch of the Jê family are close enough to Mëbengokre that their descriptions bear on our discussion, and vice-versa. Apinayé, the closest among these, is described by de Oliveira (2005); a previous description by Callow (1962) gives great

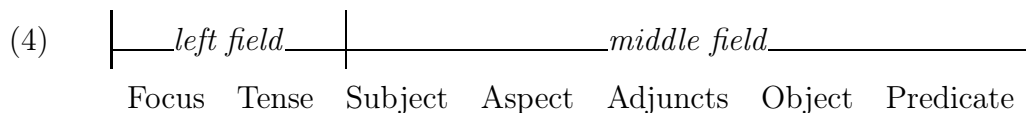
detail about its morphology and phonology, but relatively little about the topics that interest us here. Timbira, also quite closely related to Mēbengokre, has been described by Alves (2004); older published descriptions can be found in Popjes and Popjes (1986) and Shell (1952). Suyá has been described by Santos (1997), and Panará, slightly more distant from the rest, is the subject of Dourado (2001). Neither of the latter have been given consideration in this study.

In the southern branch of the Jê family, one finds the work of Urban (1985) discussing ergativity in Xokleng, and Wiesemann’s (1972) description of Kaingang. Wiesemann (1986) is a survey of the pronoun systems of several Jê languages. We didn’t have access to any usable source on the syntax of central Jê languages.

In recent times, a fair amount of work has been produced on the subject of ergativity in Jê languages, partly in response to the new synthesis of the facts put forth by Reis Silva (2001). Most of this work, known to us solely from conference programs, remains unpublished, and wasn’t accessible to us during the preparation of this dissertation.

1.2 The structure of main clauses

Word order in Mēbengokre is fairly rigid. The following diagram shows the position of constituents in a matrix clause. Tense and Aspect are the positions for two separate classes of particles, with roughly temporal and (viewpoint) aspectual meaning:¹



Most grammatical descriptions include early on a section devoted to establishing the lexical categories found in the language under study. The distinction between the class of nouns and the class of verbs is of great importance for all the discussion that is to follow, but we will not be too concerned about the remaining categories. We

¹It’s not clear whether there is a “right field” for extraposed constituents in Mēbengokre or if these only appear exceptionally as “afterthoughts”, but in any case this aspect of Mēbengokre syntax doesn’t enter consideration in the present work.

introduce a couple of notions that will only be fully explained in §1.3 and §1.4, namely the opposition between two forms of verbs, and the opposition between different case forms of pronominal elements, as the main criteria to establish the opposition in lexical category between nouns and verbs.

Predicates can be classified descriptively on the basis of the number of arguments they take and the morphological case that they assign to them. The following table summarizes the different predicate types found in Mēbengokre matrix clauses:

(5)

	Type I	Type II	Type III	Type IV	Type V
Form A	ERG–ABS	ERG–ABS	ABS	ABS	DAT–ABS
Form B	NOM–ACC	NOM–ABS	NOM	—	—

Examples of each of these types will be given in §1.3. In a move that at this point will sound irremediably circular, types I, II and III will be called *verbs*, based on the criteria mentioned above, i.e., that they oppose two forms (“A” and “B”) in their paradigm, and that this correlates with the fact that they exhibit two different patterns of case-marking their arguments. The circularity of this definition will be gradually mitigated, as we discuss other morphological properties that line up with this definition of the categorial opposition.

1.3 Verbal morphology

While non-verbal predicates are generally unanalyzable,² verbal stems are often morphologically complex. In this section, we provide a quick overview of the morphological categories expressed on verbs. We will concentrate initially on form and on a relatively superficial characterization of their function. In later chapters, and particularly in chapter 4, we will be much more precise about their semantics.

The maximal template of the verb in this language is given in (6).³ The morphology that is most important for the purposes of this dissertation is what in the template

²Except for compounding, which is quite productive in Mēbengokre, and the “nominal applicative” (cf. fn. 29, on p. 68).

³The transcription used throughout the thesis is quite abstract, and is chosen to highlight mor-

is called “category”, and number. The former was already introduced above as the contrast between the two verbal forms. Hereinafter we will call Form A *nominal*, and Form B *verbal*.

- (6) a. person – voice/valence – number/class – root – category
b. i-bi-ku-nɔ-r
1-INTR-CLASS-lose-N
“I’ve gotten lost.”

As far as morphological structure goes, category seems to be the affix closest to the root: class and voice prefixes are sensitive to whether the stem they are attaching to is verbal or nominal. Choice of category, on the other hand, can trigger root suppletion, but never suppletion of a constituent larger than the root, whereas number can trigger suppletion of the whole stem.

1.3.1 Category

In previous versions of our work, we identified the opposition between the two forms of verbs as an opposition between “finite” (form B or the verbal form) and “non-finite” (form A or the nominal form) forms of the verb. Though the intuition behind these labels seems to us to be correct, as form A has many of the properties of participles (though not infinitives) in better-known languages, we wish to highlight the parallel between the interpretation of nominal forms of verbs and underived nouns, and to avoid confusion with what it means to be finite or non-finite in the grammar of more familiar languages. In particular, we wish to exclude the possibility of implying that there are non-finite forms of verbs in addition to their nominal(ized) form. No such distinction exists.

The semantics of “category” is at the core of what will be discussed in chapters 2 and 4. As far as form goes, verbal and nominal forms of verbs contrast in that the

phological structure rather than to approximate pronunciation; for a discussion of Mēbengokre phonology and morphology, cf. Salanova (2001), Salanova (2004), and references therein.

latter normally have an extra final consonant that is idiosyncratically determined by the root:

- (7) a. tē, tēm
go.SG.V, go.SG.N
- b. mō, mōr
go.PL.V, go.PL.N
- c. rwɣ, rwɣk
go.down.SG.V, go.down.SG.N
- d. mrā, mrāp
walk.V, walk.N

There are some cases with complicated morphophonology, and also suppletion of the root (*ka-* is a class/number prefix compatible with both nominal and verbal forms of verbs):

- (8) a. ka-tɛ, ka-ʔek
CLASS-break.V, CLASS-break.N
- b. ka-ba, ka-dʒar
CLASS-take.out.SG.V, CLASS-take.out.SG.N
- c. ŋōr, pōt
sleep.V, sleep.N

In Salanova (2001), I suggested that the nominal form should be considered basic, since the shape of the verbal form could be predicted from it, modulo suppletion, but not vice-versa. More detailed examination of the regularities found across all known verbs suggests that the shape of neither form can be predicted straightforwardly from the other in the general case. We omit consideration of the relevant examples here; the interested reader may consult Salanova (2004). In this dissertation we will be agnostic about segmentation, and simply gloss nominal forms as *root.N*, and verbal forms as *root.V*.

As we stated above, category correlates with patterns of case-marking of dependents: with verbal forms of verbs, subjects are nominative and objects accusative;⁴ with nominal forms, transitive subjects are marked ergative, and intransitive subjects and objects are marked absolutive:^{5,6}

- (9) a. ba arɣm ku-ma
 1NOM already 3ACC-hear.V
 “I already heard it.”
- b. ijε a-kabēn mar ket
 1ERG 2-speech hear.N NEG
 “I haven’t heard you speak.”
- (10) a. ba kām pruu kot tē
 1NOM then path along go.V
 “I then went on the (animal’s) path.”
- b. bΛ kam i-tēm ket
 forest in 1-go.N NEG
 “I haven’t gone into the woods.”

Predicates of Types IV and V have a single form, that patterns like the nominal form of true verbs, in that the first argument gets absolutive, while the second argument (of Type V) is expressed by means of an oblique:⁷

- (11) a. i-ɲruuk
 1-angry
 “I’m angry.”

⁴In Type I transitive verbs. Another class of transitive verbs (Type II) marks its objects in the absolutive, regardless of category. We return to this below.

⁵In chapter 2, we will see that this simple generalization seems to be contradicted by the progressive construction; however, the progressive will be analyzed as bi-clausal, preserving the correlation made here.

⁶Note that absolutive case is not indicated in the glosses (only the person is glossed).

⁷In the case of experiencer predicates such as (11b), the subject is dative, rather than ergative as with the nominal forms of predicates of Type I and II.

- b. i-mã piʔok jã kĩɲ
 1-DAT book this pleasant
 “I like this book.”

Clauses involving predicates of Types IV and V are morphosyntactically parallel to possessive sentences, in which the predicate slot is occupied by a noun:⁸

- (12) i-kra
 1-child
 “I have a son or daughter.”

It could thus be said that nominal sentences are a special case of predicates of Types IV or V, or vice versa. In chapter 4, we will delve into the analogy between possessive (and, more generally, “existential”) constructions and sentences involving predicates of Types IV and V, and nominal forms of predicates of Types I, II and III.

1.3.2 Number

Many, but certainly not all, Měbengokre verbs present a contrast for “number”, which on the surface seems to be agreement with the subject of intransitive verbs, and the object of transitive verbs. Morphologically, verbal number is often manifested in class/number prefixes,⁹ but also through stem suppletion in verbs that have no such

⁸If the noun involved in the possessive sentence is “alienably possessed”, its possessor is expressed by means of a postposition, rather than by an absolutive pronoun:

- kubě ɲõ kɔ
 barbarian POSS canoe
 “The white man has a canoe.”

⁹The class/number prefixes are for the most part idiosyncratically selected by particular roots. In the cases where two verb stems contrast only in the choice of prefix, the semantic contrast is often one of number (involving *ku-* ‘singular’ vs. *ja-* ‘plural’), though a few examples exhibit a contrast that has to do with other properties of the object or the action. Here we are not concerned with the non-number components of the meaning of these prefixes.

prefixes. The contrast between (13a) and (13b) is an example of number being coded in the prefix:

- (13) a. ku-oj
“light a fire” (often used intransitively)
- b. ja-oj
“light several items on fire”

An example where the suppletion targets the whole stem is given by the following example, where a morphologically simple stem is in a suppletive relation with a morphologically complex one (for a simpler example, see the contrast between (7a) and (7b) above):

- (14) a. rwɤk
“go down (SG.N)”
- b. bi-ja-dʒwɤɾ
INTR-CLASS-put.down.N
“go down (PL.N)”

It is fair to ask why such widely divergent verbal stems are considered to be part of the same paradigm. The criterion to classify two (often suppletive) verbal stems as instantiating a number opposition is simply the obligatory substitution of one for the other in constructions where the number of the object or intransitive subject is explicitly marked as singular or plural, so here we are subordinating morphological form to a paradigmatic opposition in the syntax. Also, as we will see in §4.2, the number contrast is relevant for the determination of the aspectual value of predicates. For these reasons, we consider this opposition to be systematic, despite its morphological quirks and the fact that not all verbs exhibit it.

We will not discuss argument structure alternations here. Our description of verbal morphology therefore ends here.

1.4 Case in Mēbengokre

The present section discusses the case forms of pronouns and extends the notion of case to non-pronominal noun phrases, even though case isn't manifested morphologically in them at all in Mēbengokre. The discussion follows and expands on the exposition in Reis Silva and Salanova (2000) and Reis Silva (2001). The purpose of this discussion is to provide the morphological facts that ground the discussion of split ergativity in chapter 2.

Mēbengokre distinguishes between four case forms in pronouns: ergative, absolutive, nominative and accusative. The forms for accusative and absolutive are identical in all persons but the third. The following table, based on Wiesemann (1986), gives the different forms for the singular pronouns. Number (singular vs. paucal vs. plural) is normally marked with a freestanding particle, but there is some fusion in the first person inclusive which need not concern us.¹⁰

(15)		NOMINATIVE	ERGATIVE	ABSOLUTIVE	ACCUSATIVE
	1 excl.	ba	ijε	i-	i-
	1 incl.	gu	(gu) bajε	(gu) ba-	(gu) ba-
	2	ga	ajε	a-	a-
	3	ta/∅	kutε	∅	ku-

As the table indicates, absolutive and accusative pronouns are prefixes, while ergative and nominative forms are freestanding. Below, we establish that all of the case forms are pronominal.

¹⁰First person inclusive means “inclusive of the hearer”, and likewise for first person exclusive. The singular of the first person inclusive, of course, refers to two people (*you and I*). The fact that there is fusion of the number particle in the first person inclusive explains the slightly different distribution of *gu*, which is optionally present with absolutive and accusative inflection, contrary to what occurs with *ba* and *ga*. In what follows, we will describe the properties of pronouns based on the behavior of first person exclusive and second person, on the one hand, and third person, on the other.

1.4.1 Absolutive

The absolutive forms occur in all branches of the Jê family, and in the Southern branch, which consists of the Kaingang and Xokleng languages, they seem to be free-standing pronouns that occur in all functions, without case accident. It is plausible to suppose that this is the case in previous stages of other present-day Jê languages. Since it is the form with widest distribution in Mẽbengokre, we will gloss it simply as 1, 2, 3, without an explicit case marker.

A peculiarity of third person absolutive inflection is that, while it is zero on most stems, it is realized as the truncation of an initial consonant on stems beginning with /j/, /dʒ/, /ɲ/ and /puw/:

(16)

<i>stem</i>	<i>3+stem</i>	
jaka	aka	‘to be white’
dʒir	ir	‘to put’
puuma	uma	‘to be frightening’

In Salanova (2004) we suggest that this peculiar behavior can plausibly be traced back to a prefix in a previous stage of the language that provoked the truncation as an onset fix. In this dissertation, we gloss the third person absolutive pronominal as an element fused to the stem (i.e., *3.stem*) whether it has a morphological reflex or not.

Absolutive inflection is also used for possessors of inalienably-possessed nouns (i.e., a structural genitive case). In fact, when we address the connection between case-marking inside noun phrases and case marking in the clause in chapter 2, we will conclude that the absolutive should be called genitive throughout.

1.4.2 Accusative

Accusative is minimally distinct from absolutive, and it is employed in only a subset of transitive verbs. This has prompted efforts to merge the two, and explain the surface contrast as based on prosodic demands, as in de Oliveira (2005), where the accusative *ku-* is considered to be an allomorph of the absolutive \emptyset used with monosyllabic

verbal stems, or on semantics, as in Reis Silva and Salanova (2000), where *ku-* is said to indicate a particular noun class or specificity of the object (more individuated animate entities).

While both approaches have a certain plausibility, neither completely fits the synchronic facts. For one thing, *ku-* only occurs on transitive verbs, while \emptyset is the only one to occur on nominal forms of transitives and intransitives, as well as on inalienably possessed nouns, regardless of their phonology or semantics. It is precisely for this reason that we employ the labels “accusative” versus “absolutive”. Furthermore, postpositions are arbitrarily divided into those that govern the accusative (*mã* ‘to’, *be* ‘in’, and *jε* ‘ERG’) and those that govern the absolutive (*ɔ* ‘with’, *kot* ‘along’, *?ã* ‘on’, among others). The following table summarizes the facts.¹¹

(17)	a.	break (tr. v.)	ku-kwũr	* \emptyset -kwũr
	b.	break (tr. n.)	* ku-kwũɲ	\emptyset -kwũɲ
	c.	go (intr. n.)	* ku-tẽm	\emptyset -tẽm
	d.	son (inal. n.)	* ku-kra	\emptyset -kra
	e.	with (abs. p.)	* ku-kot	\emptyset -kot
	f.	to (acc. p.)	ku-mã	* \emptyset -mã

One is therefore forced to admit the existence of an accusative inflection distinct from the absolutive.¹² Another peculiar fact about *ku-* is that it’s substituted by the second person prefix when the *subject* of a transitive verb is in the second person.

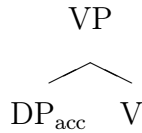
¹¹The abbreviations should be interpreted as follows: tr. v., transitive verb; tr. n., nominal form of a transitive verb; intr. n., nominalized form of an intransitive verb; inal. n., inalienably possessed underived noun; abs. p., postposition governing the absolutive; acc. p., postposition governing the accusative.

¹²The fact that the morphological contrast is only visible in the third person shouldn’t make us hesitate: this is precisely what happens with the dative versus accusative distinction in the pronominal clitics of most Romance languages.

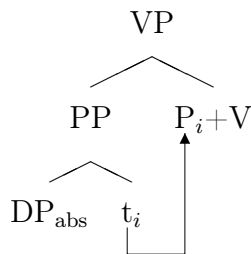
- (18) a. ba ku-bĩ ‘I killed it’
 1NOM 3ACC-kill
- b. ga a-bĩ ‘You killed it’
 2NOM 2-kill
- c. * ga ku-bĩ
- d. ba a-bĩ ‘I killed you’
 1NOM 2-kill

As to how to explain the peculiarity that absolutive is used for the objects of some verbs, we adopt a proposal by Reis Silva (in progress), who sets off from the generalization that all verbs that assign absolutive to their objects are characterized by extra morphology (a class/number prefix), which could be plausibly characterized as applicative. Neither underived intransitives nor accusative-assigning transitives have class/number prefixes:

- (19) Accusative-assigning transitive: bĩ ‘kill’, ma ‘hear’, etc.



- (20) Absolutive-assigning transitive: ka-ba ‘take out’, ja-ko ‘blow’, etc.



Objects introduced by the applicative morpheme get absolutive case because they are the objects of the applicative morpheme, rather than of the verb.¹³ Direct objects of inherently transitive verbs get accusative. This might have semantic consequences which are out of the purview of this dissertation.

¹³The apparent circularity of this statement will be attenuated once we discuss the formal mechanisms for case assignment in §2.5.

1.4.3 On the referential nature of object prefixes

Noun phrases are in complementary distribution with third person pronominal object forms (in both the accusative and the absolutive):

- (21) a. ku-bĩ ‘(he) killed him’
 3ACC-kill
- b. mruu bĩ ‘(he) killed an animal’
 animal kill
- c. mruu ku-bĩ ‘the animal killed him’ (not: ‘killed the animal’)
 animal 3ACC-kill

The pattern is not unfamiliar, as it is attested in object markers in Bantu (Bresnan and Mchombo 1987), in Romance dialects which don’t permit clitic doubling (Cinque 1990), and claimed to be the case in several Amerindian languages from different families (Jelinek 1984). What does seem peculiar about the pattern found in Měbengokre, as opposed to the languages mentioned (but is also characteristic at least of a few other Jê, Tupian and Carib languages), is that the object markers, though apparently attached to the stems, can be replaced by a non-pronominal noun phrase. That is, in those words that require it, the absolutive argument is obligatory,¹⁴ but it can be either a pronominal prefix or a non-pronominal noun phrase. We take this to mean that the pronominal prefixes are referential (i.e., *not* agreement);¹⁵ objects are considered to be clitic left dislocated whenever the object pronominal forms are

¹⁴Anticipating our discussion in chapter 2, even in constructions involving control.

¹⁵One shouldn’t read too much into the claim that the person markers are referential. In fact, first and second person markers *are* literally referential, but third person markers can also be variables, as will be seen in chapter 3, and as is already evident in (22). Syntactically, they are pronominal arguments of the predicate that selects them.

On a related note, an alternative approach would say that the object markers themselves aren’t referential, but rather are licensers of *pro*. We don’t have sufficient data to distinguish between these two positions, which in the literature on Romance languages have generated a long debate. Note that in this literature it has been remarked that clitic left-dislocation is incompatible with focus, so examples such as (22) are *prima facie* problematic for the approach we adopt here.

present. Such situations arise when the object is in focus position, before the tense markers *ně* or *dʒa* (cf. (4)). Object *wh*- questions also require that there be an overt object pronominal, with the *wh*- word occupying the same focus position:

- (22) a. mru nē ku-bī
 animal NFUT 3ACC-kill.SG.V
 “He killed an *animal* (focus)”
- b. mɤj nē ku-bī
 what NFUT 3ACC-kill.SG.V
 “what did he kill?”

Despite the caveats expressed in fn. 15, we will often, for simplicity, refer to all of the forms in table (15) as pronominal forms, rather than distinguishing between freestanding pronouns and person prefixes. The distinction between these is assumed to be simply a morphological or prosodic one.

1.4.4 Nominative

Nominative forms of pronouns are likely to have originated from inflected auxiliaries, i.e., from the fusion between an absolutive pronominal form and a left-peripheral particle.¹⁶ Though synchronically it’s implausible to consider them auxiliaries in Mēbengokre, some aspects of their behavior are atypical in garden variety pronouns.

The unusual characteristic of nominative pronouns is that, in main clauses, they can duplicate a subject that is already expressed lower in the clause by an ergative, dative or absolutive pronominal form. These pleonastic nominative pronouns, unavailable in embedded clauses, seem not to indicate any emphasis.¹⁷

- (23) a. ba i-tēm
 1NOM 1-go.N
 “I go.”

¹⁶Auxiliaries that agree in person and number with the subject subsist in Xokleng, a language of the southern branch of the Jê family (cf. Urban 1985, p. 166-7).

¹⁷In fact, they are topics, as subjects often are. With special prosody much more is possible, of course, but this shouldn’t surprise us.

- b. ba ije ir
 1NOM 1ERG 3.put.down.N
 “I put it down.”

We take the ability to be “duplicated” by a nominative pronoun in the position between tense and aspectual particles as the primary diagnostic for subjecthood in Mēbengokre main clauses. In the following example one can see that, while a dative subject can be doubled by a nominative pronoun, other datives, such as ethical datives or indirect objects, can’t:¹⁸

- (24) a. (ba) i-mã jã kĩp
 1NOM 1-DAT this please

¹⁸All of the sentences considered above can be further augmented with an emphatic pronoun, a fact first described by Borges (1995).

- a. ba nē ba tē
 1NOM NFUT 1NOM go.V
 “I go.”
- b. ba nē ba ku-bur
 1NOM NFUT 1NOM 3ACC-put.down.V
 “I put it down.”
- c. ba nē ba i-tēm
 1NOM NFUT 1NOM 1-go.N
 “I go.”
- d. ba nē ba ije ir
 1NOM NFUT 1NOM 1ERG 3.put.down.N
 “I put it down.”

Pronouns in this position also take the nominative form. The difference between this position, which we call Focus, and the former, is that while Focus can be coindexed with any argument lower in the clause, the Nominative subject position can only be coindexed with the subject:

- a. ga_i nē ba_j a_i-pumũ
 2NOM NFUT 1NOM 2-see
 “I saw *you*.”
- b. *ba_j nē ga_i a_i-pumũ
 1NOM NFUT 2NOM 2-see

There is also a difference in information structure, as is implied by the labels. The lower position is topical, whereas the higher one is either presentational or contrastive focus.

“I like this.”

- b. ga (*ba) i-mã jã ñã
2NOM 1NOM 1-DAT this give.V

“You give this to me.”

Similar examples could be produced showing a contrast between absolutive subjects of intransitive verbs and absolutive objects of transitive ones.

1.4.5 Case in non-pronominal noun phrases

Non-pronominal noun phrases do not show any case accident, except in the ergative, where they are followed by *kutɛ* or *tɛ*. As we suggested in (15) above, *kutɛ* is in fact a pronoun, and thus noun phrases followed by *kutɛ* are clitic left-dislocated. From the morphology, though this is inconclusive, it would seem that *tɛ* is a reduced form of the *pronoun*, rather than a case marker or postposition directly on the noun phrase, so even in this case one would be dealing with a clitic left-dislocated construction. If non-pronominal noun phrases followed by an ergative pronoun are clitic-left dislocated, they plausibly occupy the same slot as nominative pronouns in constructions where they appear pleonastically. This is a matter for future research.

Throughout the thesis, we will talk of noun phrases (or arguments) in Mëbengokre as *absolutive*, *nominative*, etc., to refer to noun phrases licensed in the same positions as pronouns that receive absolutive, nominative, etc.¹⁹ Given that pronouns are generally in complementary distribution with full noun phrases, this is not an unreasonable move, but by it we don't mean to imply that “abstract case” has to be a part of our grammar. The question is again discussed in §2.5.

