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Editors
Anna E. Jurgensen
Hannah Sande
Spencer Lamoureux
Kenny Baclawski
Alison Zerbe

Berkeley Linguistics Society
Berkeley, CA, USA

Berkeley Linguistics Society
University of California, Berkeley
Department of Linguistics
1203 Dwinelle Hall
Berkeley, CA 94720-2650
USA

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Foreword

This monograph contains a number of the talks given at the 41st Annual Meeting of the Berkeley Linguistics Society, held in Berkeley, California, February 7-8, 2015. The conference included a General Session and the Special Session *Fieldwork Methodology*. The 41st Annual Meeting was planned and run by the second-year graduate students of the Department of Linguistics at the University of California, Berkeley: Kenny Baclawski, Anna Jurgensen, Spencer Lamoureux, Hannah Sande, and Alison Zerbe.

The original submissions of the papers in this volume were reviewed for style by Anna Jurgensen and Hannah Sande. Resubmitted papers were edited as necessary by Anna Jurgensen and Kenny Baclawski, and then compiled into the final monograph by Anna Jurgensen. The final monograph was reviewed by Spencer Lamoureux. The endeavor was supported by Alison Zerbe's management of the Berkeley Linguistic Society's funds for publications.

The BLS 41 Executive Committee
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Non-canonical Noun Incorporation in Bzhedug Adyghe

Ksenia Ershova
*University of Chicago**

1 Introduction

Noun incorporation (NI), i.e. the formation of a new verbal form by combining a verb and a noun into a single phonological word, has been the focus of much discussion among linguists.[1] Some researchers argue that it is done in the lexicon (Mithun 1984), others have claimed that it must be treated as a syntactic process (Sadock 1980; Baker 1988 and subsequent work). This paper addresses NI in the Bzhedug dialect of Adyghe, a polysynthetic language from the Northwest Caucasian family. Unlike many well-known polysynthetic languages, Adyghe does not have productive verbal NI; however, arguments may be incorporated into the predicate if it is nominalized (1).

(1) a. hạče-me s-ja-že
guest-PL.OBL 1SG.ABS-3PL.IO+DAT-wait
'I'm waiting for guests'.

b. sjezeš'əʁ [**heč'e**-je-ženə-m]
1SG.ABS.tire.PST guest-DAT-wait-OBL
'I'm tired of waiting for guests (lit. guest-waiting)'.

One of the widely assumed properties of NI is that it targets only the Patient or Theme of the predicate, both in finite predication (Baker 2009:154) and nominalized constructions (Koptjevskaja-Tamm 1993:99–102). In this paper I present data that appears to challenge this generalization and show that it is in fact a phenomenon separate from what has been canonically understood to be argument incorporation. NI in Adyghe, while governed by the argument structure of the nominalized predication, is morphosyntactically a nominal process. The restrictions imposed on this process inform us on Adyghe clause structure and the size of the nominalized construction. Underlyingly, arguments are hierarchically arranged in accordance with their level of agentivity, with the more agentive argument positioned higher; this supports the widely established hypothesis that the agent is an argument external to the VP (Kratzer 1996), but is not readily obvious within Adyghe grammar. The incorporation

*The data was collected in Aul Neshukay (Teuchezhsky District, Republic of Adygea, Russia) in July 2014. Examples are in the Bzhedug dialect, unless otherwise noted. I am grateful to the speakers of Adyghe for their generous help, Greg Kobele, Maria Polinsky, Yuri Lander, the audience at BLS'41, and especially Karlos Arregi for discussion, comments and criticism. All mistakes are mine.

[1]Abbreviations: ABS – absolutive, ADV – adverbial, BEN – benefactive, CAUS – causative, COM – comitative, DAT – dative, DIR – directive, ERG – ergative, IMP – imperative, INF – infinitive, INTR – intransitive, IO – indirect object, IPF – imperfect, NEG – negation, NML – nominalizer, OBL – oblique, PL – plural, POSS – possessive, PR – possessor, PRS – past, REFL – reflexive.
Transcription notes: č = t͡ʃ, š = ʃ, ž = ʒ, ʒ = d͡z, ǯ = d͡ʒ, ŝ = laminal voiceless fricative, ẑ = laminal voiced fricative, Ç = glottalized consonant, C' = palatalized consonant.

data provides evidence for a "passive" structure of nominalizations, where the nominalizing morpheme cuts off the external argument.

The rest of the paper is organized as follows: section 2 provides a short overview of Adyghe clause structure and the polysynthetic verbal form, as well as general information on nominalizations; in section 3 I present the incorporation data; section 4 contains my analysis of nominalized constructions and NI in Adyghe; section 5 concludes.

2 Background on Adyghe

In this section I provide general information on Adyghe clausal and nominal structure, focusing on polysynthesis and case-marking patterns, as well as the basic morphosyntax of nominalized constructions.

2.1 Polysynthesis

A notable typological trait of Adyghe is prominent polysynthesis, i.e. radical head-marking of syntactic relations both in the verbal and nominal domain. All participants of a predication are indexed on the verb, and a single predicate constitutes a full clause; thus, in (2) we can see five participants: absolutive first person, ergative third person plural and three indirect objects introduced by their respective applicative heads.

(2) [sə]-qə-[t-de]-[p-fə]-[∅-r]-[a]-ʁa-ʒeš'təʁ
[1SG.ABS]-DIR-[1PL.IO-COM]-[2SG.IO-BEN]-[3SG.IO-DAT]-[3PL.ERG]-CAUS-read.IPF
'They were making me read it to you together with us' (Temirgoy; Letuchiy 2015)

Within a nominal phrase, the relation of possession is expressed on the nominal, and the full NP referring to the possessor is optional, analogous to NPs in a full clause:

(3) w-jə-wəne
2SG.PR-POSS-house
'your house' (Temirgoy; Gorbunova 2009:147)

Participants are marked with a set of personal markers which are uniform across syntactic roles and phonologically very similar to full pronominals (Table 1). Personal markers not associated with overt morphology are marked as ∅ in this section for illustrative purposes; they are left unmarked in the rest of the paper.

Indirect object markers are always associated with an overt applicative head; there is over a dozen of them in Adyghe. Some examples of these are the dative *(j)e-*, general locative *š'ə-*, the benefactive *fe-*, malefactive *ṣ̂ʷe-* and comitative *de-*. A predicate may have multiple applicative markers, example (2) contains three: the dative, comitative and benefactive.

Morphemes within the polysynthetic word are strictly ordered; a slightly simplified verbal template is shown in Table 2.

