Iranian-Armenian language contact in and before the 5th century CE

An investigation into pattern replication and societal multilingualism

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Gewidmet in immerwährender Liebe und Dankbarkeit
meinen Eltern, Steffi & Wolfang,
die mir stets zur Seite standen und alles ermöglichten.

&

Melek gibi sabrı ve sonsuz desteği için
sevgili eşim Şira'ya tezimi ithaf ederim.

'My name is Ozymandias, king of kings:
Look on my works, ye Mighty, and despair!'
Nothing beside remains. Round the decay
Of that colossal wreck, boundless and bare
The lone and level sands stretch far away. (from Shelley, *Ozymandias*)

Abstract

This study provides new insights into the historical language contact between Classical Armenian and West Middle Iranian, specifically Parthian. Next to an up-to-date account of known lexical, morphological, and phraseological Iranian loans in Armenian, the discussion focuses on one major and three minor syntactic patterns which, it is argued, are the result of pattern replication.

The major pattern, the Classical Armenian periphrastic perfect, has previously been the focus of numerous papers owing to its unusual construction: while intransitive verbs construe with nominative subjects and an optional form of the copula in subject agreement, transitive verbs exhibit genitive agents, accusative objects and an optional copula in a invariable 3.SG form. Based on a discussion of morphosyntactic alignment patterns in general, and of Armenian and West Middle Iranian in particular, it is shown that previous accounts cannot satisfactorily explain the syntax of the perfect. In a new approach, it is argued that Armenian exhibits tripartite morphosyntactic alignment as the result of 'copying' and adapting the ergative alignment pattern of the West Middle Iranian past tense. This analysis is supported both by the historical morphology of the perfect participle and by a corpus analysis of five major works of Armenian 5$^{\text{th}}$-century historiography.

The minor patterns—*ezāfe*-like nominal relative clauses, subject resumption and switch-reference marking using the anaphoric pronoun Arm. *ink'n*, and the quotative use of Arm. *(e)t'ē*—are equally linked to parallel constructions in West Middle Iranian, which may have served as syntactic models for their Armenian counterparts.

The final part of the study discusses the Armenian–Iranian relationship from a language contact point of view and, making use of historical, epigraphic, and literary sources, proposes that a superstrate shift of the Parthian-speaking ruling class of Armenia to Armenian as their primary language best explains the amount of Parthian linguistic material and patterns in Armenian.

Keywords: Armenian, Iranian, language contact, pattern replication, multilingualism, morphosyntactic alignment

Word count: 98,088

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Contents

List of Tables

List of Figures

Abbreviations

Below are outlined the glosses and abbreviations used in this study. The transliteration of the Armenian script used here is that of Hübschmann-Meillet-Benveniste with the modifications commonly applied in, e.g., the *Revue des Études Arméniennes*. Where transliterations for other languages have been used, they are quoted in the standard format or those used in the secondary literature from which examples have been taken.

Glosses

ABL	ablative
ABS	absolutive
ACC	accusative
AGR	agreement
ANA	anaphor
AOR	aorist
COMP	complementiser
CONJ	conjunction
CON	connective
CVB	converb
DAT	dative
DECL	declarative
DEM	demonstrative
DET	determiner
DIR	direct case
DU	dual
ERG	ergative
EZ	*ezāfe* marker
F	feminine
GEN	genitive
IMPRS	impersonal
IMP	imperfect
IMV	imperative

INF	infinitive
INJ	injunctive
INS	instrumental
INT	intensifier
IOBJ	indirect object marker
IPFV	imperfective
ITR	intransitive
JUSS	jussive
LOC	locative
MID	middle
M	masculine
NEG	negative
NFUT	non-future
NOM	nominative
N	neuter
OBJ	object marker
OPT	optative
PASS	passive
PL	plural
PN	proper noun
POSS	possessive
PRS	present
PST	past
PTCP	participle
PTC	particle
QUOT	quotative
REFL	reflexive
REL	relativiser
SBJV	subjunctive
SG	singular
TR	transitive
VBADJ	verbal adjective

Languages

Alb.	Albanian
Arab.	Arabic
Aram.	Aramaic
Arm.	Armenian
Av.	Avestan
Az.	Azeri
Chin.	Chinese
CIr.	Common Iranian
Cymr.	Welsh
Geo.	Georgian
Gk.	Greek
Goth.	Gothic