This concludes our description of the case facts of Mëbengokre. We should make a brief remark about the absence of any reference to agreement in the dissertation. The assumption that we will make here is that all of the phenomena that are relevant to our analysis of ergativity fall under the purview of case theory, rather than involving

¹⁹With the caveat advanced in the previous paragraph about non-pronominal noun phrases in the ergative.

agreement. It is for this reason that we have argued that the bound person forms should be considered pronouns, rather than agreement markers. There is, however, a clear case of agreement in Měbengokre, namely the “eccentric” agreement of the object pronominal with a second person subject, shown in (18b). This case won’t be taken into consideration, and should therefore be put aside for consideration in later research.

Chapter 2

Nominalizations and ergativity

In the previous chapter we offered a description of the morphosyntax of Mēbengokre, with particular attention, in §1.4, to the manifestation of case in pronominal elements. In this chapter, we relate these morphological cases described in the abstract to the intricate split-ergative alignment found in Mēbengokre. This chapter takes as a starting point the findings of Reis Silva (2001), which is devoted to the subject of case marking in Mēbengokre and other Jê languages.

The alignments to be discussed are summarized in the following three pairs of examples, all involving verbal predicates:

- (25) a. ba tẽ
1NOM go.SG.V
“I went.”
- b. ba ku-kwũr
1NOM 3ACC-break.SG.V
“I broke it.”
- (26) a. i-tẽm
1-go.SG.N
“I’ve gone.”
- b. ijε kwũŋ
1ERG 3.break.SG.N
“I’ve broken it.”

- (27) a. ba i-tēm ɔ=mõ
 1NOM 1-go.SG.N INSTR=go.PL.V
 “I’m going.”
- b. ba kwũɲɲ ɔ=mõ
 1NOM 3.break.SG.N INSTR=go.PL.V
 “I’m breaking it.”

In example (25), subjects of both transitive and intransitive verbs are expressed by a pronoun in the nominative, while the object of a transitive is expressed by an accusative pronoun. In (26), both intransitive subjects and transitive objects are expressed by an absolutive pronoun, while the transitive subject is expressed by an ergative pronoun. In (27), the transitive object and the intransitive subject are expressed by an absolutive pronoun, while subjects, both transitive and intransitive, are expressed by a nominative pronoun.

The pattern in (25) can be described straightforwardly as a nominative-accusative alignment. The pattern in (26) can be described equally straightforwardly as ergative-absolutive. The pattern in (27) is not a “case alignment pattern” at all, since one of the core arguments (the intransitive subject) is coded twice, once as absolutive and once as nominative.

The different case alignments found in Měbengokre correspond to constructions that could be characterized as differing in aspectual meaning. Before we can go deeper into what conditions the different case patterns, however, we give a brief introduction to ergativity and ergative splits.

2.1 Ergativity

Case, agreement, and word order treat different core participants of the clause in different ways cross-linguistically. In English, the pre-verbal position and the agreement of the inflected verb or auxiliary are reserved for the subject, whether it be of transitive or intransitive verbs. In addition, subjecthood is indicated on a subset of the pronouns of English by nominative case, which in main clauses is opposed to the accusative case on pronouns in object function:

- (28) a. I see you.
 b. You see me.
 c. I shout.

Marking direct objects as distinct from subjects, of course, is not the only conceivable way of distinguishing participants in a clause. A priori, if one distinguishes three primitive grammatical relations, A, S and O, where S stands for the single argument of an intransitive verb, A for the transitive subject and O for the transitive object,¹ the following five logical possibilities exist (cf. Comrie 1978, p. 332):

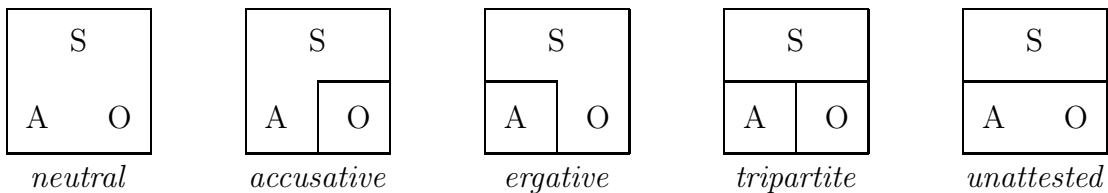


Figure 2-1: Logically possible alignments, given grammatical functions A, S and O.

With the exception of the last, all of these possibilities for case marking core participants in the sentence exist in natural languages. In this dissertation we will concern ourselves with the opposition between the most common of these case systems, i.e., the one seen in the English examples above, called nominative-accusative or simply accusative, and the ergative-absolutive, or simply ergative, where the case mark on the sole participant of an intransitive verb is identical to the case mark on the object of the transitive verb.² The contrast between the ergative and the accusative systems is exemplified below with Dyirbal, which presents a clear cut ergative system, and Quechua, which presents a straightforward accusative system, where all objects (and not only pronouns, as in English) are distinguished by their marking from an unmarked class that encompasses transitive and intransitive subjects:

¹We will assume that these primitives can be defined in a language-particular way on the basis of semantic (position within a thematic hierarchy) or syntactic (ability to control and bind anaphors, etc.) criteria.

²The assumption is that the other two attested systems can be reduced to ergative or accusative, or a combination of the two.

(29) Dyirbal (Dixon 1994):

- a. yabu banaga-n^yu
mother return-NONFUT
“Mother returned.”
- b. yabu ŋuma-ŋgu bura-n
mother father-ERG see-NONFUT
“Father saw mother.”

(30) Quechua:

- a. mama jamu-n
mother come-3
“Mother comes.”
- b. tata mama-ta riku-n
father mother-ACC see-3
“Father sees mother.”

Though initially defined in terms of marking on dependents, the designations *ergative* and *accusative* can be easily extended to encompass other means by which participants’ functions are coded in a sentence’s syntax. As we mentioned above, agreement and word order facts in English oppose objects to all subjects, transitive and intransitive, and thus they could be said to display an accusative alignment system, even though case is not marked in non-pronominal noun phrases. An example of an agreement system with ergative alignment is argued by Urban (1985) to exist in Xokleng.³ In Xokleng, verbs display agreement (through various morphological means, which include suppletion) with the absolutive argument:

- (31) a. tã wũ tẽ mũ
he 3NOM go.SG ACTIVE
“He went.”
- b. ɔŋ wũ mũ mũ
they 3NOM go.PL ACTIVE
“They went.”
- c. ɔŋ wũ ti pɛnũ mũ
they 3NOM he shoot.SG ACTIVE
“They shot him.”
- d. tã wũ mẽ ɔŋ pin mũ
he 3NOM DISTRIB they shoot.PL ACTIVE

³In §4.2 we will analyze the “number agreement” of Mëbengokre as an interpretable marker of event plurality, an analysis which presumably extends to the roughly commensurate facts of Xokleng. For now, we accept Urban’s analysis as a reasonable description of the surface facts. Note that since noun phrases in Xokleng aren’t obligatorily marked for number, the number on the verb is usually the main indication of the number of a particular argument.

“He shot them.”

In English and other SVO languages, word order could be said to follow a nominative-accusative pattern, with the accusative noun phrase following the verb, and the nominative one preceding it. We don’t know of any clear-cut example of ergativity manifesting itself solely in word order.

In what follows, we will address ergativity as it manifests itself in case marking on noun phrases and agreement in heads. In this way, we will skirt the difficult question raised by so-called syntactically ergative languages, in which the absolutive argument functions as the syntactic subject (or “pivot”) for the purposes of control or coreference in coordinated sentences. According to the typological literature,⁴ all syntactically ergative languages are also morphologically ergative, while in many morphologically ergative languages a notion of subject conflating the A and S categories (like in nominative-accusative languages) is the relevant pivot for control and coreference in coordination. We won’t have the opportunity here of fully addressing the issue of syntactic versus morphological ergativity, but it again comes up at the end of this chapter.

2.2 A brief survey of ergative splits

It is often the case that a single language will have parts of its grammar that display ergative alignment, while others display accusative alignment. These “splits” in case-marking are conditioned by several factors. According to the typological and functional literature, such factors include tense, aspect, mood, person, the semantics of the main predicate or of the arguments, and several others.

We will examine briefly three types of splits as traditionally defined: person splits, splits conditioned by tense, aspect or mood, and splits conditioned by the semantics of the predicate. The types of split are ordered from most to least frequent.⁵ Though

⁴References to the typological literature herein are primarily to the surveys in Comrie (1978) and Dixon (1994).

⁵This section has benefitted extensively from notes to two lectures offered at MIT by M. Polinsky

our main concern in the dissertation is with aspectually-conditioned splits, surveying the common types of ergativity splits serves the twofold purpose of introducing an empirical domain that is relevant to the description of Mēbengokre,⁶ and presenting evidence that variation in this domain is much more constrained than one is led to believe from superficial descriptions.

2.2.1 Person splits

In some split-ergative languages, a certain subset of nominal expressions receive case marks in the ergative-absolutive system, whereas the remainder are case-marked in the nominative-accusative system. The descriptive generalization that seems to hold crosslinguistically is that if a person split obtains, it is preferentially first and second person pronouns that are case-marked in the nominative-accusative system, whereas inanimate nouns are case-marked in the ergative-absolutive system. There is room for variation as to how the remainder of nominal expressions is divided between these two classes, but in any case a nominal “animacy” (Silverstein 1976) or “empathy” (Lehmann 1998) hierarchy seems to be respected, such that if a certain class of nouns is marked in the accusative system, all nouns with greater or equal “animacy” or “empathy to the speaker or hearer” will also be graced with nominative-accusative marking. A not particularly fine-grained version of this hierarchy would be as follows:

1st and 2nd person \gg 3rd person pronouns \gg humans \gg animates \gg inanimates

The cutting point between ergative and accusative alignment is set arbitrarily in a particular language at a certain point along this scale, with those noun phrases to the left of the cutting point showing accusative alignment, and those to the right ergative.

in March 2007.

⁶Both aspect splits and splits conditioned by the semantics of the predicate occur in a superficial description of Mēbengokre. Though person splits don’t occur in Mēbengokre, we consider them here given their cross-linguistic pervasiveness.

An example of a person-based ergativity split is given by the Panoan language Wariapano, discussed by Valenzuela (2000), where pronouns pattern as nominative-accusative, while other noun phrases pattern as ergative-absolutive:⁷

(32) Wariapano

- a. Jabon-bi-ra ka-iní-kain
3PL-NOM-EVID go-INCOMPL-3PL
“They are going.”
- b. Ja-bi-ra ano pi-ini
3-NOM-EVID paca eat-INCOMPL
“He is eating pacas (*Agouti paca*).”
- c. Nojkon pajpa-n-ra kajpe tsajka-ke
1POSS father-ERG-EVID lizard poke-COMPL
“My father poked the lizard.”
- d. Nojkon koka-ra manish-no ka-ki
1POSS uncle-EVID forest-DIR go-COMPL
“My uncle went to the forest.”

As a special case of person splits, one might include systems where case marking on noun phrases exhibits one type of alignment, while agreement (or pronominal inflection) exhibits a different one. The following Warlpiri data from Hale (1973) (apud Jelinek 1984, p. 45) exemplify such a split:

- (33) a. ngajulu-rlu ka-rna-ngku nyuntu-∅ nya-nyi
I-ERG PRES-1SG.NOM-2SG.ACC you-ABS see-NONPAST
“I see you.”
- b. nyuntulu-rlu ka-npa-ju ngaju-∅ nya-nyi
you-ERG PRES-2SG.NOM-1SG.ACC me-ABS see-NONPAST
“You see me.”

⁷Valenzuela complements the discussion of Wariapano with a discussion of Shipibo-Conibo, where all noun phrases are marked in the ergative-absolutive, and of Yaminawa, where only first and second person pronouns get nominative-accusative marking, while third person pronouns and all other noun phrases get ergative-absolutive. The Yaminawa data presented in the article are nevertheless inconclusive.

- c. nyuntu-∅ ka-npa purla-mi
 you-ABS PRES-2SG.NOM shout-NONPAST
 “You are shouting; you shout.”

As can be seen here, while noun phrases are marked as ergative or absolutive, pronominal clitics on the auxiliary are nominative or accusative. According to Corbett (2006), if there is a discrepancy between case marking and agreement, then agreement is nominative-accusative, while case marking is ergative-absolutive, but never the other way around,⁸ thus in some sense respecting the “empathy hierarchy” that applies to pronouns and other noun phrases.

There are no person splits in Mēbengokre; person splits won’t be considered any further in this dissertation.

2.2.2 Aspect splits

A second type of split ergative system is often described as being conditioned by tense, aspect and mood. Examples of languages with such splits include Georgian, Burushaski, and many of the Indo-Aryan languages. The following Georgian examples are from Nash (1995):

(34) Georgian: Ergative in the aorist

⁸Recent data from Kutchi-Gujarati in Patel (2007), however, exemplify a situation (the past perfective tense) in which agreement is ergative-absolutive, while case marking on noun phrases is nominative-accusative:

- a. tu aav-i
 you.SG come-F.SG
 “You (fem.) came.”
- b. tu chokra-ne mar-ya
 you.SG boys-ACC hit-PFV.M.PL
 “You hit the boys.”

Note that the same split pattern holds in (31), if in fact the number alternation is to be treated as agreement. In addition, participial agreement in languages such as French and Italian is with the absolutive argument, while all noun phrases in these languages follow nominative-accusative alignment.

- a. Nino-m surat-i da=xat-a
Nino-ERG picture-ABS PREV=draw-AOR.SG
“Nino has drawn a picture.”
- b. Bavšv-eb-i ga=braz-d-nen
child-PL-ABS PREV=angry-INCH-AOR.PL
“The children have gotten angry.”

(35) Nominative in the imperfective

- a. Nino surat-s xat-av-s
Nino.NOM picture-OBJ draw-TH-SG
“Nino draws a picture.”
- b. Bavšv-i țir-i-s
child-NOM cry-TH-3SG
“The child cries.”

The cross-linguistic generalization capturing this type of ergative split seems to be that “tenses” often designated by the terms perfect, perfective or aorist tend to occur with ergative-absolutive alignment, whereas the remainder, which includes at least imperfectives, occur with nominative-accusative alignment. As far as we can ascertain, then, so-called tense-aspect-mood splits essentially boil down to aspectually conditioned splits; in no case known to us are splits based unequivocally on tense (i.e., situating the proposition with respect to utterance time) or mood. Furthermore, it is also not clear (M. Polinsky, p.c., 3/2007) that the aspectual value usually described as a perfective is not in fact better described as a perfect, with perfective simple past as one of its many readings. There are no cases known to us of languages with distinct forms for the perfect and for the perfective, and an aspectually-conditioned split in which it is the perfective, and not the perfect, which is associated with ergative alignment. We will return to the semantics of these distinctions in chapter 4.

The Mēbengokre facts introduced in the opening paragraphs of the chapter constitute an aspectually conditioned ergativity split, found also in several other languages of the Jê family, and described variously in the sources enumerated in §1.1. The precise semantics of this split in Mēbengokre will be the subject of chapter 4. The contrast between ergative and accusative main clauses has been described in the

northern Jê language Timbira as one of tense in Shell (1952), Popjes and Popjes (1986), and other sources. The following Timbira examples are from Shell, *op. cit.* (apud Urban 1985):

- (36) Ergative in the “past tense”
- a. wa i-te a-py-w
 already 1-ERG 2-grab-PAST
 “I grabbed you.”
 - b. wa i-wy-k
 already 1-descend-PAST
 “I descended.”
- (37) Accusative in the “present tense”
- a. wa a-py
 1NOM 2-grab
 “I grab you.”
 - b. wa wy
 1NOM descend
 “I descend.”

The pattern in Mēbengokre is superficially identical. In the analysis that we develop in chapter 4, the split in Mēbengokre main clauses, is characterized as a contrast between a perfect with ergative alignment and an unmarked (perfective or imperfective) aspect with accusative alignment. Our translations differ accordingly from the Timbira:

- (38) Ergative pattern in the perfect:
- a. ijε a-buur
 1ERG 2-grab.N
 ‘I have grabbed you.’
 - b. i-rwɣk
 1-go.down.N
 ‘I have gone down.’
- (39) Accusative pattern in perfectives:

- a. ba a-buu
 1NOM 2-grab.V
 ‘I grabbed you.’
- b. ba rwx
 1NOM go.down.V
 ‘I go down.’

If we wish to make an analogy with the hierarchy that subsumes possible person splits, the following would be a reasonable way to summarize what we’ve said in this section:

progressive and habitual ≫ perfective ≫ perfect

As with the nominal hierarchy, a language sets a cutting point between ergatively and accusatively aligned constructions somewhere along this hierarchy; all aspectual values to the left of the cutting point show ergative alignment, while aspectual values to the right of the cutting point show accusative alignment. Using a hierarchy here is somewhat tricky, since we are referring to constructions, rather than directly to aspectual meaning. Elucidation of these issues will be postponed until chapter 4.

2.2.3 Split S systems

A third common type of split ergativity is often called split intransitivity, split S system, or “active-stative” system. It arises when some intransitive subjects (of “active” predicates) align with transitive subjects, while the rest (subjects of “stative” predicates) align with direct objects. Schematically, if we distinguish between the two types of intransitive subjects, we could represent this system as in figure 2-2.

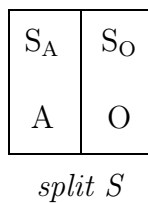


Figure 2-2: Split S system, considered by some authors (Klimov 1974) as an alignment on par with those of figure 2-1.

To illustrate split intransitivity, consider the Guaraní data, from Velázquez-Castillo (1996) in figure 2-3.

<i>Stative</i>		<i>Active</i>	
che-yta	‘I can swim’	a-yta	‘I swim’
che-monda	‘I’m a thief’	a-monda	‘I steal’
che-karu	‘I’m a big eater’	a-karu	‘I eat’
che-ka’u	‘I’m a drunk’	a-ka’u	‘I get drunk’
che-kakuaa	‘I’m big’	a-kakuaa	‘I grow’
che-guata	‘I’m a fast walker’	a-guata	‘I walk’
che-kirirĩ	‘I’m a quiet person’	a-kirirĩ	‘I stop talking’
che-tyarõ	‘I’m mature’	a-tyarõ	‘I mature’
che-vevui	‘I’m light’	a-vevui	‘I float’
che-poi	‘I lose grip’	a-poi	‘I drop’

Figure 2-3: Guaraní verbs that can be both “active” and “stative”

The predicates given constitute a small set of predicates in Guaraní that can be both “active” and “stative”,⁹ stativity or activity being revealed by the choice of the pronominal form for the subject; the majority of intransitive predicates in Guaraní belong to one class or the other, but not both.

In Mëbengokre, a similar split could be argued to exist on the basis of the contrast between Type III and Type IV predicates from table (5), repeated here for convenience:

(40)	Type I	Type II	Type III	Type IV	Type V
Nominal	ERG–ABS	ERG–ABS	ABS	ABS	DAT–ABS
Verbal	NOM–ACC	NOM–ABS	NOM	—	—

While regular intransitive verbs (Type III predicates) mark their subjects as nominative when in their verbal (or “finite”) form, a class of nominal predicates (Type IV, as well as the nominal form of Type III predicates) which translate certain stative notions (cf. §1.3) mark their subjects in the absolutive, i.e., making them identical to the direct objects of Type II predicates.

So far, we have established that Mëbengokre has two “splits” in its surface syntax: an aspect split, and a predicate-type split (“split S”) in intransitive predicates. In

⁹Possibly in the sense of Vendler (1967); cf. the discussion in Mithun (1991).

§§2.3 and 2.5 we will unify the aspectual split and the predicate-type split found in Mëbengokre under a single conditioning factor.

2.2.4 Ergativity in nominalizations

To conclude our discussion of ergativity splits commonly found cross-linguistically, we now address the opposition between nominalizations (or noun phrases in general), which tend to have an “ergative” alignment,¹⁰ and nominative-accusative main clauses. The discussion of ergativity in nominalizations is usually excluded from surveys of ergative splits, as these are generally restricted to clausal constructions. This omission, however, has obscured the fact, to which we return in §2.3, that nominalizations are at the heart of many ergative constructions in the clausal domain.

Many types of nominalizations exist. We concentrate on process nominals, (also known as action nominalizations) which denote properties of eventualities, i.e., “name the event” denoted by the verb (*destruction, growing*). They thus differ from participant nominalizations (*grower, payee*), result nominalizations (*payment, vomit*), and “fact-that” nominalizations (so-called ACC-ing and POSS-ing nominalizations in English).¹¹ Ergativity is strongly correlated with process nominalizations, even in languages that are otherwise not ergative (cf. the survey in Koptjevskaja-Tamm 1993, and the discussion in Alexiadou 2001):

- (41) a. the capture of Rome (by the Wisigoths)
 la prise de Rome (par les Wisigoths)
- b. the arrival of the Wisigoths
 l’arrivée des Wisigoths

In these noun phrases, the O participant of the transitive construction, and the S participant of the intransitive construction bear the same case, genitive. The A

¹⁰The reason for the quotes is that structural cases within noun phrases are often different from those found in the clausal domain. We speak of ergativity in nominalizations whenever a participant corresponding to an intransitive subject of the non-nominalized predicate receives a case identical to that assigned to participants corresponding to direct objects.

¹¹We will go into much greater detail on the structure of nominalizations in chapter 3.

participant of the transitive construction is introduced by an adjoined PP, like in passives. This is an ergative alignment, which in languages like English obtains only in the nominal domain. Such an alignment also obtains in nominalizations in Greek, French, Spanish, Italian, and several other well-described languages.¹²

Note that English has a complicating factor that the other languages mentioned above lack. English noun phrases can have up to two genitives: the post-nominal *of*-genitive exemplified in (41), and the so-called Saxon genitive, which occurs pre-nominally:

- (42) a. The city's destruction.
b. John's destruction of the city.
c. John's arrival.

If the pre-nominal position is excluded, as was done in the examples in (41), the English pattern is the same as that of Greek and other languages without a prenominal genitive:

- (43) a. The destruction of the city.
b. The arrival of John.
c. * The destruction of John. (with agent reading)

¹²This alignment accounts for over a quarter of the constructions in Koptjevskaja-Tamm's (1993) sample. Three other types are also common: possessive-accusative, double possessive, and sentential. The first and last of these (as well as other minor types described by Koptjevskaja-Tamm) will be excluded from our consideration here, as they seem to involve more structure than strictly nominal constructions. Cf., for instance, the contrast between the following two types of nominalizations in English, the second being an example of the possessive-accusative pattern:

- a. John's destruction of the city.
b. John's having destroyed the city.

The differences are many and have been pointed out many times before (note in particular that (b) can't be used to describe an event, but rather "the fact that"); an analysis of different types of nominalizations as being effected at different levels of an essentially verbal extended projection is advanced by Abney (1987).

- d. *The destruction of the city of John.
- e. The destruction of the city by John.

It's not clear to us what the correct analysis of the English pre-nominal genitive should be. The analogy with (nominative-accusative) active sentences should nevertheless be constrained by the fact that the pre-nominal genitive's relation to the nominalized predicate is much more tenuous than that of subjects to verbal predicates (i.e., *John's destruction* can refer not only to the destruction John caused, but also to the one he discussed, or was negatively affected by, and so on), suggesting that the "subject" is not the subject of the nominalization itself, but of a higher possessive predicate. We will not delve into this issue here.

Měbengokre event nominalizations, which are employed in a variety of constructions in the language, display an ergative-absolutive pattern:¹³

- (44) a. b Λ kam i-mõr kuni
 forest in 1-go.PL.N all
 "all my goings into the woods"
- b. ije Δ ktire krõr jã
 1ERG hawk.people make.peace.N this
 "this (occasion in which) I was making peace with the Æktire"

In the case of Měbengokre, contrary to what happens in English, there is morphological identity between the cases employed in nominalizations and those employed in ergative main clauses. This identity will play an important role in §2.3, as we attempt to reduce all the ergativity found in Měbengokre to a single source, that is, to nominalization.