The nominal template is virtually identical; it contains all the same zones. In (4) we see the possessive marker, which belongs to the argument structure zone (A) preceding the marker of negation, a pre-base element (zone B), which in turn precedes all lexical roots (zone C).

	pronouns	ABS	IO / PR	ERG
1SG	se	sə-	s-	
1PL	te	tə-	t-	
2SG	we	wə-	w-//p-	
2PL	ŝʷe	ŝʷə-	ŝʷ-	
3SG	demonstratives	∅	∅	ə-//jə-
3PL		∅	a-	

Table 1: Cross-reference markers and pronouns (Arkadiev et al. 2009:45,56)

Argument structure zone (A)					**Pre-base elements (B)**
ABS	DIR	APPL	DAT	ERG	PRS / NEG
1	2	3	4	5	6

Base (C)				**Endings (D)**		
CAUS	root	APPL	TAM	PL	PRS	NEG, case
7	8	9	10	11	12	13

Table 2: Simplified verbal template (Arkadiev et al. 2009:42)

(4) [jə]$_A$-[mə]$_B$-[ʔeλəne-λaṗe]$_C$ aš' qəš'taʁ
POSS-NEG-ring-expensive he.OBL 3SG.ERG-take.PST
'He took someone else's expensive ring' (Lander 2014)

The strict morphological ordering is especially evident if a nominal is used predicatively. In (5) the causative morpheme is wedged in between the nominal possessive marker and the lexical root of the nominal, seemingly creating a contradiction between the ordering of morphological markers and their semantic and syntactic scope.

(5) [z-jə-z]$_A$-[ʁe]$_B$-[šə-nahəč̣'a-ʁ]$_C$
REFL.PR-POSS-1SG.ERG-CAUS-brother-younger-PST
'I made him my younger brother'. (Lander 2014)

While all participants of a predication are indexed on the verb, none of them may be incorporated into a finite predicate. Nominals, however, incorporate lexical roots: non-referential adjectives and nouns combine with the head noun into a complex word stem, as one can see in (4) and (5).

2.2 Ergativity

As can be seen in Table 2, the verbal personal markers are organized in accordance with ergative alignment: the direct object of a transitive verb, as well as the intransitive subject, is cross-referenced in the absolutive slot (slot 1 in Table 2), while the ergative is marked closer to the root, in slot 5.[2] Ergativity manifests itself in case-marking as well: the intransitive

[2]Personal markers in the polysynthetic verbal form display some traits which liken them to pronominal clitics, as proposed for such languages by Jelinek (1984). This is not directly relevant to the topic addressed in this paper; here I avoid the terms 'agreement' or 'cliticization' for the purposes of neutrality.

subject (6a) and the transitive direct object (6b) are marked with the absolutive case *-r*, while the transitive subject is marked with *-m* (6b).

(6) a. ç̣'ale-**r** ∅-qeŝe
boy-ABS 3SG.ABS-dance.PRS
'The boy is dancing'.

b. ẑʷaḳʷe-**m** qʷəbʁʷe-**r** ∅-ə-ẑʷaʁ
plowman-OBL field-ABS 3SG.ABS-3SG.ERG-plow.PST
'The plowman plowed the field'. (Temirgoy, Arkadiev et al. 2009:53)

The marker *-m* is glossed as oblique, rather than ergative, because it is not restricted to the ergative argument: it also marks all indirect objects introduced by applicatives (the comitative *śʷəzə* 'woman' in (7)), possessors (8) and complements of postpositions (9).[3]

(7) ƛ̣ə-**r** śʷəzə-**m** ∅-[∅-**d**]-eʔepəʔe
man-ABS woman-OBL 3SG.ABS-[3SG.IO-COM]-help.PRS
'The husband is helping the wife'.(Temirgoy; Arkadiev et al. 2009:53)

(8) ṣ̂enəʁe-**m** ∅-jə-mafe
knowledge-OBL 3SG.PR-POSS-day
'Knowledge Day (September 1)'

(9) haç̣'e-**me** apaje
guest-PL.OBL 3PL.for
'for the guests'

Both the absolutive and the oblique case markers may be dropped; overt case morphology correlates with definiteness/referentiality. Proper names, first and second person pronouns and possessed NPs are not marked with case (Arkadiev et al. 2009:51-52).

Several authors have argued that morphological ergativity correlates with syntactic ergativity, i.e. for a structure within which the ergative is lower than the absolutive (Lander to appear; Letuchiy 2010). The data presented in this paper does not directly challenge such claims, but presents evidence for a higher position of the ergative subject on the level of base-generation, supporting the underlying clause structure proposed by Caponigro and Polinsky (2011) for Adyghe.

2.3 Defining the word in Adyghe

Nominalization in Adyghe involves argument incorporation, i.e. the formation of a complex word by combining the nominalized verb and one of its arguments. To define incorporation in Adyghe one must first determine the markers of a word boundary. This section outlines the main diagnostics for defining the word in Adyghe, as provided in (Lander 2012).

There are two main parameters which allow to determine word boundaries:

1. Strict morphological organization of the word form (see section 2.1).

[3]The plural is marked by a separate morpheme *-xe*, but in the oblique the combination *-xe-m* 'PL-OBL' can be optionally replaced by a portmanteau morpheme *-me*, as in (9).

2. Phonological alternation in penultimate syllable of the stem, i.e. the full word, excluding endings (zone D in Table 2):

   (10) /e/ → /a/ | _Ce]$_C$
   If a foot contains two syllables of the form Ce, where C stands for one consonant or a two-consonant cluster, and is located at the right edge of the stem (zone C), the vowel in the first of the two syllables changes from /e/ to /a/ (Arkadiev et al. 2009:29)

This can be seen in the following examples. In (11a) the last (and only) two syllables of the stem (zone C) are of the form Ce, and thus the vowel in the penultimate syllable becomes /a/. In (11b), on the other hand, while the stem contains the sequence of the form CeCe, it is not located at the right edge of the stem, and thus no alternation takes place.

(11) a. [b**e**ǯe]$_C$-[r]$_D$ > b**a**ǯe-r
fox-ABS
'fox'

b. [b**e**ǯe-bə]$_C$ > b**e**ǯe-bə
fox-hole
'fox hole' (Temirgoy, Arkadiev et al. 2009:29)

In (11b) the root *beǯe* 'fox' is an incorporated modifier of the root *bə* 'hole'. Incorporation in nominalized constructions is largely analogous, as we will see in section 3.

In the following subsection I provide the basic information regarding the morphosyntax of nominalized constructions.