IIr.	Indo-Iranian
It.	Italian
Kurm.	Kurmanci
Lat.	Latin
Lith.	Lithuanian
MArm.	Middle Armenian
MEA	Modern Eastern Armenian
MP	Middle Persian
MWA	Modern Western Armenian
NE	Modern English
NHG	Modern High German
NP	Modern Persian
OAv.	Old Avestan
OCS	Old Church Slavonic
OE	Old English
OHG	Old High German
OIc.	Old Icelandic
OIr.	Old Irish
OP	Old Persian
PArm.	Proto-Armenian
PIE	Proto-Indo-European
PT	Proto-Tokharian
Pth.	Parthian
Skt.	Sanskrit
Slav.	Slavonic
Sogd.	Sogdian
Syr.	Syriac
TA/TB	Tokharian A/B
TTurk.	Turkey Turkish
Ved.	Vedic
WMIr.	West Middle Iranian
YAv.	Young Avestan

Texts

A²Sc	Artaxerxes II (Susa)
Ag.	Agatʿangełos
AR	Boyce (1954)
AV	Atharvaveda
BBB	Henning (1937)
DB	Darius (Behistun)
DNa	Darius (Naqš-e Rustam)
Eł.	Ełišē

EK	Eznik Kołbac‘i
GW	Sundermann (1997)
KAP	Grenet (2003)
Kaw	Henning (1943)
Kor.	Koriwn
KPT	Sundermann (1973)
LN	Sundermann (1992)
ŁP	Łazar P‘arpec‘i
M	fragment in the Turfan Collection, Berlin
MKG	Sundermann (1981)
MMi	Andreas and Henning (1932)
MMii	Andreas and Henning (1933)
MMiii	Andreas and Henning (1934)
MX	Movsēs Xorenac‘i
PB	P‘awstos Buzandac‘i
RV	Ṛgveda
Šbrg	MacKenzie (1979)
ŠKZ	Huyse (1999)
XPb	Xerxes (Persepolis)
Y.	Yasna

Other

A	agent
C	consonant
K̂	palatal consonant
L1/2	first/second language
ML	model language
NP	noun phrase
O	object
S	subject
T	dental consonant
TL	target language
V	vowel

Preface: Goals of this study

Since the days of Heinrich Hübschmann it has been clear that Armenian is not an Iranian language, as had been assumed previously, but rather constitutes its own branch of Indo-European. Scholarship over the course of the 20th century has contributed much to the understanding of the actual relationship between Armenian and its Iranian neighbours, a relationship of language contact rather than an immediately genetic one. The focus of this century of studies has been the identification of Iranian etymologies in Armenian, and concomitantly, the explanation of phonological rules that apply to the transfer of lexical material to Armenian. To a lesser extent, and usually as a result of etymological studies, some aspects of derivational morphology and phraseology have been discussed.

One linguistic field thus far entirely untouched by Iranian influence—or rather scholarly attention—is that of syntax. Potential syntactic influence is, of course, much more difficult to spot than lexical or morphological borrowings, since no linguistic matter is taken over, but only patterns.

The goal of this study is to remedy this oversight, and to provide an insight into syntactical influence that West Middle Iranian, specifically Parthian, has had or may have had on Armenian. It will be argued that Parthian influence can, in fact, help resolve one long-standing problem in Armenian historical syntax: the construction of the periphrastic perfect. This tense, in which intransitive verbs construe with nominative subjects and an optional form of the copula in subject agreement, but transitive verbs exhibit genitive agents, accusative objects and an optional copula in a petrified 3.sg form, is compared to the ergative construction of the West Middle Iranian past tense.

The parallels emerging from the comparison of the Iranian and Armenian patterns

strongly suggest that Armenian has copied and modified the Iranian model; this explanation, it is argued, can explain the unusual construction of the periphrastic perfect, its synchronic diversity, and diachronic development better than previous attempts relying solely on Armenian-internal developments.

Next to the replication of the Parthian past tense construction, three further patterns show indications of potential Iranian influence: the occurrence of nominal relative clauses in Armenian which are comparable to the *ezāfe*-construction in West Middle Iranian; the use of a single pronoun (Arm. *ink'n*, Pth. *wxd* /wxad/) as intensifier, subject resumption marker, and switch-function marker; and the use of the complementiser (Arm. *(e)t'ē*, WMIr. *kw* /kū/) as a quotative marker even before *wh*-questions.

Next to uncovering more information about the potential syntactic influence of Iranian on Armenian, this study aims to provide an insight in the historical background and processes of language contact between Armenian and Iranian, explaining why Iranian influence resulted in this particular mix of lexical, morphological, and syntactic loans.