¹³The arguments for constructions such as those in (44) to be considered nominalizations rather than complement clauses are presented in chapter 3. For now, note that they refer to events, occur with determiners and cardinality expressions used with nouns, and head constituents that have the distribution of regular noun phrases (i.e., they can appear in left-peripheral focus positions, can be *wh*-expressions when merged with *which*, and so on), in addition to their translations as nominalizations (which are much less natural in the metalanguage than, e.g., equivalent relative or complement clauses) offered spontaneously by consultants.

More generally, nominalizations have been postulated to be at the core of certain clause-level ergative constructions in language families such as Inuit (discussed below, in §2.4) and Mayan. An important fact to note is that, contrary to other ergativity splits, which languages may or may not have, action nominalizations are normally ergative.¹⁴ Given an adequate theory of ergativity in nominalizations, the attempts to reduce main clause ergativity to nominal ergativity can constitute a significant advance in our understanding of ergative splits. We will return to this at the end of §2.3, and in §2.5.

2.3 Ergativity in Mēbengokre

So far, we have mentioned that ergativity arises in Mēbengokre nominalizations, in main clauses with certain aspectual values, and obligatorily with some intransitive predicates. In chapter 1 we related ergative-absolutive case marking to a particular form of the verb, which we've called nominal, without further justification. In this section we will be more precise about the contexts where ergativity arises. To begin, consider again examples (25–27), which opened the chapter, repeated here for convenience:

- (45) a. ba tē
 1NOM go.SG.V
 “I went.”
- b. ba ku-kwūr
 1NOM 3ACC-break.SG.V
 “I broke it.”
- (46) a. i-tēm
 1-go.SG.N

¹⁴We don't pretend at this point to have explained away all of the non-ergative nominal constructions found in Koptjevskaja-Tamm's survey, but simply hinted above that controlling for more than is usually controlled in broad typological studies, the preponderance of ergativity in nominalizations is even more overwhelming than what the survey suggests. Of course, the truth of this claim cannot be deduced from anything else, but rather requires detailed cross-linguistic analysis.

“I’ve gone.”

- b. ijε kwũɲ
3ERG 3.break.SG.N

“I’ve broken it.”

- (47) a. ba i-tẽm ɔ=mõ
1NOM 1-go.SG.N INSTR=go.PL.V

“I’m going.”

- b. ba kwũɲ ɔ=mõ
1NOM 3.break.SG.N INSTR=go.PL.V

“I’m breaking it.”

The constructions in (45), which were described above as displaying a nominative-accusative alignment, arise in matrix clauses that have a perfective interpretation. Those in (46), described as ergative-absolutive, arise in matrix clauses that have a perfect interpretation.¹⁵ Finally, the “mixed alignment” displayed by (47) occurs in clauses that receive a progressive interpretation.

The data could be summarized by the following table, which is based on the one presented in (5) above:¹⁶

(48)	Type I	Type II	Type III	Type IV	Type V
Perfect	ERG–ABS	ERG–ABS	ABS	ABS	DAT–ABS
Progressive	NOM–ABS	NOM–ABS	NOM+ABS	—	—
Perfective	NOM–ACC	NOM–ABS	NOM	—	—

Our ultimate goal in this chapter is to explain the split ergativity exhibited by this data set. This involves not only reducing all manifestations of ergativity to a

¹⁵The meaning of this will be clarified in chapter 4. In fact, as we will see in that chapter, the range of interpretation of this type of main clause is much wider than just the perfect which translates this example. This fact should be borne in mind, but it doesn’t affect the argumentation in this chapter.

¹⁶As can be seen, the split in case alignment only applies to verbal predicates (Types I, II and III), not to nominal ones (incidentally, this gap in the table will be explained once we reduce ergativity in Mëbengokre to nominalization). The label “perfect” applied to Type IV and V predicates is misleading, of course, since in these predicates no contrast in aspectual value is instantiated morphologically.

single component of the structure, something which we'll do within the confines of this chapter, but also imbuing the labels “perfect” and “perfective” with meaning, something which will only be fully accomplished in chapter 4.

2.3.1 Ergative is the alignment of embedded clauses

Let's temporarily step aside from considering the case alignment found in matrix clauses, and consider embedded clauses.

The literature dealing with Jê languages has several times put forth the generalization that nominal forms occur in embedded contexts, while verbal forms occur in main clauses. Notably, Wiesemann (1972) considers the verbal form (which she calls “short form”) and the nominal form (“long form”) of the verb to be positionally-determined allomorphs of the verb: the verbal form would occur solely in matrix clauses, while the nominal form occurs in all embedded clauses.¹⁷ Nothing is said by Wiesemann about the correlation between the two forms of the predicate and the case marking of arguments in the clause. From what we've said since the table in (5) in chapter 1, we know we should expect an ergative alignment in embedded clauses in Mēbengokre. This is in fact what happens in the following two clear cases of subordination:

- (49) a. ba [kute tɛp krɛn] pumũ
 1NOM 3ERG fish eat.N see.V
 “I saw him eating fish.”
- b. ba [kute tɛp krɛn] mɔrɔri ipej
 1NOM 3ERG fish eat.N during do.V
 “I did it while he was eating fish.”

An assortment of other constructions seem to involve clause subordination. Consider the following:

- (50) a. arɔm kute tɛp krɛn mɔ
 already 3ERG fish eat.N to
 “He's already about to eat fish.”

¹⁷Wiesemann retracts from this position in a later paper (Wiesemann 1986), in which she recognizes the use of nominal forms in main clauses, contrasting in aspectual value with verbal forms.

- b. kute tɛp krɛ̃n mɛj
 3ERG fish eat.N good
 “He eats fish properly.”
- c. kute tɛp krɛ̃n ket
 3ERG fish eat.N NEG
 “I haven’t eaten the fish.”

A superficial inspection of these data might lead us to the descriptive generalization that ergativity is associated with negation, as in (50c), with adverbial modification, (50b), and with a particular aspectual value (“prospective aspect”), (50a), which are in themselves unanalyzable into more basic constituent parts (cf. Urban 1985, p. 186). This is clearly the wrong path to take, however.

As indicated in the gloss to (50a), the marker following the verb is nothing other than a postposition, which in fact subordinates the semantically main verb. Several postpositions can appear in this position, though only three, or possibly four of them can appear forming matrix clauses, as in the example discussed.¹⁸

That is, (50a) is structurally identical to the subordinated clause in (49b), and we propose that it be analyzed as a subordinate clause as well: i.e., a nominal clause is subordinated to a main predicate which is a postposition. Suggesting an analogy with the construction that translates it in English (“is about to”) can serve to give plausibility to this proposal, but at this point the nature of the construction might need some more elucidation; i.e., is there a subject to the postposition, or is the postposition some sort of raising predicate? We return to this in §2.5 below.

The case of (50b) falls into the same category. The construction that translates predicates with a manner modifier is actually one where the clause is embedded as an argument of a manner predicate that is syntactically the main predicate of the clause.

¹⁸Gildea (1992) discusses the relation (which he fancies purely diachronic) between postpositions and case endings and aspectual or temporal values in the Carib language family. This discussion is excluded from the published version of his work (Gildea 1998), and therefore unavailable to us during the preparation of this dissertation.

A similar expression of manner occurs in St’át’incets, and is described in Arregui and Matthewson (2001). The following are some relevant data extracted from this paper:

(51) St’át’incets

- a. skenkín ti n-s-xát’-em-a ta sqwém-a
 slow DET 1SG.POSS-NOM-hard-INTR-DET DET mountain-DET
 “I walked up the hill slowly (lit., my walking up the hill was slow)”
- b. áma ti s-nik’-in-ás-a ti sts’úqwaz’-a s-Mary
 good DET NOM-cut-TR-3ERG-DET DET fish-DET NOM-Mary
 “Mary cut the fish nicely (lit., Mary’s cutting of the fish was good)”

In these St’át’incets examples, the manner modifier is a main predicate, while what is semantically the main predicate appears as a nominalized complement of the former, as is evidenced both by the nominalizing morphology and the determiners.

We are now left to deal with (50c). We will argue that, like manner predicates, negation is the main predicate of the clause, and takes the negated clause as its complement.

There are a couple of simple arguments to consider negation a main predicate that takes nominal (or nominalized complements); the same arguments could be extended, *mutatis mutandis*, to manner predicates:¹⁹

(52) Negation can be used with a noun phrase argument to negate existence:

- a. tɛp ket
 fish NEG
 “There is no fish.”
- b. arɣm wa ket
 already 3.teeth NEG
 “He no longer has any teeth.”

(53) Negation takes person inflection, with a negative existential meaning:

¹⁹To this effect, see the discussion around ex. (140) below.

i-ket=ri
1-NEG=at
“When I didn’t exist.”

We return to the semantics of all of these constructions in chapter 3, once we have given a semantics for nominalizations.

What is then the connection between embedding, the category of the predicate, and ergativity? We contend that all embedded clauses in Mēbengokre are nominal (i.e., are headed by nominal forms of verbs), something for which we’ll argue more extensively in chapter 3. We saw that nominal clauses in Mēbengokre are ergative (we take this to be a primitive for now; the fact is related to more general principles in §2.5). The intent of this section has been to reduce as many of the ergative constructions found in Mēbengokre as possible to constructions involving subordination. We have done this with negative clauses, clauses with manner modifiers, and clauses with post-verbal postpositions used to convey particular aspectual meanings. We still have to explain the facts of the progressive, and explain ergativity in main clauses. In the following section, we deal with the progressive. Main clause ergativity is the subject of chapter 4.

2.3.2 The progressive construction

We have reduced all but one of the cases where ergativity arises in Mēbengokre to instances of clause subordination. Clause subordination requires the use of the nominal form of the verb, which, in turn, implies ergative alignment in the case marking of its arguments. There seems to be one case, though, where the use of such a form does not imply ergative case marking; this is the progressive construction, introduced above (cf. 27). We turn to it now.

The construction consists of a clause subordinated to the postposition *ɔ* (instrumental), followed by an “auxiliary” verb. The latter is generally chosen from intransitive verbs denoting positions or motion; the most common are *dʒa* “stand up”, *ɲũ* “sit down”, *nõ* “lie down” and *mõ* “go (pl.)”. The nuances in the meaning of the construction according to the choice of verb are interesting in their own right, though

irrelevant for our present purposes. The following set of examples illustrates this:

- (54) a. ba tɛp krɛ̃n ɔ=ɲũ
1NOM fish eat.N INSTR=sit.SG.V
“I’m eating fish (sitting down).”
- b. ba tɛp krɛ̃n ɔ=mõ
1NOM fish eat.N INSTR=go.PL.V
“I’m eating the fish (gradually).”
- c. ba tɛp krɛ̃n ɔ=dʒa
1NOM fish eat.N INSTR=stand.SG.V
“I’m eating fish (standing).”

In such constructions, it can be seen that the case of the transitive subject is nominative rather than ergative. In intransitive clauses, a nominative duplicates the absolutive subject:

- (55) ba i-rwɣk ɔ=mõ
1NOM 1-go.down.N INSTR=go.PL.V
“I’m going down.”

As Reis Silva (2006) has shown, the nominativity of the subject depends on the “auxiliary” being verbal. When the auxiliary is in its nominal form, the normal ergative pattern arises:

- (56) a. ga tɛp krɛ̃n ɔ dʒa
2NOM fish eat.N INSTR stand.SG.V
“You are eating fish.”
- b. ajɛ tɛp krɛ̃n ɔ a-dʒã̃m
2ERG fish eat.N INSTR 2-stand.SG.N
“You are eating fish.”

Our proposal for this construction is that it should be analyzed as its outer syntax suggests it should: i.e., the “auxiliary” should be treated as a main verb, while the semantically main verb should be considered to be subordinated to an instrumental

postposition, forming an adjunct to the clause headed by the auxiliary.²⁰ Nominative subjects are the subjects of the “auxiliary”, when it is in its verbal form. The ergative subject of the subordinated predicate gets deleted because there is a coreferential nominative subject above it, and so only arises if there is no nominative subject, i.e., when the “auxiliary” is in nominal form, as in (56b).

Thus the construction in question is in effect biclausal, and its lack of ergativity despite the nominal character of the predicate is epiphenomenal. A peculiarity of the construction is that while ergative subjects can be deleted, absolutive subjects don’t:

- (57) a. ba i-tər ɔ=dʒa
 1NOM 1-dance.N INSTR=stand.V

²⁰There are a couple of facts which are prima facie problematic for this approach, however. First is that the “auxiliary” becomes destressed and cliticizes to the main verb, whereas we’d expect it to keep word level stress if it was the main predicate. In addition, the clause under the instrumental postposition ɔ behaves differently from true instrumentals, as shown by Reis Silva (2006), in that it can’t be clefted together with the ɔ, as the latter can:

- a. ba karatʃu ɔ ku-krẽ
 1NOM spoon INSTR 3ACC-eat.V
 “I ate with a spoon.”
- b. ba tɛp krẽn ɔ ɲũ
 1NOM fish eat.N INSTR sit.V
 “I am eating fish.”
- c. karatʃu ɔ nẽ ba ku-krẽ
 spoon INSTR NFUT 1NOM 3ACC-eat.V
 “I ate *with a spoon*.”
- d. karatʃu nẽ ba ɔ ku-krẽ
 spoon NFUT 1NOM INSTR 3ACC-eat.V
 “I ate *with a spoon*.”
- e. * tɛp krẽn ɔ nẽ ba ɲũ
 fish eat.N INSTR NFUT 1NOM sit.V
- f. tɛp krẽn nẽ ba ɔ ɲũ
 fish eat.N NFUT 1NOM INSTR sit.V

The significance of these facts is not completely clear. Further consideration of them will be left for future research. Both Reis Silva (op. cit.) and de Oliveira (1998) consider ɔ to be a light verb rather than an instrumental postposition.

“I’m dancing.”

- b. *ba tər ɔ=dʒa
1NOM dance.N INSTR=stand.V

As we saw in chapter 1, however, the obligatoriness of absolutive arguments is an independent fact about Mēbengokre morphosyntax, and the above pattern could be ascribed to this fact.

Laka (2006) proposes something similar to account for the nominative subjects found in the progressive construction in some Basque dialects. The relevant data are the following:

- (58) a. emakume-a-k ogi-a jan du
woman-DET-ERG bread-DET eat has
‘The woman has eaten (the) bread’
- b. emakume-a-k ogi-a jaten du
woman-DET-ERG bread-DET eating has
‘The woman eats (the) bread’
- c. emakume-a ogi-a jaten ari du
woman-DET bread-DET eating PROG is
‘The woman is eating (the) bread’

Rather than accepting “split ergativity” in the Basque progressive, Laka proposes that (58c) has a biclausal structure. In Laka’s approach, *ari*, which was considered to be an antipassive in some previous accounts, or a progressive auxiliary in others, is taken to be a main verb (meaning ‘to be engaged’) that takes a nominalization as a complement: *jaten* is analyzed as *ja-te-n* ‘eat-NOM-LOC’. The subject of the progressive construction receives the case and thematic role from the verb *ari*. In dialects where *ari* has been reanalyzed as a grammatical marker (Asp), ergative marking appears in the construction. This is essentially what we propose here for the Mēbengokre progressive.

2.4 Summing up: nominalizations and ergativity

In the previous section, we have considered several of the ergative constructions found in Mēbengokre. We have seen that they all involve some form of subordination, hence “nominalization”.

The connection between subordination and nominalization comes from an arbitrary fact about Mēbengokre, which we will not attempt to explain: that there is no embedding of finite verbal clauses in Mēbengokre, only of nominal constructions.²¹

We saw that embedded nominalizations subdivide into those that are subordinated to a one place predicate (as in negation, manner modification, and other constructions considered in §2.3.1), and those where the subordinating predicate has a (nominative) subject, causing the ergative subject of the embedded clause to be deleted (the progressive construction, considered in §2.3.2). In any case, we were able to maintain that even in the latter case, the embedded nominalization was ergative. Furthermore, we claimed at the end of §2.2.3 that the “split S” of Mēbengokre, like the ergative splits triggered by subordination, also boils down to the opposition between the category of nouns and verbs.

What is, then, the connection between nominalization, or rather nounness, and ergativity? Before giving our own account of this, we need to consider one previous approach in which nominalization is made to be at the heart of clausal ergativity: Johns’s (1992) analysis of Inuktitut. Johns proposes that sentence (59c), which translates “The man stabbed the bear”, is derived through the two intermediate constructions that precede it.

- (59) a. kapi-jaq
stab-PASS.PART
“The stabbed one.”
- b. anguti-up japi-ja-a
man-ERG stab-PASS.PART-3S

²¹This is an altogether not uncommon pattern, however (cf. Polinsky 2007 on Adyghe). It should also be pointed out that Mēbengokre possesses other constructions, such as paratactic constructions, that translate embedded propositions.

“The man’s stabbed one”

- c. anguti-up nanuq kapi-ja-a
 man-ERG bear-ABS stab-PASS.PART-3S/3S

“The bear is the man’s stabbed one.”

That is, the passive participle in (59a), which is essentially a patient nominalization, is at the core of a passive free relative, (59b). This free relative in turn will become the object of a copular construction, yielding (59c). The structure is thus more or less²² as in Figure 2-4.

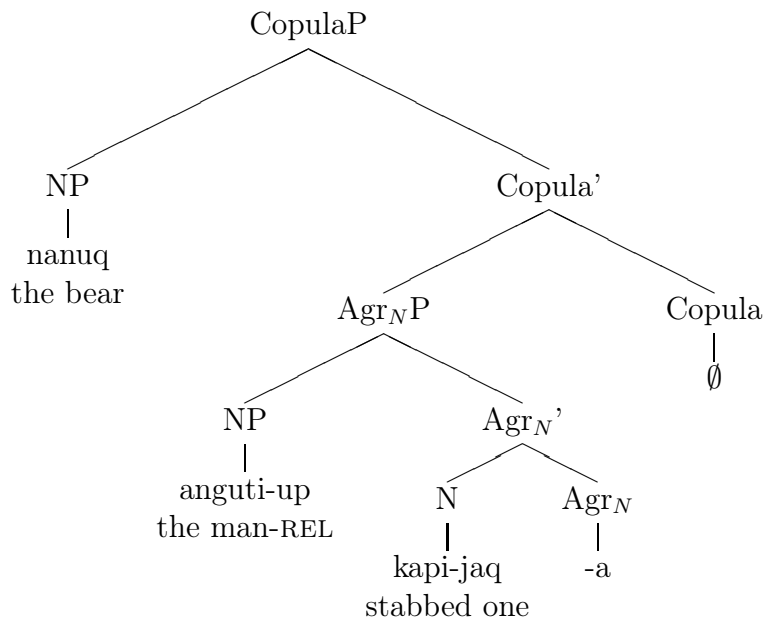


Figure 2-4: Structure of an Inuktitut transitive clause

There is an obvious circularity in this proposal, from the point of view of relating nominalization and ergativity. Nominalization here is being used as an abbreviation for patient nominalization; these nominalizations are “passive” by definition. Thus Inuktitut ergativity essentially boils down to the ergativity that results from the obligatory passivization of all transitive clauses. There is no real need to invoke nominalization as an intermediate step.²³

²²Under what we here call Copula, Johns puts agreement with “the bear”.

²³Of course, the possibility exists that nominalization is more basic than passivization; i.e., passives

This is crucially not the way that we propose to relate nominalizations and ergativity in Mēbengokre. For one thing, the nominalizations involved in Mēbengokre are not passive participant nominalizations, but rather action nominalizations which are presumably active. The structural differences between action nominals and the parallel verbal clauses in Mēbengokre are therefore much smaller than that between the structure proposed by Johns for (59c) and a regular finite clause in any other language. They boil down to the case-theoretic properties of the functional structure above the lexical projection. The latter is common to both verbal and nominal constructions.

In the following section, we will attempt to build the essentially ergative character of nominal projections into the syntax, and examine the conditions that have to be met for a nominative-accusative alignment to arise.

2.5 A formal analysis of case

Case is a morphological category found in natural language that in the descriptive and typological tradition is traditionally assumed to have the functional motivation of keeping participants of a clause distinct. Though it is often the case that there is a correlation between a participant's case and its position in the thematic hierarchy, case cannot be reduced to semantics, as can be seen in cases of raising to object, such as the following:²⁴

- (60) a. We believe that *he* is qualified.
b. We believe *him* to be qualified.

cross-linguistically (at least those that are constructed analytically, like the one found in English) would embed a nominalization, rather than the other way around, as is usually thought. This is a possibility that, to our knowledge, hasn't been discussed in the literature, and one that we are not capable of pursuing here.

²⁴Taken from Merchant (2006), on whose overview of standard case theory we base the discussion surrounding (60-61).

Though in neither of these sentences the pronoun bears a thematic relation with the predicate *believe*, and in both cases the thematic relation with the lower predicate *be qualified* is the same, the pronoun receives nominative case in the first, and accusative in the second. A similar situation arises with valency-changing operations such as passive and antipassive, among others:

- (61) a. Everyone trusted him.
b. He was trusted by everybody.

In these examples, the pronoun bearing the θ -role of theme receives the accusative in the active sentence, and the nominative in the passive one. Thus the mapping from thematic roles to case is both one to many and many to one.

A common view since Vergnaud (1977) is that case is a formal mechanism to license noun phrases in the syntax, and that there is a one-to-one mapping between cases (or case positions) and case assigners. Thus, accusative case is normally assumed to be assigned by the verb, or by some head in its immediate projection, while nominative case is assigned by tense. In the nominal domain, one could say, in a similar vein, that a structural case such as the postnominal genitive is assigned by some nouns,²⁵ while the English prenominal genitive is assigned by the determiner.

The relation between thematic licensing and case is most straightforward in situations described as “inherent case assignment”. In these cases the head and the maximal projection involved in thematic licensing and in the determination of morphological case are the same.²⁶

²⁵For arguments that the postnominal genitive is structural, see Alexiadou (2001).

²⁶Work by Fraga (2006) suggests that this relation might not be as straightforward as is traditionally assumed. Fraga decomposes prepositions into lexical roots, presumably responsible for relating their themes to an associated locus of points in space, and a category-assigning head that is responsible for case assignment, and possibly for the dynamic versus static contrast which correlates with the case governed by P in languages such as Greek and German. In addition, and discussed explicitly by Fraga, several uses of prepositions are purely functional, such as last-resort *for*-insertion in English, or marking of specific animate direct objects in Spanish with *a*.



In the case of lexical roots that are to become verbs or nouns the situation is slightly more complicated. If we accept that pairs such as *destroy* and *destruction* are composed of an identical lexical root which attaches to two distinct category labels,²⁷ then the thematic role of the theme and its case are assigned by different heads. This is a good result, since we want the thematic relation between the lexical head and its complement to be the same in principle regardless of category; case, on the other hand, depends on whether a noun or a verb is formed.

2.5.1 Case in Mēbengokre noun phrases

There are two types of underived nouns in Mēbengokre: those that are inalienably possessed (“relational nouns”), and those that are either alienably possessed or generally not possessed at all. The first class is exemplified in (63); the second in (64).

We will not consider prepositions further in this dissertation, so these complications arising in their syntax will be put aside.

²⁷The proposal that lexemes always decompose into a category-less root and a category-assigning functional head is discussed in Pesetsky (1995) and Marantz (1997), and has been adopted in much work within Distributed Morphology. We will not present any empirical arguments in favor of that position, as opposed to the traditional view in which words come with their categories from the lexicon. It is probably not difficult to translate the syntactic part of our proposal into the traditional approach to nominalization, which involves a nominalizing head over a verbal projection; see Alexiadou (2001), who interprets Grimshaw’s (1990) distinction between action and result nominals as a distinction between embedding or not embedding a verbal projection.