2.4 Nominalizations

This paper focuses on two types of nominalized constructions: the action nominal marked with the suffix *-n* (12) and the manner nominal marked with the suffix *-ç̌'e* (13). While semantically different, these constructions appear to exhibit identical morphosyntactic behavior, hence I use examples of both interchangeably and gloss both uniformly as 'NML'.

(12) [haç̌'e-xe-m ja-je-že-**n**] Zarine jəʔʷef
guest-PL-OBL 3PL.POSS-DAT-wait-NML Zarina POSS.work
'Waiting for guests is Zarina's task'.

(13) [w-jə-therqʷe-ʁeška-**ç̌'e**] səgʷə jeʁape
2SG.PR-POSS-pigeon-feed-NML 1SG.POSS.heart 3SG.ERG-worry.PRS
'Your manner of feeding pigeons irritates me'.

These constructions, while derived from predicates, have largely nominal morphosyntax. Absolutive and ergative personal markers are necessarily dropped, and indirect object markers are generally dropped as well. The nominalized verbs are modified by incorporated adjectives, as regular nominals, (14a) and, unlike regular predicates (14b), may not be modified by adverbs (14c).

(14) a. se sjəčʼas [**psənčʼe**-če-nə-r]
I 1SG.like.PRS fast-run-NML-ABS
'I like to run fast'.

b. se sjəčʼas [**psəčʼ-ew** sə-čenew]
I 1SG.like.PRS fast-ADV 1SG.ABS-run.INF
'I like to run fast'.

c. * se s.jə.čʼas [**psəčʼ-ew** če-nə-r]
I 1SG.like.PRS fast-ADV run-NML-ABS
Expected: 'I like to run fast'.

Nominalizations are not limited to sentential complement positions; they may surface in any nominal syntactic position, e.g. as the complement of a postposition:

(15) se stol t͡ʂə.ʁe [leʁe-ʁʷəšʼəžʼə-nə-**m paj**]
I table 1SG.ERG.do.PST dish-dry-NML-OBL for
'I set the table for dish-drying'.

Like regular nominals, they may head a relative clause (16) and appear with demonstratives (17).

(16) [qeŝʷa-čʼ-ew s-a-ʁeʂaʁe-m-re] se
dance-NML-ADV 1SG.ABS-3PL.ERG-teach.PST-OBL-and I
t͡ʂetəʁe-m-re λešew zetječ̣əx
1SG.ERG+know.IPF-OBL-and very differ.PL
'The manner of dancing which you were taught and the one I know are very different'.

(17) [**mə** w-jə-beʒe-wəčʼə-n] zeč̣'erjə jezešʼəʁ
this 2SG.PR-POSS-fly-kill-NML all.ABS tire.PST
'Your killing of flies has annoyed everyone'.

The arguments of the nominalized predicates are remapped to positions appropriate for nominal modifiers: as incorporees or possessors. (18a) shows that the absolutive argument may be expressed as an incorporee, it may not retain absolutive case marking as in a finite clause (18b).

(18) a. [**leʁe**-thač̣'ə-nə-m] s-jezešʼəʁ
dish-wash-NML-OBL 1SG.ABS-tire.PST
'I'm tired of dish-washing'.

b. * [**laʁe-xe-r** thač̣'ə-nə-m] s-jezešʼəʁ
dish-PL-ABS wash-NML-OBL 1SG.ABS-tire.PST
Expected: 'I'm tired of dish-washing'.

A more detailed description of argument encoding, and particularly incorporation, is provided in the following section.

3 Noun incorporation

This section focuses on the morphosyntactic properties of argument incorporation in nominalized constructions. I show that this is indeed a case of incorporation, i.e. formation of a new word by combining a nominalized predicate with an argument, and continue to demonstrate that it is a nominal process, rather than verbal. I then offer data that shows that this phenomenon is nevertheless restricted by verbal argument structure.

3.1 Diagnostics for incorporation

In section 2.3 I outline the main diagnostics for determining word boundaries in Adyghe. This subsection is aimed to display that in nominalized constructions the incorporated argument forms a single word with the predicate based on these diagnostics.

Firstly, the incorporated nominal does not form its own stem for the phonological alternation presented in (10). (19a) shows that the penultimate syllable in the root *šekʷe* 'hunt' surfaces as /a/ in the right environment, i.e. when this root functions as an independent word; in (19b), where the corresponding nominal is incorporated into the nominalized predicate, the alternation no longer takes place.

(19) a. se səgʷə rjehə [š**a**ḳʷe] sə-ḳʷenew (< š**e**ḳʷe)
I 1SG.like.PRS hunt 1SG.ABS-go.INF
'I like to go hunting'.

b. se səgʷə rjehə [š**e**ḳʷe-ḳʷe-nə-r]
I 1SG.like.PRS hunt-go-NML-ABS
'I like to go hunting'.

Secondly, the incorporated root can be embedded in morphology relating to the full nominalized form. In (20) the second person possessive marker preceding the incorporated root *λeʁe* 'dish' refers to the full nominalized form, and not just to the nominal directly to the right; this is evident from the English translation.

(20) š'əʁetəž' [w-jə-[**leʁe**-a-fe-thač'ə-č'e]]
stop.IMP 2SG.PR-POSS-dish-3PL.IO-BEN-wash-NML
'Stop washing other people's dishes!'

The morphosyntactic position of the root *leʁe* 'dish' indicates that it forms a single morphophonological unit with the nominalized predicate.

In the following subsection I show that NI in Adyghe, if treated as a case of argument incorporation in Baker's (1988) sense, challenges the generalization that this type of operation is only possible for the direct complement of the lexical verb, and consequently, existing accounts of this operation. In subsection 3.3 I proceed to show, however, that this phenomenon is not in fact the same, but can be explained as a nominal process.

3.2 Unrestricted noun incorporation

A widely documented cross-linguistic property of noun incorporation is that it only targets the Theme or direct object of the verb (Baker 2009:154). This has been claimed to be true for nominalized predicates as well (Koptjevskaja-Tamm 1993:99–102). Incorporation in Adyghe nominalizations appears to challenge this generalization.

In nominalized constructions, any argument may be incorporated: the direct object(20), the unaccusative (21) or unergative (28) subject, an applicative indirect object (22) and even the ergative subject (23), (24).[4]

(21) se stol t͡ʂəʁe [**leʁe**-ʁʷəš'əž'ə-nə-m paj]
I table 1SG.ERG.do.PST [dish]$_{SUBJ}$-dry.INTR-NML-OBL for
'I set the table for dish-drying'.

(22) se səgʷə rjehə [**ʔʷeŝhe**-tje-tə-nə-r]
I 1SG.like.PRS [hill]$_{IO}$-LOC-stand-NML-ABS
'I like standing on a hill'.

(23) [**beʒ'e**-zə-thač'ə-ç'e-r] ç'etəw-zə-thaç'e-m fed
[fox]$_{SUBJ}$-[REFL.ABS]$_{OBJ}$-wash-NML-ABS cat-REFL.ABS-wash-OBL like
'The fox's manner of washing itself is similar to the cat's'.

Furthemore, some speakers allow incorporation of more than one argument; in (24) the absolutive and ergative arguments are both expressed as incorporees.

(24) [**pŝeŝe-leʁe**-thaçə-ç'e-r] səgʷə rjehə
[girl]$_{SUBJ}$-[dish]$_{OBJ}$-wash-NML-ABS 1SG.like.PRS
'I like the girls' way of washing the dishes (as if there's a girls' type of dish-washing)'.

Some examples even seem to have a possessor and an incorporee referring to the same syntactic argument. Thus, in (25) and (26), both the incorporee and possessive phrase seem to represent the absolutive subject of the nominalized verb, and the ergative subject in (27).

(25) [**w-jə-beʒ'e**-š'xəpç̌ə-ç'e] s-jə-ʁe.rehatə.r.ep
[2SG.PR-POSS]$_{SUBJ}$-[fox]$_{SUBJ}$-smile-NML 1SG.ABS-3SG.ERG-calm.PRS.NEG
'Your fox-like grin disturbs me'.

(26) [**pšaše-m** **jə-ç'ele**-qe.ŝʷa-ç'e] ʁeŝeʁʷen
[girl-OBL]$_{SUBJ}$ POSS-[boy]$_{SUBJ}$-dance-NML interesting
'It's interesting when the girl does a male dance'.

[4]In this and following sections I label incorporated arguments and possessors with their corresponding syntactic roles in a finite clause, using the abbreviations SUBJ for intransitive subjects and transitive agents, IO for indirect objects and OBJ for direct objects. I use these terms for illustrative purposes solely, to distinguish these labels from morphological case in the nominalized constructions. The term 'subject' is particularly problematic for Adyghe, since it has been proposed that this language is syntactically ergative and the absolutive displays subjecthood properties (Letuchiy 2010; Lander to appear).

(27) [**a ç̌'ale-m jə-pŝeŝe**-ʒene-də-ç̌'e] šen zeç̌'jə
[that boy-OBL]$_{SUBJ}$ POSS-[girl]$_{SUBJ}$-[dress]$_{OBJ}$-sew-NML manner all
jeʁeš'zə
3SG.ERG-make.laugh.PRS
'That boy's girlish manner of sewing dresses makes everyone laugh'.

I claim that these peculiarly unrestricted patterns of incorporation do not necessarily constitute a counterexample to Baker (2009) and Koptjevskaja-Tamm's (1993) generalization. In the following section I argue that, while an argument is incorporated into the nominalized predicate in the sense that the two form a single morphophonological unit, this is not the same type of mechanism as described by Baker (1988), i.e. it does not involve Head Movement of the closest complement of the verb to its verbal head. The strange properties of this construction can be readily accounted for if it is addressed as a relation between a nominal and its syntactic dependents.

3.3 Noun incorporation is nominal

Several empirical facts appear to indicate that incorporation in nominalized constructions is a nominal, rather than verbal process.

One piece of evidence is the morphosyntactic position of the incorporated nominal: it attaches to the left of all verbal morphology, as opposed to next to the verbal stem or in the position where the corresponding personal marker would surface in a finite construction (Table 3).

POSS	incorporated argument(s)	verbal prefixes	verb root	verbal suffixes	nomin-alizer	nominal suffixes & endings

Table 3: Morphosyntactic position of incorporated noun

Thus, we can see in (28) that the nominal *adəɣe-pŝeŝe* 'Adyghe girl' appears to the left of the directive prefix, which, within the verbal template, can be preceded only by the absolutive personal marker.

(28) se səg^{w}ə rjehə [[adəɣe-pŝeŝe]-[qe]$_2$-ŝ^{w}e-nə-r]
I 1SG.like.PRS [Adyghe-girl]$_{ABS}$-DIR-dance-NML-ABS
'I like how Adyghe girls dance'.

Another argument for the nominal nature of argument incorporation in nominalizations is its striking similarities to incorporation of modifiers and nominal arguments into non-derived nouns. In (29) we can see that regular nominals may have several incorporees; for relational nouns the closest incorporee is interpreted as the argument or inherent possessor of that nominal (30), while the outer incorporee is interpreted freely. Multiple NI in nominalized constructions appears to follow the same pattern: in (24) the inner incorporee is interpreted as the patient, while the outer incorporee denotes a generic agent.

(29) [adəge-**heč'eḳʷeč'e**-swəret-xe-r] qjənəx
Adyghe-[**animal**]-picture-PL-ABS hard.PL
'Adyghe pictures of animals are hard' (Lander 2014)

(30) j-**ane**-š
POSS-[**mother**]-brother
'his uncle (mother's brother)' (Temirgoy; Lander 2015)

As expected for regular nominals, possessive phrases in nominalizations are interpreted freely, according to context: they can refer to any of the participants, including the direct object (31), or not an argument at all (32).

(31) [**laʁe-me** **ja**-thaǰə-n] se s-jezeš'əʁ
[dish-PL.OBL]$_{OBJ}$ 3PL.PR+POSS-wash-NML I 1SG.ABS-annoy.PST
'I'm tired of washing the dishes'.

(32) [**s-jə-č'ale-me** **ja**-pŝe-thaǰə-n] mafe-qes
[1SG-POSS-boy-PL.OBL]$_{POSS}$ 3PL.PR+POSS-[neck]$_{OBJ}$-wash-NML day-every
sə-ṗəλ
1SG.ABS-try
'Every day I wash the necks of my boys'.

In the following section I show that, as in relational nouns, the closest incorporee in nominalizations is structurally restricted, while any additional incorporees are freely interpreted nominal modifiers. Crucially, the data indicates that the choice of the closest incorporee is governed by underlying verbal structure, providing insights to how much verbal structure is encompassed by the nominalizer, and how much is omitted.

3.4 Incorporation driven by argument structure

While the previous sections might have created an illusion of chaos in the realm of argument incorporation, there is in fact a restriction regarding this process, which is summarized in (33).

(33) **Incorporation Hierarchy**: In a two-place predicate, the closest incorporee must be the less agentive argument.