Nevertheless, when we move on to describe the function of category-assigning heads in the semantics, we believe that the traditional approach would become unwieldy. In later parts of the thesis we will imbue the category-forming heads *n* and *v* with content. In particular, cf. the discussion in §4.1.2.

Inalienably possessed nouns require their “possessor” argument to be expressed.²⁸ The case of this argument is the genitive, like that of themes in English nominalizations. A few nouns, i.e. (65), can be in both classes, sometimes with a slight (or not so slight) semantic difference.

- (63) a. i-kra ‘my son’
 b. i-pa ‘my arm’
 c. i-pũrkwã ‘my home’
- (64) a. i-põ kikrɛ ‘my house’
 b. i-põ krit ‘my pet’
 c. (mẽ i-põ) bʌ ‘(our) forest’
- (65) a. i-dʒudʒɛ ‘my weapon’ a’. i-põ dʒudʒɛ ‘my bow’
 b. i-bikwa ‘my relative’ b’. i-põ bikwa ‘my relative or friend’

We will assume that the difference between the alienably and inalienably possessed nouns is one of argument structure. While inalienably possessed nouns project their possessors as sisters of the lexical root, the possessor of alienably possessed nouns is expressed by means of a postpositional phrase adjoined to the nominal projection.²⁹

In the approach to case sketched above, the argument of $\sqrt{\quad}$ doesn’t get case from the head selecting it (unlike what happens with arguments of prepositions) and is

²⁸Inalienable possessors are usually in part-whole or possessor-possessed relation with the lexical root, though the latter only in the sense in which ‘my brother’ can be considered possessive.

²⁹This explains the fact that the thematic interpretation of alienable possessors is fixed, only expressing literal possession; other types of relations (benefactive, locative, etc.) are expressed by means of different postpositions.

There is a limited form of alternation in argument structure in the nominal domain, in what one might call the “nominal applicative alternation” of Mēbengokre, which allows certain alienable nouns to become relational, i.e., take an argument to their left, which would otherwise be expressed by means of a locative postpositional phrase, and assign genitive to it:

- a. ɲo ‘water’ a’. pidʒo ka-ɲo ‘fruit water (i.e. juice)’
 b. ko ‘carved wood’ b’. akʌ ka-ko ‘lower lip wood (i.e., lip-disk)’

forced to get case elsewhere: it gets structural genitive case from n , the category assigning head. Thus, if we represent the two relations of thematic selection and case assignment by arrows, we have the representation in Figure 2-5.

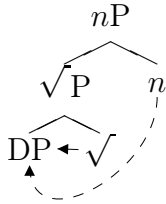


Figure 2-5: Thematic selection and case in a simple nominal projection.

We may assume that structural genitive case is simply not assigned if there is no argument projected as a sister of $\sqrt{}$; it also can't be assigned to constituents adjoined higher in the structure, such as the alienable possessors.

It seems that in this case, even though morphological case and thematic licensing occur in separate heads, the relationship between the two is straightforward. The real challenge comes from the behavior of verbs.

2.5.2 Case in nominative-accusative clauses

Getting the case facts right when there is one structural case to be assigned is straightforward enough. Finite verbal clauses (in Mébengokre and more generally in languages with nominative-accusative alignment) pose a particular challenge. In them there are two structural cases to be assigned, nominative and accusative. The usual assumption in the government and binding tradition is that the latter is assigned by the verb, while the former is assigned by tense, as in the structure in Figure 2-6.³⁰

Yet nominative-accusative case marking requires a special type of dependency between the two noun phrases or case-assigning heads: assignment of accusative case depends on what goes on higher in the structure; it is not assigned, even to noun phrases generally assumed to be generated as sisters of the verb (or $\sqrt{}$), if a higher

³⁰It is often assumed that nominative case is assigned upwards to a subject that has moved to [Spec,TP], rather than downwards to [Spec,vP], as we have it here. The question is orthogonal to our discussion.

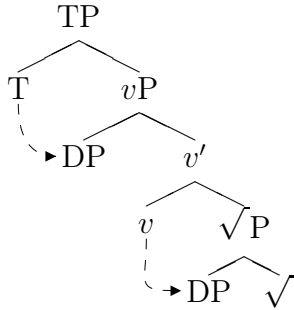


Figure 2-6: Assignment of nominative and accusative in a transitive finite clause.

argument (chain) isn't present. A common approach to capture this generalization descriptively is synthesized by the following generalization:

(66) Burzio's generalization³¹

Accusative case is only assigned if (and only if) an external argument is present.

Burzio's generalization has several exceptions,³² in addition to suffering from the purely deductive anomaly of bringing together argument structure (i.e., the presence of an external argument) and case, after we've argued that they should be kept distinct. The following examples show some of the exceptions to Burzio's generalization:

(67) a. *Greek*

Mou aresei i thalassa.
 1SG.DAT please.3SG the.F.SG.NOM sea.F.SG.NOM

"I like the sea."

b. It struck me that all these counterexamples are irrelevant.

These examples fall into two classes. In one case, if the external argument has lexically determined case, as in (67a), no accusative is assigned; conversely, if an expletive receives nominative, as in (67b), accusative is available even without the verb having a thematic external argument. That is, accusative seems to depend

³¹Cf. Burzio (1986), Reuland (2000).

³²Cf. discussion in Marantz (1991).

on whether structural case is assigned to an external argument, not on whether an external argument is projected.

This is suggestive of a second approach to the case dependency: that case is “oppositional”, i.e., that it serves to keep different noun phrase participants in the sentence morphologically distinct. The intuition is that two noun phrases in a particular domain of case assignment will get their cases not locally, as the single argument of a preposition or noun, but rather “relationally”.

In this dissertation, we will maintain the traditional view of case as being assigned by heads, but will adopt an element from one recent formalization of the relational approach to case, namely the idea of dependent case found in Marantz (1991).

To give a concrete example of how dependent case functions (again, without straying too far from received ideas about case), consider what happens in a regular finite transitive clause.³³

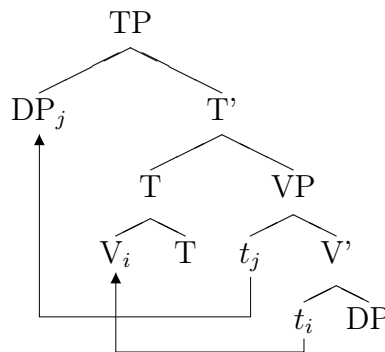


Figure 2-7: Configuration in which dependent case is assigned to one DP chain.

In the configuration depicted in Figure 2-7, both subject and object DPs are in the government domain of V+T (in addition, the base — or possibly all — of both chains is in the government domain of the trace of the verb, but this is not relevant here). Dependent case, i.e. accusative, is assigned by the following postulate:

- (68) Dependent case is assigned by V+T to a position governed by V+T when a distinct position governed by V+T is:

³³For the sake of simplicity, $\sqrt{\quad}$ and v are merged into a single head V in this structure.

- a. not part of a chain governed by a lexical case assigner
- b. distinct from the chain being assigned dependent case

Dependent case assigned up to the subject: ergative

Dependent case assigned down to the object: accusative

That is, accusative, which is the dependent case in this situation, is assigned to the object noun phrase in case there is another DP chain (i.e., the subject's) in the government domain of V+T. The remaining DP in the government domain will receive the unmarked case, i.e., nominative. The clause governing the assignment of dependent case in effect replaces Burzio's generalization with a homologue which is based solely on case, rather than on thematic licensing of the external argument.

Why is dependent case assigned down to the object, rather than up to the subject, yielding an ergative alignment in finite verbal clauses? We attempt to answer this in the following section.

2.5.3 Case in embedded clauses

Let us now turn to clauses of the type considered in §2.3.1. We concluded that these ergative constructions are headed by a nominal form of the verb. Though we will go into much greater detail about their structure in chapter 3, let us assume a lexical projection similar to that of verbs, but with a different category label, as in Figure 2-8.

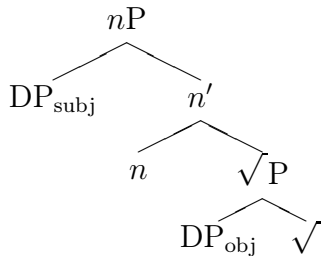


Figure 2-8: Structure of a nominal projection.

In Marantz's (1991) approach, (morphologically) ergative and accusative languages are mirror images of each other. Though not made explicit by Marantz,

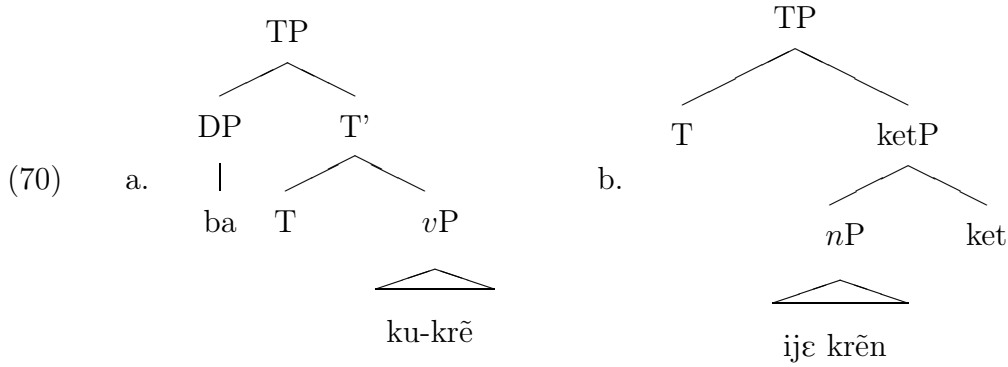
it's plausible to suppose the distinction is coded as a construction-specific parameter governing the direction of assignment of dependent case by V+T; that is, whether a particular construction has ergative or accusative alignment rests on a parameter that is orthogonal to the rest of its structure. We suggest a slightly different approach: nominative-accusative case marking arises when two case-assigning heads (*v* and T) are found within the domain where two arguments are to receive case; ergative-absolutive arises when both structural cases are assigned by a single head (*n* or *v* not linked to T). We will have the opportunity to return to this after we explore, in chapter 4, what the link between *v* and T, which is lacking in nominal predicates, consists of.

To implement our approach to case in the nominal domain so as to yield the case marking pattern of Měbengokre nominalizations, all we have to do is make explicit that dependent case in the situation in which there is a single case governor (in this case *n*) is what we've been calling ergative, while unmarked case in the same domain is the genitive of §2.5.1, which is what we've been calling absolutive until now. Case marking in all embedded clauses, including those where the embedding predicate is negation or a manner predicate, and in intransitive predicates of Type IV, is subsumed under this mechanism.

To summarize this, consider the following two sentences:

- (69) a. ba ku-krě
 1NOM 3ACC-eat.SG.V
 "I ate."
- b. ije krěn ket
 1ERG eat.SG.N NEG
 "I didn't eat."

Though we haven't fully argued for the structure that corresponds to these sentences, the following are first approximations that take heed of what we've said so far:



In the first situation, whether *v* moves to T or not, we contend that *v* has a privileged link with T that creates a domain with two case governors, which is the context for accusative alignment to arise. In the second case, the negation *ket* is the highest predicate in the clause, and so is the one that has the potential of linking with T, to the detriment of any lower predicates, which are left to fend for themselves as far as case assignment goes. Since *ket* has no arguments other than the nominal clause below it, we don't see any reflexes of dependent case assignment.

At this point one could raise the following question: why don't any of the functional categories that intervene between *v* and T (in Mēbengokre, if there are any, or in any other language) function like *ket*, and break the link between them? Intuitively, of course, the reason is that *ket*, differently from, e.g., negation in English, is a main predicate, whose argument, the nominal clause, is closed off to any operation that would extend the government domain for case assignment. Any attempt at formalization of this intuition at this point risks circularity; cf., for instance, Hunt (1993), who deals with contexts for ergativity in Gitksan; to her, what determines whether a clause will be ergative or accusative is whether it's embedded under a lexical or a functional head, respectively. In the case at hand, Mēbengokre negation would be a lexical predicate, whereas negation in English would be functional. In chapter 4 we skirt this problem altogether by building the link with higher temporal functional categories into the lexical entry for *v*; *n* lacks such a link. That is, the ability to link with higher functional structure is a property of the category label merged with the main predicate.

The reader might have observed a parallel between what we are proposing and theories of ergativity such as those found in Nash (1995). Putting it somewhat vaguely, for Nash, and for several others since then, ergativity arises in constructions that lack certain higher functional projections. What we maintain here, however, is not that higher functional structure is lacking, but rather that the link between the lexical projection and functional structure cannot be established directly. That is, while in nominative-accusative constructions v and T are directly linked, they (or rather n and T) are prevented from linking in the constructions that surface as ergative. The nature of the link between v and T is only made fully explicit in §4.1.2.

2.6 The source of main clause ergativity

So far, we've addressed case marking in both verbal main clauses, and embedded nominal clauses. If they denote entities, it is not clear how constructions headed by nominal forms of verbs (or any other noun phrase) can in and of themselves become main clauses; so the ergativity found in main clauses with the perfect aspect is still mysterious. We will address this problem in chapter 4; before we get to that, we need to understand nominalizations both in their structure and in their meaning. That is the subject of chapter 3.

Chapter 3

The structure and interpretation of nominalizations

In §2.2.4, we stated that Měbengokre nominalizations display an ergative alignment. The relevant examples are repeated here for convenience:

- (71) a. b_Λ kam i-mōr kuni
forest in 1-go.PL.N all
“all my goings into the woods”
- b. ije _Λktire krōr jã
1ERG hawk.people make.peace.N this
“this (occasion in which) I was making peace with the Ìktire”

Subsequent parts of chapter 2 reduced other ergative constructions found in the language to nominalizations. In particular, it was claimed that all embedded clauses are nominal, and that several apparently matrix constructions that display ergativity, such as sentences with manner modifiers and negation, should be analyzed as “biclausal” constructions embedding a nominalization.

The aim of this chapter is to examine embedded nominalizations, and to come up with a precise enough characterization of their structure and meaning so that the constructions in which they appear may be understood. The constructions to be considered are broadly two: those that denote actions, such as (71) above, which one

could call “action nominalizations”, and those that denote participants, such as (72), which could descriptively be labeled “internally-headed relative clauses”.

- (72) a. kubẽ kutɛ ʌktirɛ krõr nẽ jã
 barbarian 3ERG hawk.people make.peace.N NFUT this
 “This is the white man that made peace with the Ìktire.”
- b. i-mã aje amũ=jã=ʔã kubẽkʌ jadʒʌr=jã ŋã
 1-DAT 2ERG farther=this=at clothes put.on.SG.N=DET give.V
 “Give me the clothes that you put on yesterday.”

In this chapter, we will claim that both of these types of constructions share a similar structure, and differ minimally in their semantics. We begin by providing a description of internally-headed relative clauses, and later show that action nominalizations represent a simple extension of the expressive possibilities of relative clauses.

3.1 Internally-headed relative clauses

Word order in Měbengokre relative clauses is identical to that found in matrix clauses. In particular, the noun that is modified by the relative clause, i.e., the head, appears inside it, in the position it would occupy as an argument of a regular matrix clause.

- (73) kubẽ kutɛ mẽ i-mã mẽkrĩdʒʌ ɲõr=ja
 barbarian 3ERG PL 1-DAT chair give.N=the
 ‘The chair(s) that a/the white man gave us’, or
 ‘The white man/men that gave us a/some/the chair(s).’

No special marking appears on the head. This results in the ambiguity observed in the preceding example, which was pointed out also for Lakhota by Williamson (1987), among other languages,¹ and seems to be an essential characteristic of the construction:

- (74) a. Wĩyą wą owĩža wą kaḡe ki
 woman a quilt a make the

¹See the surveys in Culy (1992) and Basilico (1996).

‘The quilt that a woman made’, or
 ‘The woman that made a quilt.’

There is no restriction as to the grammatical function within the relative clause of the noun phrase that serves as head: noun phrases in adjunct roles are freely allowed, as attested in (75). Null third-person pronominals can also be interpreted as heads, in a construction that could be considered the equivalent of a free relative (cf. 76):

(75) kubē kot i-tēm nē ije aŋro bĩ-n nē jã
 barbarian with 1-go.SG.N and 1ERG peccary kill.SG.N NFUT this
 ‘This is the white man with whom I went and killed peccaries.’

(76) mē tũm kutε arẽŋ nē jã
 PL old 3ERG 3.say.N NFUT this
 ‘This is what the ancients told.’

Nevertheless, a relative clause cannot be headed by an adjunct that is not overtly present. We take this to mean that the heads of relative clauses in Mēbengokre can only be noun phrases, i.e., there are no relative clauses headed by *how*, *when*, etc.:

(77) a. akati kam i-tēm ja
 day in 1-go.SG.N the
 ‘the day I go’
 b. *i-tēm ja
 (impossible with a *when* translation)

In this they seem to differ from a very similar construction discussed by Larson (1982), Warlpiri adjoined relative clauses. The latter, in addition to the ambiguity as to which participant is the head of the relative clause, display an ambiguity between a participant reading and a temporal one:

(78) ngajulu-rlu-rna wawiri nyangu, kuj-a-ŋpa pantu-rnu nyuntulu-rlu
 I-ERG-1sg kangaroo see-PAST, COMP/AUX-2sg spear-PAST you-ERG
 a. ‘I saw the kangaroo which you speared’
 b. ‘I saw the kangaroo when you speared it’

It should be kept in mind that we are explicitly ruling out this freedom of interpretation in Mëbengokre relatives, as we later include eventive readings among their expressive possibilities. We will argue that eventive readings are permitted precisely because, like nominal participant readings, they arise from binding of a variable that is projected within the nP , i.e., the variable that saturates the lexical root's referential argument when it is event-denoting.

3.2 The structure of IHRCs

We will take internally-headed relative clauses such as those given in the previous section as the prototypical example of a nominalization in Mëbengokre. In this section we will propose a structure for them, and in §3.3 we propose a way to derive their semantics compositionally. The relevance of looking at internally-headed relative clauses is that other meanings of nominalizations, and in particular the eventive readings which we will need in chapter 4, will follow as small extensions of the simple syntax and semantics for IHRCs developed here.

We'll be minimalistic, and assign the structure in Figure 3-1 to internally-headed relative clauses such as that in (73).²

The key elements of this structure are the following: (a) the relative clause itself consists solely of a lexical root, all of its adjuncts and arguments, and an external argument introduced by the category-assigning head;³ (b) this structure is selected directly by a determiner, and (c) arguments of $\sqrt{\quad}$ (and of n) can be either DPs or determinerless NPs. The point of the latter two assumptions will be made clear below. Before we move on to that, we need to discard a few alternative structures.

A common analysis of internally-headed relative clauses, advanced, e.g., by Cole (1987) in his analysis of Quechua, holds that they have a structure more or less as in

²The dative adjunct of (73) is omitted here.

³Certain aspectual projections, such as that containing *arvm*, might have to be added to this structure, but we claim that neither tense nor a complementizer are part of IHRCs.

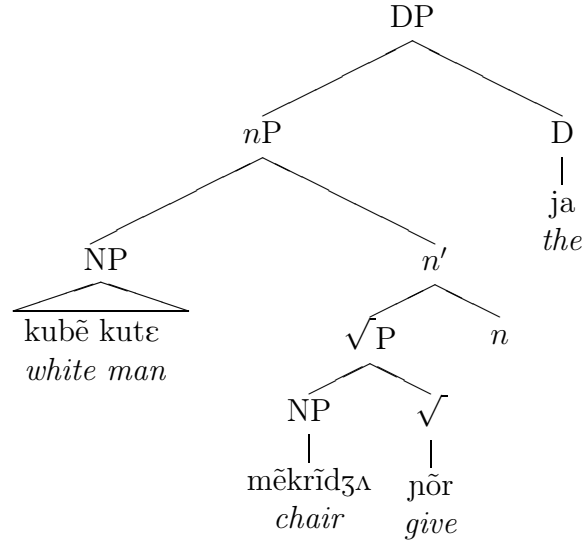
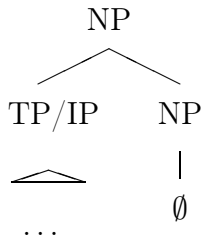


Figure 3-1: Structure of Mẽbengokre internally-headed relative clauses

the following tree, i.e., they are headed by a null external head, to which the visible part of the relative clause is adjoined.

(79)



We contend that internally-headed relative clauses in Mẽbengokre never have an external head. In Mẽbengokre this is so for a very simple deductive reason: there is no adjunction inside noun phrases (or elsewhere, in fact) other than of postpositional phrases. The following are forbidden:

- (80) a. *tũm kikɛ
old house
- b. *bo kikɛ
hay house
- c. bo=ɔ kikɛ
hay=INSTR house

“House made of hay.”

The only apparent exception to this is a type of dvandva compound discussed by de Oliveira (2005), where two nouns are juxtaposed. This is actually only found in a handful of names of imaginary creatures, and should be considered marginal:

- (81) a. kubẽ=rɔp
barbarian=jaguar
“Jaguar people.”
- b. kubẽ=jep
barbarian=bat
“Bat people.”

“Adjectives” inside a noun phrase are always the syntactic head of the construction; i.e., they seem to constitute a special case of internally-headed relative clause, rather than standing as a class of their own. This question will be touched on again in §4.4.

We conclude that a structure such as that proposed by Cole for Quechua is quite unlikely for relative clauses in Mēbengokre, since such adjunction structures don’t occur with anything other than postpositional phrases in the language.

As for how much structure Mēbengokre IHRCs contain, the following contrast between matrix clauses and IHRCs can be adduced to show that certain left-peripheral positions are absent:

- (82) kukruut nẽ ba arɣm ku-bĩ
tapir (FOC) NFUT 1NOM already 3ACC-kill.SG.V
“I killed *tapir*.”

- (83) (*kukruut) (*nẽ) (*ijɛ) arɣm ije bĩn
tapir (FOC) NFUT 1ERG already 1ERG 3.kill.SG.N
“What I already killed.”

The left periphery of matrix clauses such as (82) is constituted by a focus position, that can contain at most one dislocated XP, a delimiting particle that indicates future versus nonfuture tense, and a position reserved for nominative subjects, which is

higher than that of any oblique subject. This latter position, in particular, was discussed in §1.4.

None of these left peripheral positions are available in the relative clause in (83). The ergative subject can appear only after the particle *arɣm*, which appears just after the nominative in (82). This puts whatever projection *arɣm* is in as the upper bound of structure in IHRCs, effectively excluding TP and CP.

3.3 The basic semantic analysis

Let us take as a starting point the structure that we established in Figure 3-1, and derive the translations we observed in (73) by working our way through one example. Consider the following:

- (84) *kubě* *kutɛ* *rɔpkrɔri* *bĩn=ja*
 barbarian 3ERG jaguar kill.N=the
 a. ‘The white man who killed the/a jaguar.’
 b. ‘The jaguar that the/a white man killed.’

The following denotations are straightforward:⁴

- (85) a. $[[bĩ]] = \lambda x_e.\lambda e_v.\text{kill}'(e, x)$
 b. $[[rɔpkrɔri]] = \lambda x_e.\text{jaguar}'(x)$
 c. $[[kubě]] = \lambda x_e.\text{barbarian}'(x)$

How do these parts come together to give the correct denotation to the subconstituent *rɔpkrɔri bĩ*? Clearly not by Functional Application.

Given that indefinite noun phrases in Měbengokre have no overt determiners, we will consider them to be determinerless NPs, of type $\langle e, t \rangle$. They come together with the main predicate by the compositional rule of Predicate Restriction, introduced by Chung and Ladusaw (2004). The rule can be summarized as:

⁴The semantic types used are: individuals (e), eventualities (v), which can be considered just a special type of the former, and truth-values (t).