This generalization holds for all types of two-place predicates: transitive with an ergative agent and absolutive patient (34), intransitive with an absolutive subject and indirect object introduced by an applicative (35) and so-called inverse verbs with the more agentive argument introduced by an applicative (36). Below I review each type of verb separately.

1. ERG > ABS: if a transitive predicate is nominalized, the absolutive must be incorporated first.

   The predicate *thaǰ'ə-* 'wash' is an example of a transitive two-place predicate: in (34a) it is used in a finite clause; the direct object *laʁexer* 'dishes' is in the absolutive, and the first person prefix on the predicate marks the ergative subject. In case this predicate is

nominalized, the absolutive argument must be the incorporee closer to the nominalized predicate. This can be seen in (34b), where the noun *leʁe* 'dish' is now incorporated into the predicate, and the ergative agent is expressed as a possessor; (34c) shows that the arguments may not be switched in position without a change in meaning, in this case rendering a nonsensical utterance.

(34) a. se deʁʷədedew laʁe-xe-r s-thaǯ'əʁe-x
I very good dish-PL-ABS 1SG.ERG-wash.PST-PL.ABS
'I washed the dishes thoroughly'.

b. [**pŝaŝe-m** **jə-leʁe**-thaǯ'ə-n] s-jezeš'əʁ
[girl-OBL]$_{SUBJ}$ POSS-[dish]$_{OBJ}$-wash-NML 1SG.ABS-tire.PST
'I'm tired of the girl's dish-washing'.

c. #[**laʁe-me** **ja-pŝeŝe**-thaǯ'ə-n] s-jezeš'əʁ
[dish-PL.OBL]$_{OBJ}$ 3PL.PR+POSS-[girl]$_{SUBJ}$-wash-NML 1SG.ABS-tire.PST
Expected: 'I'm tired of the girl's dish-washing'. ("Seems as if the dishes are washing the girl".)

2. ABS > APPL: if an intransitive predicate with an indirect object is nominalized, the indirect object must be incorporated first.

An example of such an intransitive two-place predicate is *feg*^{w}*əṩe-* 'congratulate'; in (35a) the one who carries out the action is marked in the absolutive and the addressee is marked with the oblique and introduced by the benefactive prefix on the predicate. In (35b) we can see that the incorporee that appears closer to the nominalized predicate is necessarily interpreted as the benefactive, i.e. the addressee.

(35) a. sabij-xe-r č'elejeʁaǯe-m fe-g^{w}əṩ^{w}aʁex
child-PL-ABS teacher-OBL BEN-congratulate.PST
'The children congratulated the teacher'.

b. [**pŝaŝe-me** **ja-č'ele**-fe-g^{w}ə.ŝ^{w}a-č'e] səg^{w}ə rjehə
[girl-OBL]$_{SUBJ}$ 3PL.PR+POSS-[boy]$_{IO}$-BEN-be.happy-NML 1SG.like.PRS
'I like how the girls congratulate the boys'.
*'I like how the boys congratulate the girls'.

3. APPL > ABS: if a two-place predicate that has an absolutive and applicative argument, where the applicative argument is more agentive, is nominalized, the absolutive argument must appear as the closest incorporee.

Inverse verbs in Adyghe constitute a small set of predicates, where the more agentive argument is introduced by an applicative prefix and carries oblique case, while the less agentive argument is marked as the absolutive (Arkadiev et al. 2009:64–65). One such predicate is *š'əʁ*^{w}*əpše-* 'forget': the experiencer is introduced by the locative applicative prefix and the stimulus is marked with the absolutive (36a). If this predicate

is nominalized, the closest incorporee is necessarily interpreted as the absolutive, i.e. the less agentive argument (36b).[5]

(36) a. č̣'ale-m gʷəš'aʔe-xe-r zeč̣'e š'ə-ʁʷəpšaʁ
boy-OBL word-PL-ABS all LOC-forget.PST
'The boy forgot all the words'.

b. [**č̣ale-me** **ja-nene**-š'ə-ʁʷəpša-č̣'e]
[boy-PL.OBL]$_{EXP}$ 3PL.PR+POSS-[grandmother]$_{TH}$-LOC-forget-NML
səgʷə rjəhep
1SG.like.NEG
'I don't like how children forget their grandmothers'.
*'I don't like how grandmothers forget their children'.

The pattern of argument encoding displayed above for inverse predicates shows that the hierarchy in (33) is based on agentivity, and not surface argument encoding. Intransitive predicates with an indirect object, as in (35), and inverse predicates, as in (36), have identical argument structures on the surface: one absolutive and one applicative argument. However, we see that the restrictions on incorporation differ based on the agentivity of the participants. This means that the hierarchy is sensitive not to case-marking or surface positions, but to the semantic nature of the arguments.

When a two-place predicate is nominalized, one of the arguments can be dropped, including the less agentive one (37a). An additional structural restriction applies in these cases, however: the more agentive agrument is necessarily expressed as a possessor and cannot be incorporated; if incorporated, it coerces the interpretation of the less agentive argument (37b).

(37) a. λešew dejə [**nane-me** **ja**-š'ə-ʁʷəpše-n]
very bad [grandmother-PL.OBL]$_{EXP}$ 3PL.PR+POSS-LOC-forget-NML
'It's very bad, forgetfulness of grandmothers'.

b. λešew dejə [**nene**-š'ə-ʁʷəpše-nə-r]
very bad grandmother$_{TH}$-LOC-forget-NML-ABS
'It's very bad to forget grandmothers'.
*'It's very bad, forgetfulness of grandmothers'.

Along with the Incorporation Hierarchy summarized in (33), this data indicates that argument encoding in nominalizations is structurally constrained, and the constrains concern the closest incorporee, i.e. the less agentive argument. This can be accounted for in a straightforward way if we assume that the verbal argument structure is the driving force behind the restrictions. The following section outlines the analysis.

[5]Since it is particularly hard to assign the term 'subject' or 'object' to the arguments of this verb, I mark the applicative argument as EXP for Experiencer and the absolutive argument as TH for Theme.