Predicate Restriction (Chung and Ladusaw 2004, p. 5)

$$\begin{array}{c} \lambda y. \lambda x. P(y, x) \wedge Q(x) \\ \wedge \\ \lambda x. \lambda y. P(y, x) \quad \lambda x. Q(x) \end{array}$$

If we apply this composition rule to our example, we get:

$$(86) \quad \llbracket \text{rɔpkrɔri b̄in} \rrbracket = \lambda e. \lambda x. \text{kill}'(e, x) \wedge \text{jaguar}'(x).$$

We won't go into how the external argument is introduced,⁵ and we will assume that *kutε* is vacuous. So the denotation we get for the core of the relative clause (84) is:

$$(87) \quad \llbracket \text{kubē kutε rɔpkrɔri b̄in} \rrbracket = \\ \lambda y. \lambda e. \lambda x. \text{kill}'(e, x) \wedge \text{jaguar}'(x) \wedge \text{barbarian}'(y) \wedge \text{Agent}(e, y)$$

As can be seen in the representations above, we assume, with Heim (1982) and much subsequent work, that indefinite noun phrases lack quantificational force of their own. In (87), this results in that whenever the syntactic arguments are indefinite (i.e., determinerless) noun phrases, a verbal projection is as unsaturated semantically as just a verb by itself. The denotation of such *nPs* is an *n*-place property of individuals. This *nP* combines with *D* to form internally-headed relative clauses.⁶

What is the determiner *ja*, then? We will claim that it is an unselective binder. This means that it binds a variable contained in its sister constituent, but which variable is bound (if the constituent contains more than one) is not determined by structure. Any one variable is bound by *ja*, while all other variables that are free at this point in the structure are bound by existential closure:

$$(88) \quad \llbracket \text{ja} \rrbracket = \lambda P_{et}. \iota x P(x)$$

$$(89) \quad \begin{array}{l} \text{kubē} \quad \text{kutε} \quad \text{rɔpkrɔri} \quad \text{b̄in} \quad \text{ja} \\ \text{barbarian} \quad \exists \text{ERG} \quad \text{jaguar} \quad \text{kill.N} \quad \text{the} \end{array}$$

⁵We return to this question in §4.3.

⁶For a somewhat similar approach to relative clauses in Salish, see Jelinek (1995).

- a. ‘the jaguar that a white man killed’
 $\iota x \exists e \exists y: \text{kill}'(e, x) \wedge \text{jaguar}'(x) \wedge \text{barbarian}'(y) \wedge \text{Agent}(e, y)$
- b. ‘the white man that killed a jaguar’
 $\iota y \exists e \exists x: \text{kill}'(e, x) \wedge \text{jaguar}'(x) \wedge \text{barbarian}'(y) \wedge \text{Agent}(e, y)$

This is pretty straightforward. Note that in addition to these readings, there are readings of this sentence where the non-head noun phrase is definite, as definite determiners are optionally null.

To repeat what we said at the beginning of §3.2, we considered internally-headed relative clauses in this and the preceding section because we believe them to be the prototypical example of a nominalization in Mébengokre. We will assume that the structure of all nominalizations we deal with in the dissertation is what we have proposed for IHRCs. In the following section, we show that the semantics of eventive nominalizations is a simple extension of the semantics which we developed for IHRCs in this section.

3.4 Eventive complement clauses

Complement clauses that are formally identical to internally-headed relative clauses can get eventive interpretations, as opposed to participant, or fully clausal, interpretations. This can be seen in direct perception constructions:

- (90) ba ʌk kʌr ma
 1NOM fowl coo.N hear
 ‘I heard the bird calling.’

Arguably this is also the interpretation they get when they are complements of manner predicates:

- (91) a-dʒu-jarẽɲ məj
 2-ANTIPASS-say.N good
 ‘You spoke well.’ (lit.: ‘Your saying was good.’)

The semantics that we have developed for relative clauses extends without significant modification to get the senses in (90–91):

- (92) ba bēnjadzɔwɔr kute bēn dzir ma
 1NOM chief 3ERG speech place.N hear
- a. ‘[I heard] the reciting of the/a ritual speech by the/a chief’
 $\iota e \exists x \exists y: \text{recite}'(e, y, x) \wedge \text{chief}'(y) \wedge \text{speech}'(x)$
- b. ‘[I heard] the ritual speech that the/a chief recited’
 $\iota x \exists e \exists y: \text{recite}'(e, y, x) \wedge \text{chief}'(y) \wedge \text{speech}'(x)$

Remember from the discussion surrounding example (77) that for a particular participant to be the head of the relative clause, it has to be present in the structure, i.e., whatever variable gets bound by the determiner outside the internally-headed relative clause to become the semantic head, has to be projected in the structure. This argues for a variable $e \in D_v$ to be present, presumably as an argument of the verbal root.

This is all we need to proceed to our analysis of matrix nominal clauses in chapter 4. The next section is simply an addendum showing how the semantics we’ve given to nominal constructions⁷ merges with various things to yield negative sentences, sentences with a manner modifier, and “short nominalizations.”

3.5 The semantics of negation, manner modification, and short nominalizations

We observed above that in Mēbengokre sentences that have manner modifiers, such as (91), the semantically main clause appears syntactically embedded under the manner modifier. Arregui and Matthewson (2001) discuss manner modification in Salish, which seems to function in a similar way:

⁷Throughout this dissertation we’ve been avoiding the term *nominalization*, as we believe these nominal structures to be basic, rather than derived from verbs, but of course the structures under discussion are nominalizations under most different approaches.

(93) Mēbengokre

mē tər məj
PL dance.N good

“They danced well (lit., their dancing was good)”

(94) St’át’imcets

skenkín ti n-s-xát’-em-a ta sqwém-a
slow DET 1SG.POSS-NOM-hard-INTR-DET DET mountain-DET

“I walked up the hill slowly (lit., my walking up the hill was slow)”

As Arregui and Matthewson point out, this structure is amenable to an analysis where the nominalized clause denotes a definite description of an event that saturates the argument position of the manner predicate:

(95) $\llbracket \text{mē tər məj} \rrbracket = \llbracket \text{məj} \rrbracket (\iota e. \llbracket \text{mē tər} \rrbracket (e))$

Note that the meaning of the embedded nominalization is crucially *not* that of a proposition, but rather is a description of an event, so (93) cannot mean “It was good that they danced.” A formalization of this distinction, which is recognized since Vendler (1967), is advanced by Zucchi (1993).

Something similar could be applied to negated sentences (cf. Davis 2005 for a treatment along those lines of one type of negation in Salish.)

Why does manner modification work like this in Mēbengokre? I suspect that it’s because the language drastically restricts adjunction: there are no open classes of adjectives or adverbs, and, as we saw above, relative clauses aren’t adjoined either. This, coupled with the fact that finite clauses can’t be embedded, is the reason why nominalizations are so pervasive in the language. The settings of these two parameters are what make Mēbengokre look superficially different from other languages, like French and English, that also have ergativity in nominalizations.

3.5.1 Short nominalizations

Mēbengokre has two morphemes, $dʒ\lambda$ and $dʒw\lambda j$, that are used to create a large repertoire of what could be intuitively called “lexical” nominalizations, such as the

following:

- (96) a. piʔok-jarẽ-n-dʒwɣj
writing-say-NLZR-master
'teacher'
- b. i-dʒʌ-ku-r-dʒʌ
1-AP-eat.N-container
'My eating utensils', but also: 'my eating place', 'my food', etc.

In the literature on other Jê languages (cf., e.g., de Oliveira 2005), these have been considered to be an instrument and an agent nominalizer, respectively. Our contention is that what the “nominalizers” attach to is already nominal (i.e., it’s an eventive complement clause, as described above), and they themselves are no more than the semantically bleached nouns *dʒʌ* ‘container’ and *dʒwɣj* ‘master’.

What is the relation between these nouns and the nominalized clause? The nouns cannot be external heads: as we saw above, what is interpreted as the head of an internally-headed relative clause has to be a null pronoun or a determinerless noun phrase in a governed position. This is not the case in either (96a) or (96b). In addition, *dʒʌ* and *dʒwɣj* are compatible with both an overt internal head,⁸ and an external head, which in any case appears to the left of the relative clause.

Instead, we propose that the structure of these “short nominalizations” is just what the morphology leads us to believe: they are full nominalized clauses that are (genitive) complements to the bleached nouns.⁹ How exactly “the master of saying writing” comes to mean “teacher” will have to be worked out on another occasion, but the path to follow should be clear.

⁸For instance, *dʒwɣj* can co-occur with an overt agentive subject, though the sense of these constructions is not clear to us at this point.

⁹Alternatively, we could take these bleached nouns to sit in *n*, and have a “classificatory role”, i.e., restricting the interpretations of the lexical projection to those that are compatible with the classifier’s feature set.

Chapter 4

The interpretation of matrix nominals

In chapter 2, we explored the relation between nominalizations and ergative syntax. In chapter 3, we provided a semantics for nominalizations in embedded contexts, and derived the meaning of constructions employed for manner modification, negation, and progressive aspect, all of which embed a nominalization.

In the present chapter, we address the original puzzle presented in the introduction. The puzzle can be restated as follows: The opposition between nominalized and non-nominalized verbs, which so far only signaled a difference in context, has nevertheless a clear effect on aspectual interpretation in main clauses; this can be seen in the following paradigm:¹

- (97) a. krwɣj jã nẽ mop krẽ
parakeet DEM NFUT malanga eat.V.SG
“This parakeet ate the malanga.”
- b. krwɣj jã nẽ mop ku
parakeet DEM NFUT malanga eat.V.PL
“This parakeet ate the malangas.”
- (98) a. krwɣj jã nẽ kutɛ mop krẽn
parakeet DEM NFUT 3ERG malanga eat.N.SG

¹As in previous chapters, v indicates the verbal form of the verb, N the nominal form of the verb; though in principle identifiable with pieces of the verb’s morphology, we opt for being agnostic about segmentation. SG and PL indicate verbal number; when not marked, the particular verb doesn’t display an opposition between singular and plural.

“This parakeet has eaten malanga (at least once in his life).”

- b. krwɣj jã nẽ kutɛ mop kur
 parakeet DEM NFUT 3ERG malanga eat.N.PL

“This parakeet eats malanga (often).”

The translations given should be considered first approximations, and, as we will see later in the chapter, reflect only some of the possible meanings of each construction. For now, we can summarize the effect of nominalization and verbal number on interpretation in non-future main clauses as follows:

(99)

	VERBAL	NOMINAL
SINGULAR V	Perfective; singular object	Experiential perfect, relative to the subject’s life-span
PLURAL V	Perfective; plural object	Habitual or generic

The meaning of (97) can be characterized as positioning the event with respect to a topic time that is set by narrative context.

In (98), on the other hand, the event is, like in (97), contained in an interval, though one that is not anaphoric but rather coterminous with the subject’s life-span (*mutatis mutandis* for inanimate subjects). The interpretation of these sentences containing nominal forms of verbs has been variously described as “stative” or “subject-oriented.”

Our project in this chapter is to provide a semantics for the different verb forms of Mēbengokre that is compositional, in the sense that it respects facts about Mēbengokre clause structure that we have established in previous chapters. In particular, we wish to derive the stativity of the constructions in (98) from the fact that the verb forms are nominal, and are therefore forced to be interpreted in a particular way.

A priori, there are at least two ways to explain the aspectual opposition between nominal and verbal forms of verbs: on the one hand, one could say that Mēbengokre nominals inherently denote states, not unlike the participles of better-known lan-

guages; on the other, one could say that something about the construction is responsible for the stativity, but not in itself the fact that the forms employed are nominal.

Though we aim to give both possibilities a fair hearing, we will contend that the latter is the correct approach, based primarily on the fact that nominal forms of verbs are not necessarily stative in embedded contexts, but rather are so only in main clauses. Furthermore, we will contend that the device that renders nominal forms of verbs stative in matrix clauses is the same that allows underived nouns to be interpreted as existential clauses. Our arguments are expanded in §4.3. Before turning to that, however, we develop a semantics for regular (non-nominal) verbs, as this will remain the same regardless of how we choose to analyze nominal ones.

4.1 The interpretation of verbs

The simplest position we can take as to the meaning of a sentence such as (100), which is consistent with previous discussion, is one where the logical form is as follows:

- (100) bĕnjadʒwɤr bĕn dʒi
 chief speech put.V.SG
 ‘The chief recited (put down) a ritual speech.’
 $\exists e \exists x: \text{recite}'(e, \text{the-chief}', x) \wedge \text{speech}'(x)$

Of course, to this we need to add viewpoint aspect and tense. We will assume that viewpoint aspect, i.e., perfective versus imperfective, and tense, are projections above a structure such as (100). That is, viewpoint aspect and tense are operators that take propositions as arguments, and restrict their semantics in particular ways. The basis of their interaction is explained in the following few sections.

4.1.1 The event argument

In chapter 3, we argued for the existence of an event argument in predicates because of the need to refer to definite descriptions of eventualities in embedded nominalizations. Summarizing our discussion from that chapter, we propose, following Davidson

(1967), that certain types of predicates have, in addition to their arguments of type e , an argument of type v (event).²

It is not important here to give a precise definition of what an element of D_v is; for our present purposes, it can be thought of as a special type of individual with specific properties (in particular, a duration). Informally, we can say that it refers to a situation that is described by a verb, corresponding to the intuitive meaning of a noun phrase with a gerund or nominalization as its head.

In Davidson’s proposal, the event argument is simply a device to hold together the various components of action sentences, allowing certain entailments to be easily derived. The event argument is shared by the main predicate and all secondary predicates (temporal and other adjuncts) in a sentence, as represented in the following example:

- (101) a. John played the violin yesterday at Symphony Hall.
 b. $\exists e: \text{violin-playing}'(e) \wedge \text{Ag}(\text{John}', e) \wedge \text{yesterday}'(e) \wedge \text{at-Symphony-Hall}'(e)$

In chapter 3, we made a case for the usefulness of a definite description of events such as (102) to identify the semantics of action nominalizations with that of other nominal expressions, and give a semantics to manner modification constructions in Mēbengokre.

- (102) a. John’s playing of the violin yesterday at Symphony Hall
 b. $\iota e. \text{violin-playing}'(e) \wedge \text{Ag}(\text{John}', e) \wedge \text{yesterday}'(e) \wedge \text{at-Symphony-Hall}'(e)$

The event argument is also the key for assigning an interpretation for time-delimited propositions. Intuitively, a simple past sentence such as “John saw Mary” could be given the following interpretation:³

²Note that in the traditional nomenclature, which we employ here, variables in the domain of individuals are generally represented by x, y , etc., whereas variables in the domain of events are represented by e, e' , etc. This e shouldn’t be confused with the e that represents the *type* of individuals.

³In this dissertation, we will use t_o to refer to the utterance time.

- (103) a. John saw Mary.
 b. $\exists t < t_0: \text{John see Mary at } t$

Given what we said so far, the translation could be recast as follows:

- (104) $\exists e: \tau(e) < t_0: \text{Ag}(\text{John}', e) \wedge \text{seeing-Mary}'(e)$

The function τ is a surjection from the domain of eventualities to the domain of time intervals, mapping each eventuality to the time interval it occupies. $\tau(e) = t$ is introduced as a presupposition, rather than as an assertion.

How can we make this more compositional?

4.1.2 What are verbs?

As we saw in chapter 3, “nominal forms of verbs” in embedded contexts can head noun phrases that denote definite descriptions of events. We proposed the following semantics for an embedded noun phrase containing a nominal form of a verb:

- (105) ba bēnjadžwɣr kutɛ bēn dʒir ma
 1NOM chief 3ERG speech put.N.SG hear
 ‘[I heard] the reciting of the/a ritual speech by the/a chief’
 $\iota e \exists x \exists y: \text{recite}'(e, y, x) \wedge \text{chief}'(y) \wedge \text{speech}'(x)$

It seems reasonable to assume that the meaning of the embedded nominal form of the verb, up to but not including D, is shared by all forms of verbs. The difference between the verbal and the nominal form of the verb is introduced above this level: while nominal forms may be selected by a determiner, which can bind either an event variable or an individual, true verbs obligatorily become propositions, that is, their event variable (as well as any other free variables) is bound by an existential operator.

This existential operator might just be “thrown in” (i.e., be a syncategorematic rule of existential closure) when a *v*P merges with a higher sentential functional category, or it might be introduced as part of the denotation of some lexical item. Given the discussion in chapter 3, we propose that the existential semantics is part of the lexical entry of *v*:

$$(106) \quad \llbracket v \rrbracket = \lambda P_{vt}.\exists eP(e)$$

This functional category has a morphological reflex on Měbengokre verbs, namely the truncation of the final consonant. That is, we propose that the nominal forms of verbs have to be considered morphologically basic, while the properly verbal forms are derived by merging the root with v . v is also associated with nominative-accusative marking on the arguments, as opposed to the ergative-absolutive employed in clauses headed by non-finite verbs.

The denotation of n is, for our present purposes, vacuous, and it has no morphological expression. Its only effect is in the ergative case marking, which, as we said in §2.5, is a sort of default. Thus, it might seem that the only reason why we keep a nominal head n in our syntax is for symmetry. The reader should nevertheless be reminded of the short note on the “classificatory” role of n which was made at the end of chapter 3. It is possible that the noun-forming head might have other content related to the fact that its extended projection is often a referential expression, much in the way that the content of v is related to the fact that it normally heads propositions.

We can restate what we have said in this section as follows: there is no lexical distinction between nouns and verbs in Měbengokre, except in the argument structure. If the referential argument of a lexical root (i.e., the event argument, or the entity argument to which the root “refers”) is of the right type, i.e., is an event,⁴ it can become both a noun if nothing happens, or a verb if its event argument gets bound by the verbalizing head v . As a verb, its destiny is to become the head of a proposition; as a noun, it can become a referential expression, or appear in an existential construction. Lexical roots that don’t have an event argument, i.e., underived nouns, don’t have the option of becoming verbs.

⁴Of course, there is a certain circularity in putting things that way, as there might be certain entity-type variables (cf. 132d) that are a priori difficult to distinguish from eventuality-type ones. This problem is discussed briefly in chapter 3. Here, we will simply assume that the distinction can be established on the basis of dynamicity features on the referential argument of the lexical root, something which is largely true.

Let's move on to describe some of the properties of verbs.

How does the vP get linked to tense, to yield time-delimited propositions such as (104)? We need to revise the lexical entry for v slightly. Let us assume that denotations are always relative to time intervals, but that only v (so far) is assignment-dependent. We thus have the following revised definition of v :

$$(107) \quad \llbracket v \rrbracket^t = \lambda P_{vt}. \exists e: \tau(e) = t. P(e)$$

At this point we are ready to give closure to the discussion of case in §2.5. It should be recalled from that section that we considered the necessary condition for nominative-accusative case marking a configuration in which two case-assigning heads were within the same domain of case assignment, as opposed to the situation that gives rise to ergative-absolutive, in which only one case-assigning head is responsible for both cases. We wish to propose that the forced link with a higher functional category introduced in the denotation of v is what enlarges the domain of case assignment to eventually engulf T and yield the desired configuration. No such link is introduced by n , whose denotation is not assignment-dependent.

Many alternatives to the way we build structure within our proposal are imaginable. We will not explore any alternatives here, but rather only highlight two important elements of our particular implementation: (a) eventualities are kept distinct from time intervals, and (b) the event variable is bound by v , rather than higher in the structure. These assumptions, while probably not crucial, are meant to capture two important facts about Mẽbengokre clauses, which have been recurrent in this thesis; they are, respectively: that nominal clauses can refer to the eventualities themselves (e.g., when embedded under perception verbs), and that verbal projections are always propositional. Other characteristics of the particular formalization chosen are merely technical choices, and can be easily recast in other frameworks.

What we have said so far amounts to saying that “verbness” (which in previous versions of our work we referred to as “finiteness”) is what links the event description to a higher functional category that binds the evaluation time.

The tree in Figure 4-1 sums up our proposal so far. In this tree, events and time intervals are kept distinct, and are related by v in the way that was described above. Tense is a relation between the utterance time t_0 and the evaluation time for v .

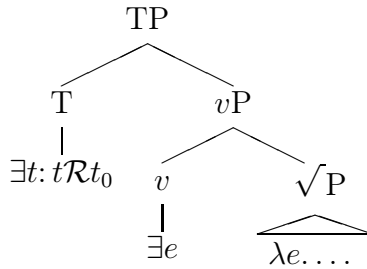


Figure 4-1: Minimal structure of a verbal clause

We are now in a position to return to (104), still simplifying slightly.

- (108) a. $\llbracket \text{John seeing Mary} \rrbracket \in D_{vt}$
 b. $\llbracket v \rrbracket^t(\llbracket \text{John seeing Mary} \rrbracket) = \exists e: \tau(e) = t. \llbracket \text{John seeing Mary} \rrbracket(e)$
 c. $\llbracket \text{PAST } \phi \rrbracket = \exists t: t < t_0: \llbracket \phi \rrbracket^t$
- (109) $\llbracket \text{John saw Mary} \rrbracket = \exists t: t < t_0: \exists e: \tau(e) = t. \llbracket \text{John see Mary} \rrbracket(e)$

This decomposes as indicated in the tree given in Figure 4-2.

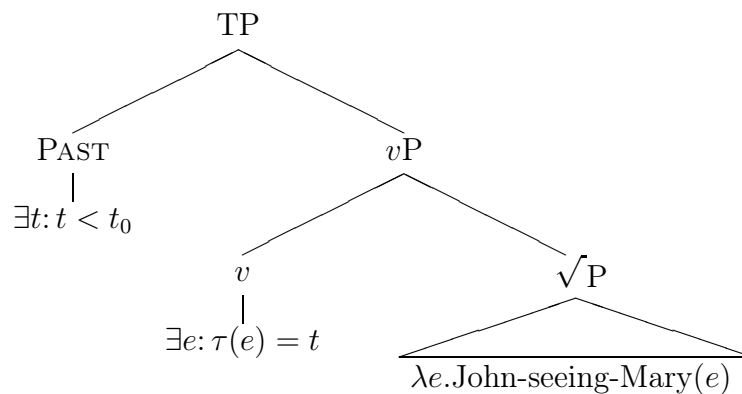


Figure 4-2: Structure of (109).

4.1.3 Excursus on viewpoint aspect and tense

It has long been observed that in many cases the tense specification doesn't relate the time of an event directly to utterance time, but rather intermediates between the utterance time and another, intermediate time interval. This can be observed in the following set of sentences, in which sentence (110a) sets a temporal context, while (110b) relates the event times to such a context, rather than to utterance time.⁵

- (110) a. What was going on when you got home?
 b. John had met Mary and was talking to Peter about it.
- (111) a. $\exists t^*: t^* < t_o: \exists t: t < t^*: \text{John meet Mary at } t$
 b. $\exists t^*: t^* < t_o: \exists t: t \supseteq t^*: \text{John talk to Peter at } t$

(111) are first approximations to a translation of the propositions in (110b). The intermediate time interval t^* , called Reference Time in Reichenbachian parlance, and Topic Time by Klein (1994), the name that we adopt herein, like the event time (t in the formulas above), seems to be set by the narrative context.

Viewpoint aspect presupposes a type of connection between event time and this topic time. We assume, with Klein (1994) and others, that viewpoint aspect has essentially two values, perfective and imperfective, for which we adopt the following definitions, from von Stechow and Iatridou (2005):⁶

- (112) a. $[[\text{PFV } \phi]]^t \Leftrightarrow \exists t': t' \subseteq t: [[\phi]]^{t'}$
 b. $[[\text{IMP } \phi]]^t \Leftrightarrow \exists t': t' \supseteq t: [[\phi]]^{t'}$

These formalizations capture the intuition that the main contrast between the perfective and the imperfective is that the former claims that the event is fully con-

⁵We will continue with the practice of treating the relations between time intervals effected by Tense and Asp to be presuppositions. Whether this is as correct for Asp as for Tense is an issue into which we won't enter.

⁶The pluperfect is useful here for expository purposes in this section, but will play no role in our discussion of Mébengokre, so we don't define it here.

tained within the topic time, whereas the latter makes no claim to this effect; cf., for instance, the following sequences in Spanish:

(113) ¿Viste a Juan?

Did you see Juan?

(114) a. Estaba jugando en el jardín recién.

was.3S.IMP playing in the yard recently

... maybe he's still there.

b. Estuvo jugando en el jardín recién.

was.3S.PFV playing in the yard recently

... maybe he's still there.

... he can't be too far.

Given these facts, we have to redefine the function of tense as making a particular connection between utterance time and this same topic time, rather than the event time directly. The denotation for the different tenses doesn't have to be any different from what we previously conceived, but the time variable that will be bound by Tense will be Asp's, rather than *v*'s. We can assume the following definitions for now:

(115) a. $[[\text{PAST } \phi]]^t \Leftrightarrow \exists t' < t: [[\phi]]^{t'}$

b. $[[\text{PRES } \phi]]^t \Leftrightarrow [[\phi]]^{t_0}$

c. $[[\text{FUT } \phi]]^t \Leftrightarrow \exists t' > t: [[\phi]]^{t'}$

Tense is therefore higher in the tree than viewpoint aspect, yielding the partial tree in Figure 4-3 for the first half of (110b).

Neither tense nor viewpoint aspect are directly encoded in Měbengokre verbs. For the purposes of this dissertation, we will assume that tense and viewpoint aspect are not what is involved in producing the aspectual contrasts that introduced the chapter. Though we have stated this since the introduction,⁷ we are now in a position where we can be more precise about our claims.

⁷I.e., in rejecting the possibility that the forms might differ solely in an aspectual feature, and adopting the solution that they differ in category.

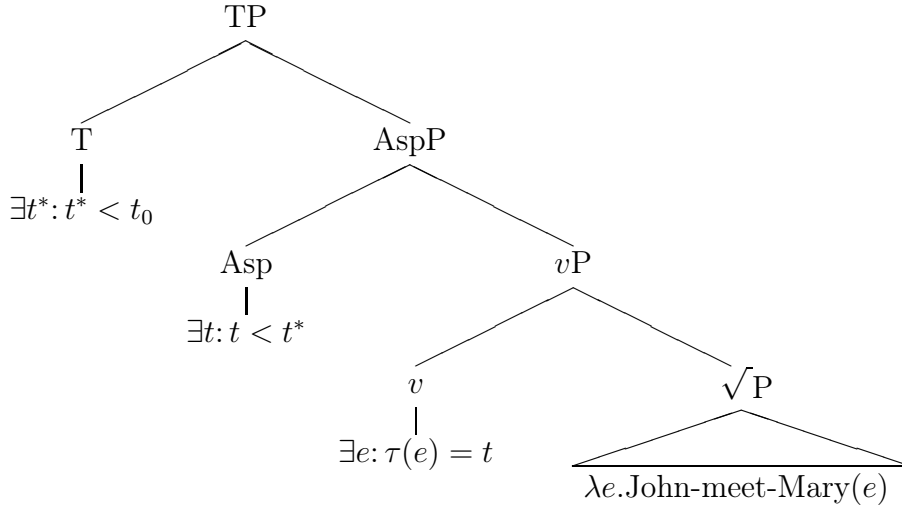


Figure 4-3: Minimal structure which accomodates viewpoint

Smith (1997) argues that aspect should be divided into two domains, which she calls “upper” and “lower” aspect. The latter is identified with Aktionsart, i.e., the inherent aspectual structure of lexical predicates, whereas the former is straightforwardly what is usually called “viewpoint aspect” (i.e., most prominently, the distinction between perfective and imperfective). Our claim is that, on the one hand, though not crucially, viewpoint aspect should be limited to perfective and imperfective. On the other hand, we claim that aspectual values such as those that nominal forms of verbs take, that is, all of the aspect that is discussed in this chapter, should be characterized as “lower aspect”, rather than viewpoint. It should be borne in mind that this is a non-standard extension of the notion of “lower aspect” that, if applied to better-known languages, would encompass participial formation, considering it to be the “lexical” creation of a stative predicate out of an eventive one, thus making it completely independent from viewpoint, which only determines how this state is to be related to topic time.⁸

Tense being by semantic necessity a higher projection than viewpoint aspect, it follows that it is also independent from the “lexical aspectual operations” discussed in

⁸The discussion of “compound tenses” in English in §4.3 is relevant in this regard. In such tenses, we would contend that viewpoint is a property of the inflected auxiliary, and is completely separate from the stativity introduced by the participial form of the verb.

this dissertation. Working out how left-peripheral particles instantiate the different categories of viewpoint and tense, and how default values of both viewpoint and tense are assigned to different types of predicates, are matters which are left for future research.

4.2 Verbal number

As we said in chapter 1, and again in the introduction to this chapter, Mēbengokre verbs display an alternation for number, most often manifested by root suppletion, or by a change in the “classifier” prefix of verbal stems.⁹ The purpose of this section is to establish, though with caveats, the semantics of verbal number. The semantics of number will be relevant from §4.3 on, and in particular in §4.5 as we attempt to reduce the contrast between (98a) and (98b) to the visible pieces of verbal accident, i.e., number and lexical category.

The following sentences exemplify the number contrast found in Mēbengokre:

- (116) a. η ra nē ba saku kam ku-dʒa
 paca NFUT 1NOM bag in 3ACC-put.V.SG
 “I put a paca (*Agouti paca*) in the bag.”
- b. η ra kumɛj nē ba saku kam ku-ɲje
 paca many NFUT 1NOM bag in 3ACC-put.V.PL
 “I put many pacas in the bag.”
- (117) a. ku-beŋet nē kaɣmã dʒa
 SG-old.man NFUT up stand.V.PL
 “The old man stood up.”
- b. mē-beŋet nē mē kaɣmã kuʔe
 PL-old.man NFUT PL up stand.PL
 “The old men stood up.”

There has been some discussion about what verbal number, which is quite widespread in Amazonian languages, is about, with some authors claiming that it’s number agreement with the absolutive argument and others claiming that it’s exclusively a marker

⁹For more details on the morphology of number, see chapter 1.

of plural action.¹⁰ That in Mēbengokre the plural mark on a verb can stand primarily for plurality of the action can be seen if we contrast (116b) with the following:

- (118) aŋʌ kumɛj nē ba saku kam ku-dʒʌ
 bead many NFUT 1NOM bag in 3ACC-put.V.SG
 “I put many glass beads in a bag (all at once).”

We will assume for the purpose of this dissertation that the number marked on Mēbengokre verbs always refers to the cardinality of the event.¹¹ According to consultants, the plural is used when referring to large (and undefined) quantities, whereas the singular can be used for a plurality, as long as it consists of relatively few individuals (“up to ten”, according to one consultant).

The question is thornier than this discussion might suggest. Cf., v.g., the following:

- (119) a. arɣm nē ba i-ɲō puru kam mop kuni kaba
 already NFUT 1NOM 1-POSS garden in malanga all uproot.V.SG
 “I already uprooted all of the malanga from my garden.”
 b. arɣm nē ba i-ɲō puru kam mop kuni krwɣ
 already NFUT 1NOM 1-POSS garden in malanga all uproot.V.PL
 “I already uprooted a lot of the malanga from my garden (but there might still be some left).”

Examples like (119) suggest more a contrast in definiteness of the object than of cardinality, with “singular” making the object definite and exhaustive (whatever the real meaning of *kuni* is), and “plural” standing for a large quantity that isn’t necessarily exhaustive.¹² (120) is even thornier. Here the plural seems to have an

¹⁰For Jê, cf. Urban (1985), who holds the former position, and D’Angelis (2004), who holds the latter. Queixalós (1998), describing an unrelated language of the Orinoco basin, defines a category of its own, “distensivité”, which is fuzzily related to aspect, agentivity, effectiveness of the action, and so on.

¹¹In fact, it suffices for our purposes to say that the number marker on verbs *may* refer to plurality of events, in addition to being agreement with some core argument. For discussion of verbal number (“pluractionality”) as event plurality, cf. Lasersohn (2005) and Cusic (1981).

¹²Cardinality might be an inherently tricky notion in Mēbengokre, given that there are no native expressions to refer precisely to quantities over two.

evidential value, yielding an interpretation where the event either happened in the past, or in a location far away from both speaker and hearer.

(120) $\kappa\lambda\mu\rho\alpha\pi\tau\chi j$ $n\tilde{e}$ $\text{pid}\zeta\text{o}$ $\text{b}\alpha\text{ri}$ $\text{?}\tilde{\alpha}$ $\text{ad}\zeta\alpha\dots$
 car NFUT fruit tree on run.into

“The car ran into the fruit tree...”

a. \dots $n\tilde{e}$ o kuni pikota
 NFUT 3.fruit all throw.down.SG

“...and made all the fruit fall.”

b. \dots $n\tilde{e}$ o kuni ka?u
 NFUT 3.fruit all throw.down.PL

“...and made all the fruit fall (not present).”

Though in what follows we control for these effects by avoiding cardinality expressions¹³ on internal arguments, and maintain the claim that verbal plurality is event plurality, examples such as these should be borne in mind when we return to the puzzle that opened this chapter. In §4.5, we ascribe the modal component of generics to a phonetically unrealized morpheme (which in §4.6.3 we identify with the *-n-* that distinguishes present from past participles in Romance languages). It might be the case, nevertheless, that we are completely wrong about this, and the modality of habituais really resides in the “plural” morphology on the verb root. Such would be a matter for further research.

4.3 The interpretation of matrix nominal forms

As we said in the introduction to the chapter, nominal forms of verbs have “stative” or “subject-oriented” interpretations in matrix clauses. What is responsible for such interpretations?

The alternatives are essentially two: (a) ascribing the stativity of the construction involving non-finite (or nominalized) verbs to the nominalizing morphology itself, or

¹³In fact, we try to avoid things like *kuni*, whose meanings aren’t clear, but since bare noun phrases are always ambiguous between definite and indefinite meanings, this might not be enough to exclude unwanted elements.

(b) ascribing the stativity of the construction to something in its syntax, rather than in the morphology of the nominalized predicate. To explain what we mean, we will discuss what each approach would involve if applied to the “compound tenses” in better-known languages. Consider the following:

- (121) a. John is eating.
b. John has eaten.

The question of how to divide up the meaning of the construction between the participial form of verbs and the auxiliaries in cases such as (121) is parallel to the question we are asking about the source of stativity in main clauses with nominal forms of verbs in Měbengokre. While it might seem clear that in (121a) the copula is semantically vacuous, and the present participle is an adjectival form, and is thus stative in the required way (i.e., has the sub-interval property), (121b) is not as clear cut.¹⁴ On the one hand, one could adopt the position that the participial denotes a state (“the state of having had the experience of eating”), while the auxiliary is vacuous; on the other hand, one could believe that the participial is eventive (i.e., has as a denotation whatever the verb’s denotation is, without any stativization), and the stativity comes from the auxiliary, which in this account would be a type of raising predicate with a meaning approximately equivalent to “to have the experience of . . .”

The first of these approaches corresponds to option (a) above; the second, to option (b). In Měbengokre, however, the question has to be framed in slightly different terms, as there is no overt auxiliary to ascribe any meaning to. For this reason, we talk of “stativity as a property of the construction.” In fact, we will eventually identify this component of the construction’s meaning with a particular covert element.

¹⁴Cf. the appendix of Iatridou et al. (2001), where the issue of how the meaning of the perfect is distributed between the participial and the auxiliary is discussed, without reaching a definitive conclusion.

4.3.1 Stativity as a property of nominal forms

It is common for languages to have resources to create derived stative predicates from verbs; the following are examples from English:

- (122) a. The gates are *closed*.
b. This is a *flowering* tree.

In both of the preceding examples, the emphasized words are derived from verbs, and seem to be inherently stative: in (122a), the predicate refers to a state resulting from an event that would satisfy the verb’s description, whereas in (122b), the predicate refers to an ability or habit.

Would it be possible to say that Mēbengokre non-finite verbs are precisely like English *closed* and *flowering*? Certainly this seems to have been in the air in previous work on Mēbengokre, where the non-finite forms are called “stative” or “adjectival”. The idea to implement would be that non-finite forms of verbs contain stativizing morphology that take the eventive meaning of the verb root and yield a word that denotes a set of stative eventualities that is related in some way to the original meaning.

Basing ourselves in what we know about participial forms in the better-described languages, we could list the following types of temporally stative eventualities derived from (or simply related to) an eventive predicate:

- (123) a. The property (i-level state) of having experienced a particular event (the “existential perfect”).
b. The ability or habit to perform eventualities that are described by the eventive predicate (the “generic” or “habitual”).
c. The target-state of an event (the “adjectival passive”, or “perfect of present relevance”, depending on its valence).
d. The state leading to the completion of an eventuality described by the eventive predicate (the “progressive”).¹⁵

¹⁵The progressive is stative only in the sense of having the “sub-interval property”; for a discussion

To exemplify the approach, we give a formal implementation of “target-state” statives (i.e., 123c), which is advanced by Kratzer (2000).¹⁶ This is how one would derive “closed” from the verb “to close”:

- (124) a. $\llbracket \text{close} \rrbracket = \lambda x \lambda s \lambda e. \text{closing}'(e) \wedge \text{event}'(e) \wedge \text{closed}'(x)(s) \wedge \text{cause}'(s)(e)$
 b. $\llbracket \text{-d} \rrbracket = \lambda R \lambda s. \exists e R(s)(e)$
 c. $\llbracket \text{closed} \rrbracket = \lambda s \lambda x. \exists e \text{closing}'(e) \wedge \text{event}'(e) \wedge \text{closed}'(x)(s) \wedge \text{cause}'(s)(e)$

That is, a verb that denotes a change of state, such as “to close”, would have to include in its lexical meaning both the change and the end state. The job of the stativizing morphology is to pick that state as the denotation of the derived stative predicate.¹⁷ In this approach, contrary to what we’ve contemplated so far, the verb would be basic (both morphologically and semantically), and stativizing morphology would apply to it.

To account for the Mēbengokre data, we need to propose two types of stativizer, one to derive the existential perfect (98a) from (97a),¹⁸ repeated below with a partial LF translation, and another to derive the habitual (98b) from (97b). For purposes of illustration, we offer an implementation of the first one:

- (125) a. *krwɔj jã nẽ mop krẽ*
 parakeet DEM NFUT malanga eat.V.SG
 “This parakeet ate the malanga.”
 $\lambda e. \exists x: \text{eating}'(e, x) \wedge \text{malanga}'(x) \wedge \text{Ag}(e, \text{this-parakeet}')$

of stativity, see Jackson (2005).

¹⁶An application of such an approach to Pima is found in Jackson (2005). Pima derived statives seem to have much in common with Mēbengokre non-finite forms, and Jackson’s analysis could be considered a counterpoint to the analysis that we develop here.

¹⁷The semantic type of states (*s*) can be thought of as a special type of eventuality with the characteristic of being temporally stative (i.e., having the sub-interval property) and being non-dynamic. Though for events we insist that they be kept distinct from time intervals, it’s harder to argue to keep such a distinction in the case of states.

¹⁸Though in principle we might be able to find a “general purpose” stativizer that yields the whole range of interpretation of the non-finite (or nominalized) forms.

b. krwɣj jã nẽ kutɛ mop krẽn
 parakeet DEM NFUT 3ERG malanga eat.N.SG

“This parakeet has eaten malanga (once in his life).”

$\lambda s. \exists e: \text{malanga-eating}'(e) \wedge \text{Ag}(e, \text{this-parakeet}') \wedge \text{Result}(e, s) \wedge \text{Attr}(s, \text{this-parakeet}')$

$$(126) \quad \lambda x \lambda P \lambda s. \exists e P(e) \wedge \text{Ag}(e, x) \wedge \text{Result}(e, s) \wedge \text{Attr}(s, x)$$

The Mẽbengokre stativizer could be given an approximate LF translation as in (126).¹⁹ Of course, this semantics only pushes the problem “further back”, as it makes use of two new relations. The first of these is one that identifies any event with its “result state”, in the sense of Parsons (1990), i.e., the state that obtains after any event is completed; this is not to be confused with the target state that appeared in (124c), which is a state that is in principle reversible. The second relation is the “attribution” relation, which could be thought of as the functional homologue for states of the “agent-of” relation. We won’t pursue a definition of these relations any further here, though they will appear in a different, and perhaps more transparently motivated, form in the solution we adopt later.

An issue that didn’t arise when we defined v is that the external argument has to be an argument of the stativizer in this case, as it is explicitly referred to in the expansion of its denotation. In fact, it would not be unreasonable to identify the stativizing head with n in Mẽbengokre, given the fact that non-finite forms of verbs are morphosyntactically identical to nouns. If so, a revision of our lexical entry for v as in (127) is consistent both with the definition of n and with the now standard assumption that category-assigning heads are responsible for the introduction of external arguments.²⁰

$$(127) \quad \llbracket v \rrbracket^t = \lambda x. \lambda P_{vt}. \exists e: \tau(e) = t. \text{Ag}(e, x) \wedge P(e)$$

¹⁹ /-n/ is only one of the phonological reflexes of the putative stativizer.

²⁰ See Marantz (1984), Kratzer (1996), Hale and Keyser (1993), Chomsky (1993), among others.

4.3.2 Stativity as a property of the construction

The analysis sketched in the preceding section is initially plausible (and in fact we will use certain elements of it for our definitive proposal), but it suffers from one important shortcoming: nominalized forms aren't stative when in embedded contexts; stativity is only evidenced when they are used in matrix clauses.

It would be possible to fix the analysis by identifying the stativizer with a category-assigning head other than *n*, i.e., *a* (adjective), and proposing that embedded nominalizations are really composed with *n*, which would have non-stative semantics, while matrix ones are composed with *a*. It would, however, be desirable to identify both constructions, and ascribe the stativity of main clause nominalizations to something about the construction involved in matrix nominalizations. As we will see here, there are good empirical grounds to create statives “in the syntax”, as it were.

As a point of departure note that English nominalizations are generally not stative:

(128) The opening of the doors occurred at exactly 10.

The nominal in this example doesn't refer to a “post-state” or to any of the states in (123), but rather to the opening event, which is itself a change of state. The verb “occur” takes such a denotation (for discussion of event denotations, see chapter 3) and yields a proposition that is roughly synonymous with “the doors were opened at exactly 10”, a plainly eventive meaning. Nothing of this sort is possible with statives; i.e., once a state, forever a state.

Like English nominalizations, Mēbengokre nominalizations, when merged with a definite determiner, denote definite descriptions of eventualities, as in example (105), repeated here:²¹

(129) ba bēnjadzɔwɔr kutɛ bēn dʒir ja ma
1NOM chief 3ERG speech put.N.SG DET hear

²¹As we saw in chapter 3, embedded nominalizations don't have space for tense and aspect particles, unlike main clauses. We will assume that such embedded nominalizations are at most definite descriptions of events, without ever projecting Asp and T. Our discussion of tense and viewpoint aspect above is therefore only relevant for main clauses.

‘[I heard] the reciting of the/a ritual speech by the/a chief’
 $\iota e \exists x \exists y: \text{recite}'(e, y, x) \wedge \text{chief}'(y) \wedge \text{speech}'(x)$

That is, the nominalization itself has among its meanings a set of eventualities, which can combine with an optional determiner to yield a definite description of an event. In chapter 3, we explored how this semantics was a natural extension of the semantics we developed for internally-headed relative clauses.

As we said above, *n*, though fulfilling a morphosyntactic function (licensing structural genitive case, cf. chapter 2), is semantically vacuous. In embedded contexts, binding by a definite determiner or an existential operator (as in internally-headed relative clauses) yields a non-stative interpretation. In matrix clauses, properties of the construction as a whole embed the event described by the projection of the predicate in another eventuality, which is itself stative in the required way.

In what follows, we will pursue an analysis where the stativity of matrix nominalizations stems from the fact that matrix sentences headed by nouns, be they underived or “deverbal”, are always interpreted as existential or possessive constructions.

4.4 The parallel with existential constructions

Regular noun phrases have a property that is very relevant for our analysis: they show an ambiguity between referential interpretations, as in the (ii) readings, and propositional interpretations, as in the (i) readings, with no obvious distinction between the two interpretations in the morphosyntax:²²

- (130) a. tɛp kam tʃaw
 fish in salt

²²There is further ambiguity in noun phrases such as the above, namely that either of the bare nouns in the complex noun phrase can be the head of the referential expression, yielding the readings “the fish on which there is salt” and “the white man who has a canoe”, in addition to those given. This ambiguity also has parallels in the domain of constructions with non-finite (or nominalized) verbs, but is not directly relevant to the present discussion. This is a common cross-linguistic property of internally-headed relative clauses that is discussed in chapter 3.

- i. “There’s salt on the/a fish.”
 - ii. “The/a salt that there is on the/a fish.”
- b. kubē pō kλ
barbarian POSS canoe
 - i. “The/a white man has the/a canoe.”
 - ii. “The/a canoe that the/a white man has.”

This ambiguity has parallels in the domain of constructions involving nominal forms of verbs. Compare one such case, (131), with the examples above. The ambiguity doesn’t arise in (verbal forms of) verbs, which always receive a propositional interpretation.²³

- (131) kute arēp
 3ERG hear.N.SG
- i. “(S)he has said.”
 - ii. “(The event) of her saying it.”

What should we make of the ambiguity between “nominal” and “sentential” readings of all noun phrases? Are nouns always ambiguous between being “predicative” and being “referential”?

We contend that this is precisely what is *not* the case. Nouns, contrary to finite verbs, *never* predicate directly. To show this, observe the following examples, which are more or less representative of the full range of nominal clauses:

- (132) a. bλ kam mru
 woods in game
 “There is/are (an) animal(s) in the woods.”
- b. kubē pō kλ
 barbarian POSS canoe
 “The white man has a canoe.”

²³In line with what we said above about the multiple readings of internally-headed relative clauses, the construction in (131) also has the reading “what she said.”

- c. i-kra
1-child
“I have a child.”
- d. ij- $\tilde{\lambda}$ lar $\tilde{\zeta}$ itfi
1-on laryngitis
“I have laryngitis.”

In none of these cases do we have a regular subject that is identified with the noun’s referential argument. Instead, the “subjects” of matrix clauses headed by nominal predicates are locative postpositional phrases, or, in the case of (132c), a noun phrase in the genitive that is assigned as a structural case by inalienably possessed nouns.²⁴ The constructions in which they appear can be described as existential, in a way to be made precise shortly.

The most straightforward example of an existential construction is represented by (132a). Existential constructions simply state that there are individuals that fit the description of the predicate in a particular location. Several scholars (cf. Benveniste

²⁴There is one construction that looks like predication where it is required that the “subject” be in focus position:

tɛp nē jã
fish NFUT this
“This is fish.”

This construction, which looks like an equative copula construction, is quite limited, being possible only with the demonstratives *jã* and *wã* as “predicates”. The following, for instance, is not permitted:

*i-kra nē kwɔrɔkro
1-son NFUT Kwɔrkrô
Intended: “Kwɔrkrô is my son.”

But to predicate of a locatum focalization seems to be required:

mrɯ *(nē) bɔ kam
game NFUT woods in
“The animal is in the woods.”

In any case, all of these involve the pre-*nē* position, which is used by clefted or contrastively focalized constituents, about which we haven’t said much in this dissertation.