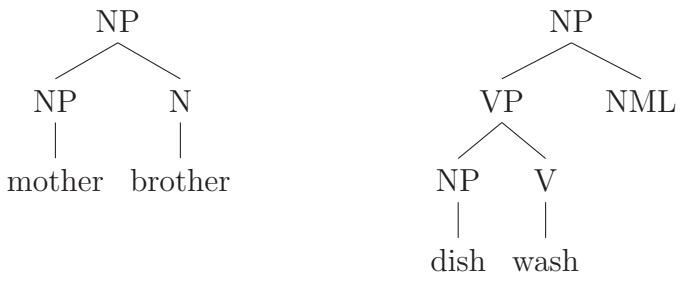

Figure 1: Parallel strutures of relational nouns and nominalizations

4 Analysis

This section aims to provide a unified analysis of the incorporation data presented in the previous section. As shown in section 3, NI in Adyghe nominalizations is, on the one hand, nominal, and on the other hand, restricted by verbal structure. In two-place predicates, the less agentive argument must appear as the closest incorporee, while the more agentive argument attaches as a possessor or outer incorporee. In such cases, the outer incorporee is interpreted as a generic agent (24) or an adjective of manner (27). The incorporee of unergative one-place predicates, such as *šʼxəpčə-* 'smile' and *qeŝʷe-* 'dance' receives an interpretation similar to the ergative incorporee: manner (25), (26) or generic agent (28).Thus, we see that the internal argument (direct object of transitive verbs and indirect object of intransitive verbs) is morphosyntactically restricted analogous to inherent possessors in underived nominals, while the external argument – ergative, absolutive or applicative in the case of inverse predicates – is interpreted analogous to general nominal modifiers. This asymmetry points toward a structure of nominalizations which contains only the internal argument and cuts off the external one, analogous to passive nominalizations described by Alexiadou (2001).

Figure 1 presents the simplified structure of the nominalized predicate from example (24) and parallels it to relational nouns which have an internal argument – the inherent possessor (30.[6]

The proposed structure provides evidence for the ergative and unergative agent, as well as the applicative in inverse predicates, being an argument external to VP. Furthermore, this argument must be structurally higher than indirect objects introduced by applicative prefixes, since, as we saw in section 3, these arguments are subject to the same structural restrictions as the absolutive direct object. This means that applicative arguments, unlike the agent, must be part of the nominalized structure. Figure 2 contains the basic clause structure for a transitive three-place predicate, where the part of the verbal structure excluded from the nominalization is colored gray.[7]

[6]I label the incorporated elements NP since they cannot include demonstratives, but may include adjectival modifiers or other incorporated elements.

[7]Working off the verbal template in Table 2, one might notice that morphology relating to the argument structure is prefixal, while temporal and aspectual morphemes attach as suffixes. Here, I assume that this correlates with the corresponding functional heads being left- or right- branching. The language has been

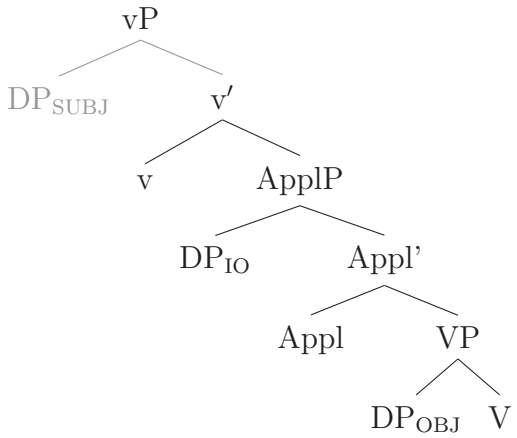

Figure 2: Basic transitive clause structure

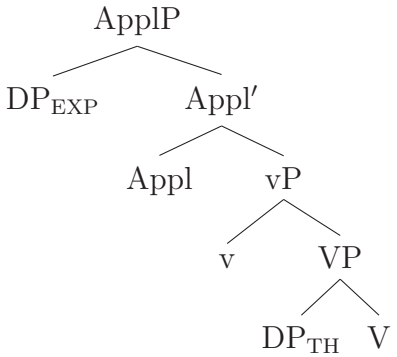

Figure 3: Structure of inverse predicates

In Figure 2 the only part of the tree that is shaded gray is the external argument. Since nominalized constructions can include overt realizations of *v*, such as the causative morpheme, I assume that the nominalizer behaves as a valency-reducing operator, rather than cutting *v* off completely.

The structure for two-place predicates with an absolutive subject and indirect object are virtually identical to Figure 2, except that V lacks a complement. Two-place inverse predicates include an applicative head above *v*, which strips the projection beneath it of its power to license the external argument, the same way as the nominalizer itself, and introduces an applicative (Figure 3).

Structurally, inverse predicates resemble passives, where a projection above *v*P strips the agentive head of its licensing power. In fact, a number of such verbs are the result of an agent-demoting operation. For example, the benefactive applicative prefix may carry habilitive semantics in a construction within which the ergative argument is deleted and replaced by an indirect object in the benefactive position. In (38a) the predicate *λeʁʷə-* 'see'

typologically labeled as left-branching, i.e. verb-final, so I assume a projection is right-headed, unless there is evidence to the contrary. Thus, in Figure 2, *v* and Appl appear to the left, since they are realized as prefixes, while VP is right-headed.

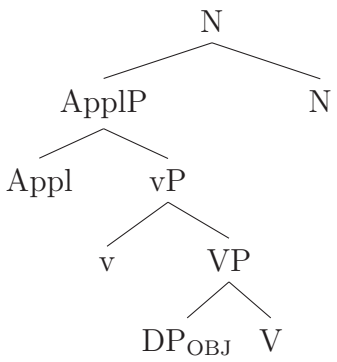

Figure 4: Nominalization of inverse predicate

has a third person plural ergative argument; in (38b), this marker is deleted and replaced by a benefactive, which in turn introduces the external argument.

(38) a. ҫ'ale-xe-m bukva-xe-r ∅-**a**-λeʁʷə-xe-r-ep
boy-PL-OBL letter-PL-ABS 3SG.ABS-3PL.ERG-see-PL.ABS-PRS-NEG
'The boys do not see the letters'.

b. ҫ'ale-xe-m bukva-xe-r ∅-[**a-fe**]-λeʁʷə-xe-r-ep
boy-PL-OBL letter-PL-ABS 3SG.ABS-[3PL.IO-BEN]-see-PL.ABS-PRS-NEG
'The boys cannot see the letters'. (Temirgoy; Letuchiy 2010)

When an inverse predicate is nominalized, the nominalizing projection selects for the higher ApplP, stripping Appl of the ability to license a specifier. The only argument that remains within the nominalization is the complement of V, which would have been marked as the absolutive in a finite clause (Figure 4). This is the argument that surfaces as the closest incorporee in the nominalization.[8]

The position of the nominalizing projection is further supported by restrictions on person marking in nominalized predicates: verbal indexing of the absolutive and ergative arguments is disallowed, while indirect object marking in front of the corresponding applicative is sometimes possible: for example, first person singular benefactive in (39) and third person plural dative in (40).