1971 and Freeze 1992, among others) have noted the parallels between possessive and existential constructions.²⁵ To Freeze (1992), possessive sentences are a special case of existential constructions with dative or genitive “locations”. In this spirit, we consider possessive constructions such as (132b) and (132c), and “affected theme” constructions such as (132d), to be part of the same phenomenon.

More specifically, we contend that while verbal predication (where α is the subject) is just $[\alpha P(x)] \rightarrow P(\alpha)$, predication in nominal sentences is indirect, i.e., $[\alpha P(x)] \rightarrow \exists x P(x) \wedge Q(x, \alpha)$, where Q represents a relation expressed by a postposition.²⁶ The relation can be locative or possessive, something which, as we said above, we consider a special type of locative relation. One might nevertheless ask whether, giving enough latitude to what Q can be, “indirect” predication doesn’t mimic the way in which external arguments are introduced in a proposal such as Kratzer’s (1996), i.e., $\exists e P(e) \wedge Q(e, \alpha)$. Of course, this is something we wish to avoid, and for this reason we will characterize Q more precisely below.

A first approximation of the translation of examples (132a-d) is, respectively, the following:

- (133) a. $\exists x: \text{animal}(x) \wedge \text{in}(\text{the woods})(x)$
 b. $\exists x: \text{canoe}(x) \wedge \text{to}(\text{barbarian})(x)$
 c. $\exists x: \text{child}(x) \wedge \text{of}(\text{me})(x)$
 d. $\exists x: \text{laryngitis}(x) \wedge \text{on}(\text{me})(x)$

²⁵Strictly speaking, Benveniste (1971) notes that *have*-constructions historically replace existential *be-to*-constructions, but no claim is made about a synchronic relation between the two.

²⁶Note the counter-intuitive postulation that in “there are animals in the woods”, the subject is “woods”. This nevertheless accords with the cross-linguistic generalization established by Freeze (1992), where locations in existential constructions pattern distributionally with subjects of verbal predicates.

Here we are not concerned with the fact that different postpositions are used to express slightly different relations between the “subject” and “predicate”.²⁷

This approach highlights the essential unity between the “sentential” and “referential” interpretations of nominal constructions. Note the parallel with one of the “nominal” interpretations of such constructions:²⁸

- (134) a. $\iota x: \text{animal}(x) \wedge \text{in}(\text{the woods})(x)$ (i.e., the animal in the woods)
 b. $\iota x: \text{canoe}(x) \wedge \text{to}(\text{barbarian})(x)$ (i.e., the barbarian’s canoe)
 c. $\iota x: \text{child}(x) \wedge \text{of}(\text{me})(x)$ (i.e., my child)
 d. $\iota x: \text{laryngitis}(x) \wedge \text{on}(\text{me})(x)$ (i.e., the laryngitis I have)

There are other examples of nominal sentences that might seem *prima facie* slightly thornier to reduce to existential constructions. Let us consider them now. The first case is the equative copular construction.

- (135) a. i-be a- $\mu\bar{o}$ bikwa
 1-at 2-POSS friend
 “I’m your friend.”
 b. $\exists x: \text{friend}(x) \wedge \text{of}(\text{you})(x) \wedge \text{in}(\text{me})(x)$

In an analysis of the closely related language Apinayé, de Oliveira (2005) simply calls *be* a copula, and ascribes to the construction the expected syntax. The problem with such an approach is that *be* has the syntax of a postposition (i.e., it appears to the left of the main predicate), and would be homophonous to a locative postposition that appears elsewhere. But, given the semantics of the above examples, can we maintain that it is a postposition?

²⁷Note in particular the opposition between inalienably possessed nouns (132c), which express their possessor as genitive inflection, and alienably possessed ones, in which the possessor is expressed by an ad hoc postposition.

²⁸A not particularly careful reader will have noted that the relation with the other nominal reading is not as direct. We return to this later. Also, the definiteness comes not from the expressions themselves, but from the particular determiner that is merged. We assume ι , as elsewhere.

In fact, one can practically give a literal translation of (135a) in English as “in me you have a friend”, so this particular example doesn’t present much of a problem, in our view, and can also be translated as an existential, as in (135b).²⁹

Another case that is worth discussing is represented by the examples in (136), not only because of their translation as adjectives into English, but because in de Oliveira (2003) they are treated as part of a class of adjectives (“descriptives”), distinct from nouns:

- (136) a. i-mã kruu
 1-DAT cold
 “I’m cold.”
- b. i-ŋruuk
 1-angry
 “I’m angry.”

We are not a priori committed to asserting that the heads of dative subject constructions like (136a) or adjective-like predicates like (136b) are actually nouns, but especially in the latter case it is desirable to assimilate them to the morphologically identical (132c), repeated below as (137), which is straightforwardly nominal (cf. 138):³⁰

²⁹An obviously related, yet slightly different construction is the following:

i-be kajtire
1-at Kajtire
“I am Kajtire.”

Here the “predicate” is a definite description. We could follow Dixon (2004), who on p. 564 discusses a similar construction in the unrelated language Jarawara and glosses it as the equivalent of “(the spirit of) Kajtire is in me”. This makes it a locative, rather than an existential construction, putting it out of the purview of this chapter. To be absolutely fair, however, the example is also different from other locatives, since in these the locatum normally appears in the pre-*ně* position, as in the last example of footnote 24.

For the relation between existentials and locatives, see Freeze (1992).

³⁰For a more thorough description of the morphosyntactic properties of lexical categories in Mëbengokre, see chapter 1.

- (137) i-kra
 1-child
 “my child”
- (138) a. i-kra-rɛ boj
 1-child-DIM arrive
 “My child arrived.” (also “I who have a child arrived”)
- b. mē kra-rɛ boj
 PL child-DIM arrive
 “Those with children arrived.” (also “the people’s children arrived”)

We contend that the cases in (136) are no different from possessive expressions such as the following, in Spanish and Portuguese:

- (139) a. Tengo hambre. (I-have hunger — Spanish)
 b. Estou com raiva. (I’m with anger — Portuguese)

Arguing in favor of this (in addition to the identity of agreement patterns) is the fact that modification of “I’m angry” in Mēbengokre is identical to modification of “my head”:

- (140) a. i-ŋruk tɔj
 1-anger hard
 “I’m really angry (I have a strong anger)”
- b. i-krã tɔj
 1-head hard
 “I have a tough head.”

Thus we have it that practically everything that morphosyntactically looks like a noun in Mēbengokre *is* a noun, and nouns have the peculiarity of not being able to predicate directly of a subject, but rather being forced to be construed with a locative postpositional phrase (or a genitive noun phrase) in an existential construction.

A small class of words like *nui* “recent”, *kumrētʃ* “authentic”, *kaʔak* “ersatz”, *tūm* “old, former”, *dʒwɔj* “real”, *pudʒi* “one”, and a few others, might pose some problems. Morphologically, they are identical to the nouns discussed above, yet their semantics is non-intersective, and thus can’t be reduced to an existential construction. In fact,

such a class has to be admitted, and admitting it somewhat weakens our case for treating non-finite verbs as nouns rather than adjectives, because, after all, there seem to exist adjectives in the language. Yet this class of lexical items is a small closed class, and there seems to be no derivational process to form members of this class out of other words. Another word which belongs to this class is *ket*, the sentential negator. Recall from our discussion of negation and manner modification in chapter 3 that negation is a main predicate that takes a nominalized clause or an underived nominal as its complement. NEG has, like the other words discussed in the text, the agreement pattern of a noun, rather than that of a verb. It might be possible to assimilate this class to the class of postpositions, which do appear as main predicates, as in the construction exemplified in (50a), in §2.3.1. We will not pursue the matter further in this dissertation.

4.4.1 Nominal forms of verbs in existential constructions

As we saw in chapter 3, and again in §4.1.2, one of the readings of a non-finite (or nominalized) verb is just $\lambda e.\exists x_1, \dots, x_n P(e)(x_1) \dots (x_n)$, or, after merging with a (possibly null) determiner, $\iota e.\exists x_1, \dots, x_n P(e)(x_1) \dots (x_n)$. By analogy to what was described for underived nouns, predication involving a nominalized verb will be done “indirectly”, i.e., what we represented above as $[Q(x, \alpha) P(x)] \rightarrow \exists x P(x) \wedge Q(x, \alpha)$. Let’s examine how one gets from the embedded reading of the nominalization, which we have already worked out, to the matrix interpretation, if we apply the reasoning applied to underived nouns:

- (141) ba bēnjadʒwɿrɿrɿ kutɛ bēn dʒir ma
 1NOM chief 3ERG speech put.N.SG hear.V.SG
 ‘[I heard] a chief reciting a ritual speech’
 $\iota e \exists x \exists y: \text{recite}'(e, y, x) \wedge \text{chief}'(y) \wedge \text{speech}'(x)$

- (142) bēnjadʒwɿrɿrɿ kutɛ bēn dʒir
 chief 3ERG speech put.N.SG
 “There is a reciting of a ceremonial speech by a chief.”
 $\exists e \exists x \exists y: \text{recite}'(e, y, x) \wedge \text{chief}'(y) \wedge \text{speech}'(x)$

That is, matrix clauses headed by a nominalized verb are interpreted as “there is a V-ing” or “there is X V-ing”. Yet this seems to give us no leads into the particular aspectual interpretation that matrix clauses with a non-finite form get. Let’s see if we can derive this.

4.4.2 The location

One important fact about existential sentences such as those in (132) is that they have a “location”, as it were. Nominal constructions without a location are weird out of the blue as clauses in Mēbengokre (though obviously not as noun phrases):

- (143) a. ?? tʃaw
 salt
 “There is salt.”
- b. ?? kʌ
 canoe
 “There is a canoe.”

Why might this be the case? Not differently from what we might say about the English translations, one could maintain that a location is always independently required. An overt location can be dispensed with if one is salient in the discourse context, and perhaps, like in English, in special cases such as “there is a God”, “there are unicorns”, and so on. Nevertheless, whether for pragmatic reasons or, as we will argue, because of the syntax of the construction, a location restricting the existential claim is always implicit.

In clauses formed with underived nouns, such as those in (132), the location is straightforwardly a locative phrase, that can be a possessor, a location, and possibly other things. In the case of nominalizations, there are a few options as to what the location can be:

- (144) a. There could be no location, just $\exists e P(e)$.
- b. The location could be the ergative subject.³¹

³¹For simplicity, we will at first only examine transitive sentences.

- c. The location could be a (phonologically null) spatial location.
- d. The location could be a (phonologically null) time interval.

The choice that makes the most of the analogy with existential sentences is superficially (b), as can be seen by comparing a plain existential clause formed with an underived noun with a clause headed by a nominal form of a verb:³²

- (145) a. [b Λ kam]_S [mru]_P
 woods in game
 “There is/are (an) animal(s) in the woods.”
 $\exists x[\text{in}'(\text{the-woods}', x)]_S[\text{animal}'(x)]_P$
- b. [b $\text{ě}\text{n}\text{jad}\text{z}\text{w}\text{r}\text{r}\text{r}\text{r}\text{e}$ kut ε]_S [b $\text{ě}\text{n}$ d zir]_P
 chief 3ERG speech put.N.SG
 “There is a reciting of a ceremonial speech by a/the chief.”
 $\exists e[\text{ERG}'(\text{the-chief}', e)]_S[\text{speech-reciting}'(e)]_P$

The logical form in (145b), however, as we anticipated at the beginning of §4.4, is no different from the way external arguments are introduced in proposals such as Kratzer’s (1996), with no effect on aspectual interpretation. So, if we want to account for the stativity of ergative clauses by recourse to the parallel with existential constructions, the story can’t end here.

Recall that in chapter 2 we established that ergative case was not θ -dependent, like inherent cases, and instead was a structural case assigned to external arguments inside a nominal projection. ERG therefore doesn’t have an inherently locative semantics, as the “locations” in other existential constructions do. That is, (145b) isn’t really parallel to (145a).

It seems to be the case that the “locations” in locative constructions necessarily get a “location” θ -role. While those relations expressed by the locative postpositions in (132) fit the bill, and possibly make the locative relation precise (in addition to assigning case to their complements), ERG arguments by themselves are not enough

³²In these examples, subscript *S* stands for the “location”, and subscript *P* for the “locatum”, something that we will expand on below.

to be “locations” or “subjects” of existential constructions. This seems to be the case also in English, given examples such as the following:

- (146) a. # There was a performance by Marta Argerich.
b. There was a performance last night.
c. There was a performance at the amphitheater.

Under our assumptions, the perceived incompleteness in (146a) is due to the fact that the existential predicate requires a locative argument, and there is no way of getting it from an agent in English. That is, only spatial or temporal locations satisfy the “thematic” requirements of the external argument (“location”) of the locative construction.³³

We propose that the difference between English and Mēbengokre existential constructions is that in Mēbengokre a noun phrase that doesn’t fit the θ -role assigned by the existential construction to its “subject” or “location” is interpreted *twice*: once as whatever theta role it gets from the embedded clause, and once more as a location. The equivalent of (146a) in Mēbengokre is therefore interpreted as “there was a performance by Marta Argerich to Marta Argerich”, or (given that “there is X to Y” in English is spelled out as “Y has X”³⁴) “Marta Argerich has performances by herself”, or, as we ultimately wish to argue, “Marta Argerich has performed”.

How does a single participant come to be interpreted twice in the structure? For purely illustrative purposes, we could make an analogy with the following construction, described by Freeze (1992):

- (147) This flour has weevils in it.

³³The essentially locative nature of that argument is evidenced in English by the etymology of the expletive used in existential constructions.

³⁴Cf. also the following:

There is a message for you \equiv you have a message.

Freeze characterizes (147) as involving inalienable possession, which might suggest that even in the case where the location is literally locative, it is interpreted twice in an existential construction, once as a pure location, once as the subject of an “inalienable property”.³⁵

The particular problem posed by Mēbengokre is therefore not whether a “double thematic interpretation” of the subject is plausible, but rather how one obtains it. No overt pronominal, as in (147), marks the position where the locative θ -role would be transmitted. What is, then, the structure that yields the required interpretation?

We should be careful to distinguish the case of (145b) from the control construction we found in the progressive, discussed in §2.3.2.³⁶ The crucial property relating the subject of the locative predicate and the subject of the lower nominal clause, aside from their obligatory referential identity, is that its case, and presumably its scope possibilities, are given solely by the lower clause. This seems to discard raising, even if we admit an approach such as Hornstein’s (1999), where picking up two theta

³⁵A further analogy could be made with Spanish datives (cf. the description in Cuervo 2003). In Spanish, clitic-doubled datives can only be recipients, and therefore animate, contrasting with non-clitic-doubled datives, which are destinations. If an inanimate dative is doubled by a clitic, as in the third example, the reference is interpreted as disjoint:

- a. Envié un paquete a Francia.
Sent a package to France
“I sent a package to France.”

- b. Le envié un paquete a Juan.
3DAT sent a package to Juan
“I sent Juan a package.”

- c. Le envié un paquete a Francia.
3DAT sent a package to France
“I sent him a package to France.”

If the interpretation of these cases is similar to what we maintain for the location in the locative construction, there are two θ -roles in (c), one associated with the P, the other with the clitic, and they can both be absorbed by a single referent if the relevant noun phrase has the right features.

³⁶It should perhaps also be kept distinct from what happens in negation and other forms of subordination, where no higher subject is thematically interpreted.

roles by movement is allowed. For the purposes of this dissertation, we will assume that the locative predicate's subject is saturated by a pronominal element that is correferential with the highest argument in the lower clause, that is, something like “backward control” (cf. Polinsky and Potsdam 2002 for discussion). The matter is of course open for future research.

At this point we could ask where the locative predicate in nominal clauses comes from. For the purposes of this dissertation we bite the bullet and admit that it is a predicate that exists in the lexicon, though one that is independently needed to interpret clauses “headed” by nouns. Why it is required will become clear in the following sections, as we discuss linking of the eventualities to topic time through higher functional projections.

The predicate in question could be considered to be a sort of (phonologically-null) positive counterpart to the negation *ket*, discussed in chapter 3, with the caveat that the latter doesn't seem to require a locative subject.³⁷ We will be more precise about the decomposition of this predicate in §4.5.

4.4.3 Provisional summary

We have taken the position that the projection of lexical predicates is category-independent. Lexical predicates that project a referential argument with the right features, i.e., an argument $e \in D_v$, can become both nouns and verbs. If they merge with v , the e variable gets existentially bound and is linked to topic time. If they merge with n , they can head referential expressions, or become propositions by further merging with a higher predicate, which, unlike the existential closure effected by

³⁷Essentially, this is the device used by Reis Silva (2001) to justify main clause ergativity in Mëbengokre and Timbira, respectively; i.e., both depart from the assumption that embedded-clause ergativity is a given, and propose that there is a null predicate embedding the ergative clauses that seem to be matrix clauses. In neither of those works is there an independent justification for such a predicate. Cf. also a similar approach to ergativity in Gitxsan by Hunt (1993). Also relevant here, though limited only to possessive constructions, is Vieira's (2001) discussion of *bahuvrihi* constructions in Guaraní.

v , requires a locative subject.

Let us call this predicate LOC. In the following section, we endeavor to derive the aspectual interpretation of main clauses headed by nominal forms of verbs from the semantics of existential constructions, that is, from the way LOC relates “subjects” and “predicates” in nominal clauses.

One might ask if LOC isn’t just another name for a stativizer, bringing our solution very close to the solution in §4.3.1, which we discarded. The answer is that while the semantics resulting from merging LOC might be like the semantics of a stativizer,³⁸ separating the stativizing element from the category-assigning head allows us to account for the fact that nominal constructions are not only stative clauses, but also non-stative clauses (in embedded contexts) or referential expressions. Furthermore, as we will see in §4.7, this move will allow us to decompose the notion of derived stativity in an interesting way.

4.5 Obtaining the experiential perfect

So far, we have established an equivalence between the Měbengokre sentences in (148a) and (148b) and the English sentences (149a) and (149b), respectively.

(148) a. krwɣj jã nẽ kutɛ mop krẽn
 parakeet DEM NFUT 3ERG malanga eat.N.SG
 “This parakeet has eaten malanga.”

b. krwɣj jã nẽ kutɛ mop kur
 parakeet DEM NFUT 3ERG malanga eat.N.PL
 “This parakeet eats malanga.”

(149) a. There is an eating of malanga to this parakeet.

b. There are eatings of malanga to this parakeet.

(150) a. $\exists e: \text{LOC}'(e, \text{parakeet}') \wedge \text{eating-malanga}'(e) \wedge \text{Ag}'(e, \text{parakeet}') \wedge \text{SG}'(e)$

b. $\exists e: \text{LOC}'(e, \text{parakeet}') \wedge \text{eating-malanga}'(e) \wedge \text{Ag}'(e, \text{parakeet}') \wedge \text{PL}'(e)$

³⁸The prototypical states then being, at some deep level, “having”, or “existing in a location.”

Of course, the parallel is only structural. The English sentences in (149) are meaningless for independent reasons. We will assume the translations in (150), which already incorporate the notion that subjects are interpreted twice in existential constructions, once in the role which relates them to the predicate, and once as locations. This makes LOC the locus of our discussion.³⁹

Above we claimed that (148a) is interpreted as an experiential perfect, while (148b) is interpreted as a generic or habitual. Our task is to show that the logical forms in (150), which are composed of the morphological categories that are apparent in the accident of Mébengokre verbs, are equivalent to these interpretations. In what remains of the chapter, we contend to have completely derived (150a). (150b) presents us with a series of interesting complications that we haven't been able to fully address so far. We nevertheless sketch what we believe needs to be done to proceed.

4.5.1 The experiential perfect

Iatridou et al. (2001) propose a semantics for the perfect broadly in accordance with the “extended now” theory of McCoard (1978). In such a theory of perfect meaning, the perfect consists of an interval, the “perfect time span”, whose right boundary (*RB*) is the evaluation time, and whose left boundary (*LB*) is set by a special type of adverbial. The semantics are formalized by von Stechow and Iatridou (2005) as follows:

- (151) a. $[[\text{PERF } \phi]]^t \Leftrightarrow \exists t': RB(t, t') \wedge [[\phi]]^{t'}$
 b. $RB(t, t') \Leftrightarrow t \cap t' \neq \emptyset \wedge \forall t'' \subseteq t': t'' \preceq t$

The claim is that the proposition ϕ is true at some interval that goes up to the evaluation time. For the existential perfect, the definition needs to be adapted somewhat, namely to a claim that the proposition ϕ is true at some point in the interval. That is:

³⁹Note also that the formulas assume that the cardinality of the eventuality is affirmed, rather than presupposed or implicated. We will return to this issue below.

$$(152) \quad \llbracket \text{PERF } \phi \rrbracket^t \Leftrightarrow \exists t': RB(t, t'): \exists t'' \subseteq t': \llbracket \phi \rrbracket^{t''}$$

It's relatively trivial to arrive at this meaning starting from the translation given in (150a). Informally, we could propose a lexical entry for LOC as follows:

$$(153) \quad \llbracket \text{LOC} \rrbracket^t = \begin{cases} \lambda y. \lambda x. x \text{ is in space in } y \text{ at } t, \text{ if } x \in D_e \\ \lambda y. \lambda e. e \text{ is in time in the experience of } y \text{ at } t, \text{ if } e \in D_v \end{cases}$$

It seems counterintuitive to set the endpoints of an individual's life-span (“experience”) in the semantics, since, after all, if $P(\alpha)$ at some interval t , then the interval has to be contained in the time span during which α exists. Nevertheless this is one plausible way to assign an interpretation to an existential perfect that lacks an adverbial phrase to specify the left boundary of the perfect time span within von Stechow and Iatridou's (2005) proposal. Thus:⁴⁰

$$(154) \quad \begin{aligned} \text{a. } & \llbracket \text{LOC} \rrbracket^t = \lambda x. \lambda e. \tau(e) \subseteq \tau(x) \\ \text{b. } & \tau(x)_{D_e \rightarrow D_i} := \lambda x. \lambda t': RB(t') = t \wedge LB(t') = \text{the birth of } x \end{aligned}$$

This is nothing other than the meaning of the experiential perfect that we expanded in (152) above.

We are now in a position to understand why LOC is required: as we saw before, the denotation of nouns is not relativized to times. We stipulate that being linked to topic time⁴¹ is a sine qua non condition for the interpretation of a proposition. An additional (time-dependent) predicate is therefore necessary in order to interpret nouns. What Mēbengokre has in its lexicon that can satisfy this requirement is the locative relation LOC, which is employed to interpret both “underived nouns” (i.e., those whose referential argument is an entity) and “verbal nouns” (i.e., those in which the referential argument is an eventuality). Though Mēbengokre has only this resource, it seems that Universal Grammar provides languages with another option to resolve the mismatch between noun denotation and higher functional structure,

⁴⁰In the definition of τ , t stands for the evaluation time applied to LOC. D_i is a domain containing all time intervals.

⁴¹By Asp; cf. discussion in §4.1.3.

namely the equative copula that we know from many better-studied Indo-European languages. A discussion of the differences between these two “auxiliary predicates”, their acquisition, and other questions that could be raised here would take us too far afield, and is therefore left for later research.⁴²

4.5.2 Excursus on perfect and perfective

We should now summarize our thoughts on the distinction between perfect and perfective, which so far have been scattered. For a more complete contemporary discussion, including a description of the perfect’s formal properties, which we are not directly interested in, the reader is referred to Iatridou et al. (2001) and Katz (2003).

Consider the following minimal pair:

- (155) Bill arrived at seven last night.
- a. He read the paper.
 - b. He has read the paper.

The two continuations differ in many respects; what we wish to call the reader’s attention to is that, while (155a) links the event time directly to the topic time (which is set by the previous discourse context, and then advanced), no such direct link exists in (155b). That is, in narrative, (155a) means that Bill read the paper at some time sufficiently soon after arriving. No such relation between arriving and reading the paper is implicated if the continuation is (155b). That is, that sentence could be used for a reading of the paper that took place before or after Bill’s arrival.⁴³

In the perfect, i.e., (155b), what seems to be linked to the topic time is not the time interval corresponding to the event of reading the paper, but rather some other time interval. The eventuality’s time (i.e., the reading of the paper) is contained in this interval.