(39) səgʷə rjehə [w-jə-wered-qə-[**s-fe**]-ʔʷa-ҫ'e]
1SG.like.PRS 2SG.PR-POSS-song-DIR-[1SG.IO-BEN]-say-NML
'I like how you sing for me'.

(40) s-j-eʁegʷəmeҫ'ə qəweλeʔʷəre-m pepč
1SG.ABS-3SG.ERG-worry.PRS 2SG.IO.ask.PRS-OBL every
[w-jə-aχš'e-[**ja**]-tə-č'e]
2SG.PR-POSS-money-[3PL.IO+DAT]-give-NML
'I am worried about your manner of giving money to everyone who asks you'.

[8]The nominalizer attaches as a suffix and it thus mapped onto the tree as left-branching head.

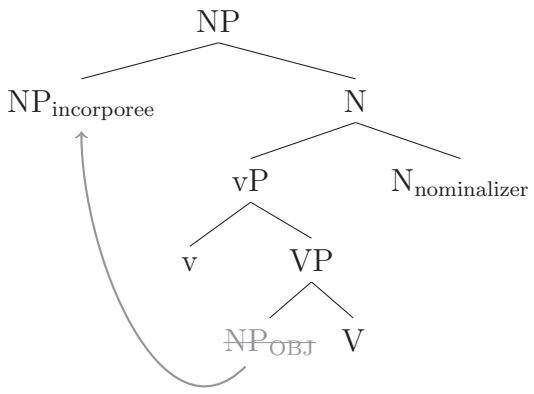

Figure 5: Movement analysis of incorporation

This can be accounted for if we assume an analysis within which the ergative and applicative arguments are licensed by their respective heads, and the absolutive is licensed by T. High licensing of the absolutive is supported by its linear position within the verbal form – on the leftmost edge. The nominalizing projection, as agent-demoting applicatives, strips *v* of its licensing power, and T is altogether cut off by the nominalizer, while the applicative head, on the other hand, remains within the nominalization.

The argument structure proposed here (with the ergative positioned higher than the absolutive) is supported by reflexive binding facts: the ergative binds the absolutive and not vice versa. In Adyghe, reflexivization is achieved by inserting a special reflexive morpheme in the morphological position of one of the coreferent arguments in the verb; in (41) we see that when the transitive predicate *λeʁʷə-* 'see' is reflexivized, the reflexive morpheme surfaces in the absolutive slot, while the ergative retains original personal marking.

(41) zeč̣'e ç̣əf-xe-r **z-a**-λeʁʷə-ž'ə
all man-PL-ABS REFL.ABS-3PL.ERG-see-RE
'All the people see themselves'. **(ERG > ABS)** (Letuchiy 2010)

Thus, this analysis connects with other aspects of Adyghe morphosyntax.

Finally, we must address the nature of noun incorporation in Adyghe. Arguably, polysynthesis involves the spell-out of complex clause-level entities as a single morphophonological unit. Within the nominal domain, the requirement of single-word spell-out applies at the level of NP, and all lexical and non-lexical entities within this projection merge on the surface into a single word. Nominalizations, being a nominal structure, are subject to the same requirement.

A difficulty we need to account for is the position of the incorporated argument: it surfaces to the left of all verbal morphology, which means that it either moves out of its base-generated position within VP (Figure 5) or it merges outside of the nominalized projection and binds a null pronominal (PRO) within the verbal structure (Figure 6).

It is clear that the overt NP denoting the incorporated argument must be merged outside of the nominalized projection, but it is not clear which analysis is preferable. The analy-

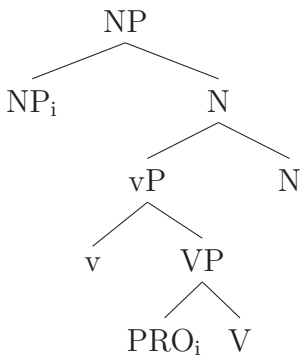

Figure 6: Analysis of incorporation with bound PRO

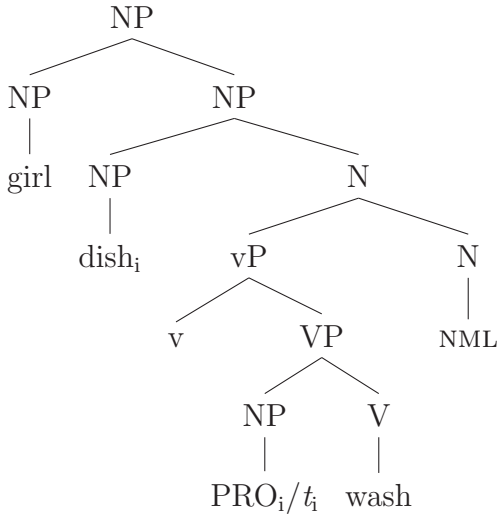

Figure 7: Structure of nominalized transitive predicate with outer incorporee

sis proposed in Figure 6 has been previously proposed for arguments within nominalized constructions (Yoon 1996; Coon 2010), but for subjects, rather than objects.

Within both analyses, outer incorporees and other modifiers attach as adjuncts to NP. Figure 7 reflects the structure of the nominalized predicate in (24), repeated in (42).

(42) pŝeŝe- leʁe- thaǰə -č’e
[girl]$_{\text{SUBJ}}$- [dish]$_{\text{OBJ}}$- wash -NML
‘girls’ way of washing dishes’

Possessive phrases attach to the NP and are assigned a loose possessive semantics (“free *R*” reading), which is then determined by context (Partee 1996). The most pragmatically salient interpretation of the possessor phrase is the unexpressed argument of the nominalized predicate; for example, in the nominalized construction from (34), repeated below in (43), the possessor is interpreted as the ergative subject. We know, however, that in the proper context, the possessor phrase need not denote the external argument (see (31) and (32)).