⁴²Of relevance here is the cross-linguistic survey of the verb “to be” compiled in Verhaar (1968).

⁴³Before, as in: “Bill arrived last night. I found out from him then that he has read the paper.”
After, as in: “Bill arrived last night. He has read the paper since then.”

What is this interval? In Iatridou et alii’s work this is what is called the “perfect time span”. In English, the right boundary of this time span is set by evaluation time (i.e., the present in the present perfect), while the left boundary may be set by a prepositional phrase headed by specialized adverbials such as *since*.

The Mẽbengokre “perfect” which we have discussed here is more restricted than the English perfect, in that it only allows what we’ve called experiential (earlier “subject-oriented” or i-level) reading, that is, the left boundary is arbitrarily set to coincide with the birth of the subject, rather than being fixed by an overt prepositional phrase.⁴⁴ The point to be made is the same, however: the event’s time is not linked directly to topic time; it’s the “experience” of the subject that is, as it is “the experience of the subject up to evaluation time”, as we saw in (154b). Note that “experience”, as we introduced it above, means the whole of the subject’s lifespan up to evaluation time, and crucially not the timespan from the moment of “experiencing something” to the present; i.e., “*x* is in my experience” should be understood as “*x* is in the domain of my life experience”.

The difference in representation between the perfect and the perfective, which we summarize in the two semi-formal LFs below, is what accounts for many of the properties of the nominal form of the verb; in particular, it should be clear why such forms are employed to give background information: topic time is side-stepped by them, so to speak.

(156) *Perfective*

$$\llbracket \text{PFV } \phi \rrbracket^t \Leftrightarrow \exists t': t' \subseteq t: \llbracket \phi \rrbracket^{t'}$$

(157) *Perfect (experiential)*

$$\llbracket \text{PERF } \phi \rrbracket^t \Leftrightarrow \exists t': RB(t') = t \wedge LB(t') = \text{the birth of } a: \exists t'': t'' \subseteq t': \llbracket \phi \rrbracket^{t''}$$

At this point, one could raise the following objection: *any* event in which *x* is involved has to have taken place in *x*’s experience, whether it be described as perfective, perfect, or imperfective. This is absolutely true; the point, however, is

⁴⁴In fact, this happens in English if no specialized adverbial is present, as in “I’ve read Annu Kareninu five times (i.e., in my life).”

that the (experiential) perfect claims *no more than this*, whereas the perfective and the imperfective further claim (or implicate) that the event in question took place relative to a more restricted interval that is manipulated by surrounding discourse. This, we claim, is the main defining trait of the perfect.⁴⁵ In particular, linking or not the event time to topic time is the essential point of contrast between perfects and perfectives.

Other properties of the perfect are often taken to define it, as opposed to the perfective. To take an example, consider the “perfect paradox” (cf. Klein 1992 and Pancheva and von Stechow (2004)):⁴⁶

- (158) a. John arrived last night.
 b. *John has arrived last night.

It is surprising that (158b) should be ungrammatical, if, like (158a), it describes an event in the past. Providing a full account of the ungrammaticality of (158b) requires us to spell out several assumptions about its structure, and would take us too far afield.

In Mëbengokre, though there is no paradox, in the sense of an unexpected ungrammaticality, there is a contrast in the interpretation of time adverbials depending on whether they occur with nominal or verbal forms of the verb. Whereas with the latter the adverbial straightforwardly modifies the time of the event, as in (159a), an adverbial occurring in a nominal sentence doesn’t.

- (159) a. amrēbe nē ba arē
 long ago NFUT 1NOM say.V
 “I said it a long time ago.”
 b. amrēbe nē ijε arēŋ
 long ago NFUT 3ERG say.N

⁴⁵Of course, other aspectual values share this trait, in particular habituais or generics, so we will need to propose criteria to distinguish between these and the perfect.

⁴⁶In not all languages that have it is the perfect subject to the perfect paradox. Cf. Giorgi and Pianesi 1998. This in itself would be sufficient to cast doubt on the paradox being a good defining trait of the perfect. We won’t go into the merit of the question here.

“It’s been a while since this has been said by me.”

The exact interpretation of (159b) is not clear to us; it either has an anteriority component, or it forces an interpretation where a present situation extends back to the specified time, as in “this is the law since a long time ago; I’ve said it”, which is the way that underived statives get interpreted:

- (160) amrēbe kamrek
long ago red
“It’s been red since a long time ago.”

We thus have evidence that Mēbengokre main clauses with nominal forms satisfy two defining criteria for perfects. Of course, like any term with a long tradition of use, “perfect” has many additional associations, which probably don’t extend to Mēbengokre nominal forms. We nevertheless believe that the choice of criteria in our definition of perfect is quite promising in terms of cross-linguistic comparison.

4.6 Speculations on generics and habituals

Can the reasoning sketched in the previous section be extended to the generic or habitual? Our starting point is the meaning in (150b), repeated here:

- (161) $\exists e: \text{LOC}'(e, \text{parakeet}') \wedge \text{eating-malanga}'(e) \wedge \text{Ag}(\text{parakeet}', e) \wedge \text{PL}'(e)$

That is, “eatings of malanga are in the experience of this parakeet”. Two problems arise: one is how a simple plurality of events is interpreted to mean a frequent event; a second problem is whether having an event repeated frequently in the subject’s past experience really amounts to the meaning that a habitual or a generic has. We will see that this latter problem further subdivides into two, which will be treated in SS4.6.2 and 4.6.4.

4.6.1 The meaning of plural

As we anticipated in §4.2, the indication of number of number on Mēbengokre verbs should properly be analyzed as indication of event plurality, at least in the cases that

are relevant to us here. We therefore have the logical form in (161).⁴⁷ But simple event plurality is plainly not equivalent to the frequent or habitual repetition of the event.

The problem seems to arise with pluractionals cross-linguistically: as we already anticipated in §4.2, rather than being a simple plurality, PL seems to denote a large number of eventualities, more than the number that could be readily described as a well-defined quantity with one of the cardinality expressions available in Mēbengokre. In fact, this might be a property not only of pluractionals, but more generally also of bare plurals. Consider the first two sentences from below:

(162) John has a horse.

(163) John has horses.

$\exists x: \text{to}'(x, \text{John}') \wedge \text{horse}'(x) \wedge \text{PL}'(x)$

(164) John raises horses.

Though (163) is true even if the cardinality of the individual x is 2, a bare plural would be considered uninformative in most contexts if the fact that $|x| = 2$ were known by the speaker. In fact, (163) has a flavor not unlike (164). What is the meaning of the bare plural in (164)? Intuitively, it seems to implicate that John raises enough horses to keep him busy, or to make it his primary occupation.

If we make a parallel between the interpretation of the plural marked on verbs and the bare plural on nouns, we can analogously state that the former has the implicature that the number of events is enough to fill an interval in a contextually salient way.

That the “filling of the interval completely” is an implicature can be seen by the possibility of canceling it, given certain left-peripheral particles and the availability of a pragmatically plausible reading, as in the following example:

(165) rɔprɛ jã arɯm kute krare jadʒwɯr
 dog this already 3ERG puppy put.PL.N
 “This dog has already given birth to puppies.”

⁴⁷A further possibility, which we cannot address here, is that event plurality not be part of the truth conditions of plural verbal phrases, but rather part of their presuppositional content.

In this case, the event of giving birth, even though it's plural, is interpreted as contained within some past time interval in the dog's life-span, rather than filling the latter completely. The proposition as a whole is interpreted as an existential perfect, with the cardinality of the eventuality being greater than one.

We can now move to the second mismatch between (161) and habitual or generic meaning: the modal component of the latter, not expressed in the former.

4.6.2 Projection into the future

A much more complex problem than the one discussed in the previous section is presented by what has been called the modal component of habituais or generics.⁴⁸ So far, we have established that the meaning of (161) is such that the cardinality of the plural eventuality is enough to fill the previous experience of the parakeet in some relevant way; i.e., what is intuitively translated by the English (149b). This, however, is not what a habitual or generic means.

Habituais or generics “project modally”, so to speak. This is exemplified by the following minimal pair:

- (166) a. John has raised horses.
b. John raises horses.

These two sentences differ in more than one respect, but one clear contrast they show is that in (166a), by evaluation time all of the horse-raising events are past, and no commitment is made as to the continuation of horse-raising events by John beyond evaluation time. (166b), on the other hand, entails that, under normal circumstances, there are more horse-raising events by John to come after evaluation time.

Before we can address this, we need to backtrack somewhat. Example (165) forces us to revise our empirical generalizations in a way that affects our analysis.

⁴⁸In this and the following sections, our discussion is partly based on Ferreira's (2005) treatment of modality in progressives and habituais.

4.6.3 Excursus on perfects and generics

At the beginning of the chapter, we synopsized the relationship between the morphological categories of number and lexical category and the aspectual interpretation of predicates with the following table:

(167)

	VERBAL	NOMINALIZED
SINGULAR V	Perfective; singular object	Experiential perfect, relative to the subject's life-span
PLURAL V	Perfective; plural object	Habitual or generic

In §4.6.1, we showed that the relationship between plural number and habituality is not direct: plural doesn't automatically mean habitual; rather, it means habitual through an implicature that can be cancelled, as was shown in example (165). In §4.6.2, we have hinted that the habitual is one more step removed from the plural: the habitual has a modal component that is unexplained by whatever apparatus we have introduced so far.

In fact, example (165) also shows that the habitual's modality can be dissociated from plural marking on the verb. The "plural perfect" given in that example has as its most readily available translation a "plural existential", i.e., one where more than one event occurred, and possibly many did, but no modal projection into the future is implied.⁴⁹

If we wish to translate the dissociation between number and modality in the habitual into a matrix comparable to (167), we would have to add one more dimension to the matrix, albeit one that is only reflected in the N.PL cell of the matrix. We can call this dimension the "modal" dimension. If we add it to the matrix, we get the following:

⁴⁹We leave open the possibility that this interpretation compares with the so-called universal perfect, i.e., "this dog has been giving birth to puppies", which also lacks modal projection.

(168)

	NON-MODAL		MODAL
	VERBAL	NOMINAL	
SINGULAR V	Perfective; singular object	Singular experiential perfect	—
PLURAL V	Perfective; plural object	Plural experiential perfect or universal perfect	Habitual

Why doesn't the modal contrast apply in the other cells of the old matrix? In the case of the verbal cells, we stipulated that the lexical entry of v contains $\exists e$, so modal readings are excluded.⁵⁰

The case of the N.SG is rather interesting. Ferreira (2005) has argued that two types of imperfectives differ solely in the cardinality of the eventuality described. While habituais are plurals, progressives are singular. Both have the same modal component. We would therefore expect N.SG to be interpreted as a progressive.⁵¹ Why doesn't this happen?

The answer seems to be that while all of the nominal aspects in the matrix above are subject-oriented (i.e., i-level) and stative, the progressive is s-level and dynamic. For this reason, the progressive construction in Mēbengokre always requires an overt auxiliary,⁵² which is actually an activity-denoting verb which takes a nominalized

⁵⁰There is again modality higher in the tree: the particle $d\zeta a$, that is used most often to indicate the future, also has certain other uses (v.g., in yes-no questions) which suggest that it is a sort of irrealis, the particle $r\tilde{\lambda}n$, which is used to express doubt and in counterfactual constructions, the evidential particle $w\epsilon$, and possibly others. Throughout this dissertation we've fixed the higher structure to exclude any modality other than what is introduced low in the tree.

⁵¹There is in fact another possibility, which is actually attested (cf. Thomson 1974): nominal forms of verbs are used in antecedents of counterfactual expressions, regardless of the number marking. We don't discuss counterfactuals in this dissertation.

⁵²See §2.3.2.

complement (activities are always s-level; see Fernald 2000).⁵³

So, pending a better solution, non-finite verbs in Měbengokre display an opposition in modality which has no phonological reflex. The source of this modality is unclear to us at this point; it might, like the interpretation of the plural as “sufficient to occupy the subject completely”, be supplied by the pragmatics as a plausible inference. For purely speculative purposes, we propose that it actually be a phonologically null morpheme.

What we have in mind is the morphological category that distinguishes between present and past participles in certain modern Indo-European languages, in particular those of the Romance family. In Spanish, for example, the exponent of this morphological category is the *-n-* that distinguishes *amando* ‘loving’ (or *amante* ‘lover’) from *amado* ‘loved’. The present participle, used in progressives, and the adjectival form *amante*, which has habitual meaning, are the modal counterpart of the past participle, which is always non-modal. The *-n-* in both the adjectival form and the present participle could thus be argued to encode the modality that characterizes these two forms.

Let’s call the phonologically abstract modal element found in Měbengokre *N*. How does *N* fit into our analysis of Měbengokre? We propose that it merges with the existential raising predicate LOC to yield a slightly different relation, LOC_n , which we could informally translate as follows:

(169) $\lambda y.\lambda e.\forall w:w\mathcal{R}w^*:e$ is in time in the experience of *y* in *w*

⁵³Note that the progressive construction in English doesn’t exclude an “s-level habitual” reading (or, as the second example shows, generic):

- a. John is eating at the trucks these days.
- b. John is answering the mail from Antarctica now, but when Bill gets back from vacation it will be his job again.

This seems to indicate that what’s essential to the meaning of the English progressive construction is the s-levelness, not the singular number. There are many limbs like this that it’s tempting to go off on, but we won’t.

That is, in all worlds related to the actual world (w^*) by a certain accessibility relation (in the case of the progressive, the relation that selects those worlds where the expected consequences of present conditions in the actual world hold). It is not clear to us how this particular lexical item would be tied to evaluation time.

4.6.4 More on the modality in imperfectives

The second point about a habitual or generic's modality is that it doesn't need verifying instances to be true. Or rather, a distinction is often made between habituals, which require verifying instances, and generics, which do not.⁵⁴ Observe the following examples:

- (170) a. This machine crushes oranges.
 b. This elevator carries eight passengers.
 c. John answers the mail from Antarctica.

In none of these sentences is it necessary for an eventuality of the type described by the clause to have actually occurred; that is, the machine in question might not have been used yet, the elevator might have never been used to full capacity, and there might be no mail from Antarctica, but the sentences will still be judged to be true. This is the generic reading.

In Mëbengokre we find that such “potential” readings are also characteristic of nominal forms of verbs in main clauses, whenever the verb is either plural or unmarked in number. The following examples illustrate this:

- (171) a. i-kra nē arɣm Δbir
 1-son NFUT already 3.climb.N
 “My son is already capable of climbing on things.”
 b. arɣm ajtε Δkur
 already again 3.feed.N.PL
 “He's able to eat again (after having been sick).”

⁵⁴We thank Jürgen Bohnemeyer for bringing this question to our attention.

- (172) bep kutɛ larĩʒitʃi kanɛ
 Bep 3ERG laryngitis treat

“Bep is the one that treats people for laryngitis.”

Example (172), elicited in a context where it was made explicit that nobody had had to be treated for laryngitis yet, is meant to be parallel to the English examples in (170).

Is this just a special case of the modality introduced above? This is something that we cannot answer at this point. In any case, whatever the exact formulation of this modal element’s semantics is, there are consequences to the way we proposed to introduce it into the structure: if *N* merges with LOC, then we expect that existential clauses with underived nouns in Měbengokre might have modal readings. This in fact appears to be the case, though the following examples, which were collected by us as spontaneous utterances in the field, are somewhat hard to reproduce in elicitation:

- (173) a. wajaŋa nẽ udʒu ɔ ku-bĩ
 shaman NFUT 3.spell INSTR 3-kill.V.SG

“The shaman killed him with a spell.”

- b. i-dʒudʒu
 1-spell

“I can do witchcraft (lit., I have spells)”

- c. i-ɲimru kumɛj
 1-prey much

“I’m a good hunter (lit., I have much prey)”

- d. dʒɔri kra rĩʒĩ
 INT child still

“Can she still bear children? (lit., does she still have children?)”

Example (173), though easier to reproduce in elicitation than the others, is not a very clear-cut case, given that it’s hard to establish that *dʒudʒu* doesn’t really mean “power”; (173d) has an inchoative meaning which might cast doubt as to whether it really is a plain existential construction, but, like (173c), it is nominal and has the ability and/or projection into the future that is characteristic of nominalized verbs.

The fact that all existential constructions, whether involving deverbal nouns or underived ones, may have this modal element is another point in favor of creating stativity “in the syntax”, rather than internal to the deverbal nominal word.

4.7 Conclusion

In this chapter, we have derived the various subject-oriented readings of matrix clauses headed by nominal forms of verbs by analogy with existential constructions. The tree that we arrive at for nominal projections, when $\sqrt{\quad}$ is event-denoting, looks as shown in Figure 4-4.

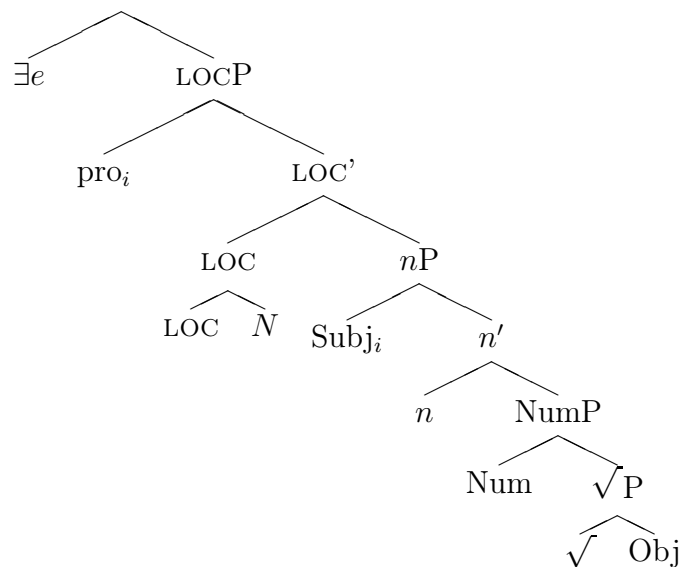


Figure 4-4: Structure of a nominal matrix clause.

This can be contrasted with verbal projections, shown in Figure 4-5, which link the event directly to topic time, without the mediation of LOC.

Above, we sketched how the verbal projection would be linked to viewpoint aspect and tense. Recall that in the case of verbs, it was v itself which had a time-dependent denotation. In the case of nouns, the required time-dependency is introduced by LOC. Contrary to v , we didn’t stipulate that LOC binds a variable existentially, though nothing crucial depends on whether we do or not, as far as we know. Presumably,

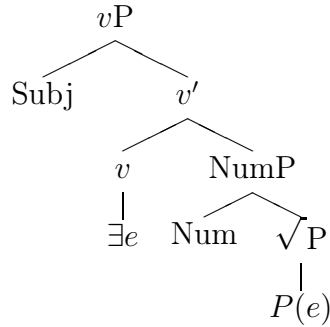


Figure 4-5: Structure of a verbal matrix clause.

as we have indicated in the first tree, existential closure takes care of binding all free variables, before the “bare proposition” is merged with the functional categories that will bind t .

Many issues remain open, of course. Among the most important, we could cite the linking of these structures to topic time through Asp. The issue is interesting because there isn’t full freedom as to what value of viewpoint is attached to different types of structure: while verbal clauses often receive perfective viewpoint (and this of course depends on the particles present in the left periphery), from what we’ve said it should be obvious that the default viewpoint assigned to nominal clauses is imperfective, i.e., the states described extend beyond topic time.

Another important question that remains open is whether, in addition to the experiential perfect interpretation and the generic or habitual readings which we have discussed, the constructions involving nominal forms of the verb have other readings which are not “subject-oriented”. If the construction indeed has parallels with the perfect of better-known languages, we are led to expect other temporally-stative readings to exist, such as the “perfect of present relevance”, and existential perfects that aren’t bounded by the subject’s lifespan, but rather by an arbitrary timespan extending to the evaluation time. The data collected by us are still inconclusive in this regard.

Finally, our hasty discussion of modality in §§4.6.2 and 4.6.4 didn’t consider the possibility that the contrast between the modal and non-modal readings might have a

source other than the abstract morpheme that we identified with the *-n-* of Romance present participles. As we suggested in §4.2, the number contrast might do more work in this regard than what it does in our analysis, and a series of implicatures might be responsible for the modal extensions that are observed.

Envoi

In this dissertation, we have endeavored to derive all the ergative constructions in Mēbengokre from a single source, namely nounness. We have argued that all embedded clauses are nominal, hence their ergativity, and that the cases in which ergativity arises in matrix contexts, though a priori unexpected, can also be reduced to a nominal construction embedded under a phonologically null existential copula that is independently required.

Though we didn't aggressively pursue applications of our analysis to other, better-known languages, the direction to proceed should be clear. As we discussed in §4.3, the division of labour in the composition of perfects and other “compound tenses” is not the same in all languages, but the differences are minimal: on the one hand one has languages where the stativizing morphology is combined with the verbal word, yielding a participial; on the other, one has those where stativity is in the auxiliary (or, as we said back then, “in the construction”). It's not unreasonable to suppose that the same constituent parts underlie both options for constructing the perfect.

Mahajan (1997) pointed out for the first time that ergativity could be found in the perfects⁵⁵ of certain Romance languages. Mahajan's insight consisted in identifying auxiliary selection in, e.g., the French (and Italian) perfect, with ergative marking in the Hindi perfective. For Mahajan, these two constructions share an underlying structure, and differ solely in that a particular element merges with the external argument in one case, yielding ergative case marking, and with the auxiliary in the

⁵⁵By this we mean the construction that is structurally parallel to the English perfect, which in most contemporary dialects of French and Italian has the meaning of a simple perfective past.

other, yielding *have*, rather than *be*, as an auxiliary.

- (174) a. Raam-ne vah kitaabē paṛḥī hē
 Raam-ERG those books_i read-PERF:AGR_i be-PRES:AGR_i
 “Raam has read those books.”
- b. Ram a lu ces livres.
- c. Raam P be read those books
 [Raam P] be → Raam-ERG (Hindi)
 Raam [P be] → Raam have (French)

If we are right in claiming that Mēbengokre nominal clauses are essentially comparable to the perfects found in certain Indo-European languages, then our contention that ergativity in Mēbengokre is always tied to nounness might also explain ergativity in these cases as well. The perfect construction in all of the cases discussed involves a participle, which is the functional equivalent of the nominal form of the verb found in Mēbengokre. Like the nominal forms in Mēbengokre, the participial cannot link directly to higher layers of inflection, and so the “smaller” domain of case assignment that triggers ergative alignment is created.

The problem with this position is that meaning and form don’t always match in the expected ways: on the one hand, we have that the French and Italian “perfects”, for lack of a commonly used simple past form in the verbal paradigms of these languages, have taken up the functions of perfective past. On the other hand, simple perfective tenses can mimic the semantics of perfects with the help of adverbs such as *already*. Perfects and perfectives seem to be in a tug of war to divide up semantic space, often overlapping. This “pragmatic residue” seems to be what functional and typological approaches to aspect splits try to capture through implicational hierarchies, without taking note, however, of the possibility that there exist “prototypical” structures for perfects and perfectives, in which the emergence of ergativity is determined structurally, rather than by discourse function.

Incidentally, the discussion of Mēbengokre nominalizations offers an unexpected answer to the problem of the opposition between perfects and perfectives, which could

be paraphrased through the following question: why should languages have recourse to two distinct tense forms that have often overlapping truth conditions (i.e., the existential perfect and the simple past)? The answer I propose is the following: such a distinction exists precisely because languages can exploit the categorial distinction between nouns and verbs to produce nuances in aspectual interpretation.

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