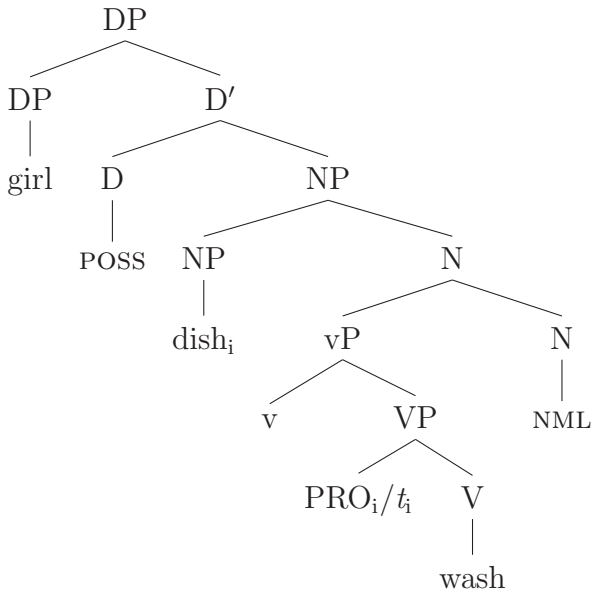

Figure 8: Structure of nominalized transitive predicate with possessor

(43) pŝaŝe-m jə- leʁe- thaǰ'ə -n
[girl-OBL]$_{SUBJ}$ POSS- [dish]$_{OBJ}$- wash -NML
'the girl's dish-washing'

Figure 8 provides a rough structure for (43).[9]

The incorporee immediately adjacent to the nominalizer must be the internal argument; the external argument may not occupy this position (34c), (37b). Neither the movement, nor the binding analysis accounts for this restriction without extra machinery. To enforce this restriction, I propose that the internal argument (be it a movement trace or a null pronominal) must be bound by the closest c-commanding nominal phrase within a given domain, and the domain is NP. This means that in cases like (31), the NP denoting the internal argument moved out of its incorporated position to the Specifier of DP (Figure 9). This movement was driven by the restriction on referentiality: incorporated elements must be non-referential, i.e. no bigger than NP.

In a construction with no overt internal argument, such as (37a), repeated below in (44), the position of the closest incorporee is occupied by a null pronominal (Figure 10).

(44) nane-me ja- ∅- š'ə- ʁ^{w}əpše -n
[grandmother-PL.OBL]$_{EXP}$ 3PL.POSS- [*pro*]$_{TH}$ LOC- forget -NML
'forgetfulness of grandmothers'

Following this line of reasoning, the external argument interpretation of the incorporated nominal in (37b) is unavailable not for syntactic reason, since the external argument should be able to adjoin as a modifier above the incorporated *pro*, analogous to the agent in (24).

[9]For the purposes of this paper, I assume that the possessive morpheme on the nominalization is D; this might not be the correct analysis for Adyghe, considering that this morpheme has the same morphosyntactic properties as applicatives and may be present in predicates (5).

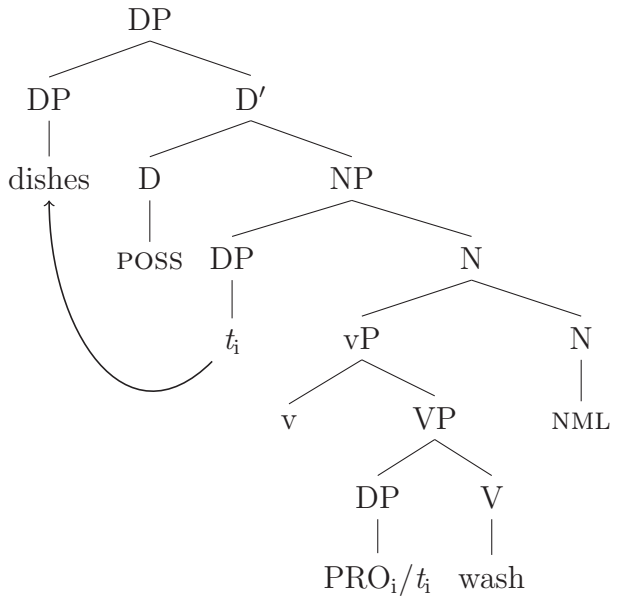

Figure 9: Movement of closest incorporee to possessor

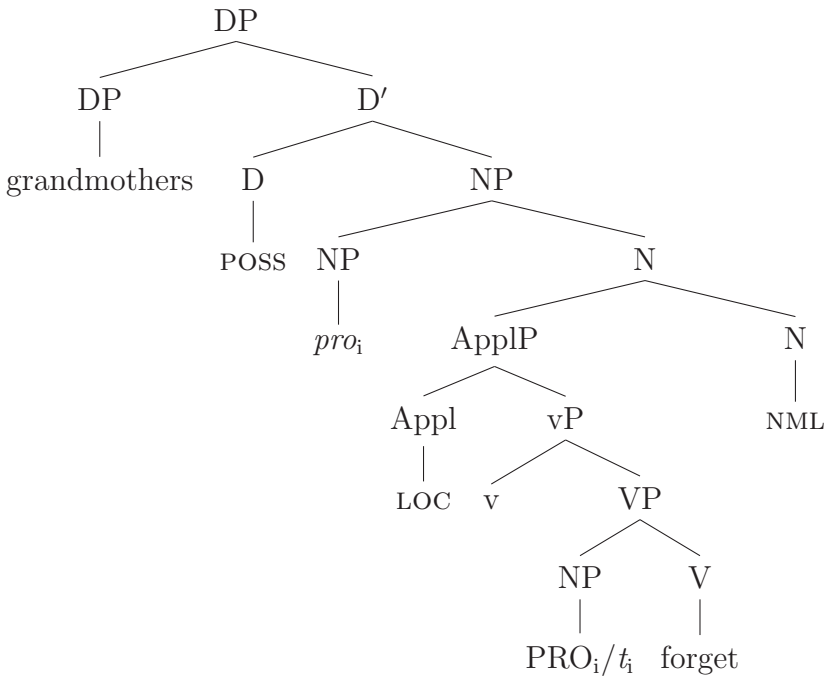

Figure 10: Structure of nominalized two-place predicate with no overt internal argument

I claim that this interpretation is unavailable due to a strong pragmatic bias to match the internal argument with an overt realization within the domain of NP.

I hope to have demonstrated how the patterns of NI in Adyghe nominalizations can be connected to the size of the nominalized construction (vP or ApplP in the case of inverse predicates) and general argument structure (the less agentive argument is internal to vP and thus included within the nominalization; the external argument is deleted).

5 Conclusion

Nominalizations in the Bzhedug dialect of Adyghe display a typologically unusual pattern of noun incorporation: in these constructions, any argument may be incorporated, including even the ergative subject. I show that this morphosyntactic process is not a direct challenge to existing theoretical accounts and is in fact driven by nominal, rather than verbal morphosyntax. Restrictions on argument incorporation in nominalized constructions point towards an argument structure within which the more agentive argument is introduced by an external head; the nominalizer selects for this head and strips it of its licensing power, acting as a valency-reducing operator.

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