It is argued that the best explanation for the strong Iranian influence on Armenian is a superstrate shift. The originally Parthian-speaking ruling class over the course of a few generations became Armenian-speaking owing to a number of socio-historical events: the fall of the Parthian Empire in 224 CE and the ensuing relegation of Parthians to second rank in the Sasanian successor state; the Christianisation of Armenia in the early 4th century CE, which included the Parthian rulers; and the wars between Armenia and the Sasanian Empire resulting from territorial, political, and religious disputes. The Parthian rulers of Armenia adopted a new, Armenian identity and in switching to Armenian as their main language of communication, influenced that language on a number of levels.

In summary, this study aims to show that

- the construction of the Armenian periphrastic perfect is the result of the pattern replication of a Parthian model;
- a number of smaller syntactic patterns (relatives clauses, use of pronouns, use

of the complementiser) also show possible signs of Iranian influence;

- the extent of the Iranian, specifically Parthian, influence on Armenian is due to a superstrate shift of the Parthian-speaking ruling class in Armenia.

In order to provide the necessary data for the study of the Armenian periphrastic perfect, a corpus analysis of its usage in 5th-century historiographical texts has been conducted, which for the first time provides a detailed statistical analysis of the variations in the construction of the perfect. This corpus analysis brings to light diachronic syntactic trends which further illuminate the development of both the perfect and the *-eal* participle.

Among other things, it is shown that

- when used adjectivally, the participle is always passive-intransitive, which reflects its historical morphological make-up;

- the use of the participle as a perfect without a form of the copula is more common than its use with the copula;

- the participle in its perfect use without copula often bears striking resemblance to the use of converbs in other languages.

Accordingly, this study contributes not only a complete corpus analysis of the use of the past participle and the perfect in 5th-century Armenian texts, but also new, original insights into the linguistic contact between Armenian and Parthian, as well as a different, more cogent explanation of the construction of the Armenian periphrastic perfect.

1 Introduction & state of research[1]

Unlike many other Indo-European languages, the lexicon, derivational morphology, and even phraseology and syntax of Armenian are not solely a product of internal developments, but have undergone significant influence from Iranian languages over the course of several centuries of cultural and political domination, chief amongst which Northwest Iranian Parthian.

As a result of such a prolonged contact situation, and the often unfortunately scant evidence, it proves difficult to produce a definitive delineation of the various Iranian influences on Armenian with any certainty. The vast majority of research on Irano-Armenian contact has thus far dealt with phonological and lexical influence; to a lesser extent, morphological and phraseological aspects have been considered. This chapter endeavours to provide two things: firstly, a detailed overview of the *status quo* of research into Irano-Armenian contact without discussing in any depth specific issues that are deemed to have little immediate impact on the overall picture; and secondly, an assessment of what aspects of contact have not been studied sufficiently.

Prior to any consideration of linguistic material, the history of the relationship between the Armenian and Iranian peoples needs to be addressed briefly to provide a setting for their linguistic interactions; similarly, a brief history of scholarship will illuminate the course research has taken in the past, and point out directions for future scholarship.

Thereafter, the various stages of Irano-Armenian language contact are discussed

[1] This introductory chapter is based largely on a handbook chapter yet to appear (Meyer fthc.*a*). Whilst research concerned with Armeno-Iranian linguistic interactions has not been stagnant over the past thirty years, most publications have focused on etymological questions; no truly groundbreaking revelations have come to light since the excellent summary of Schmitt (1983). Much of the material to follow is therefore similar to previous accounts of the matter, but contains updated material and insights.

in their historical sequence, from Old Iranian, over early and late Parthian, Middle Persian, to Modern Persian loan processes; next to the lexicon, phonological correspondences and relative chronology make up the foci of each section. A separate but brief section is dedicated to the question of East Iranian loans and a putative third West Middle Iranian dialect.

Beyond the realm of lexicon and phonology, the relevance of Iranian for Armenian morphology and phraseology is discussed, followed by a short enquiry into the importance of Armenian for the study of Iranian languages (the so-called *Nebenüberlieferung*). The chapter continues by outlining the two fields within language contact studies which have been addressed the least in research to date: syntax and the sociohistorical and cultural circumstances and effects of Irano-Armenian contact.

With this in mind, the chapter ends in outlining the rest of this study, the main questions that will be discussed, and the expected outcomes.

1.1 Sketch of Irano-Armenian interactions

In ancient geographical tradition, the region called Armenia encompasses the territory which borders on the Caucasus Mountains in the north, the Taurus Mountains in the south, and is further delimited by Media Atropatene, the modern Azerbaijan, in the East and the upper Euphrates in the West.

This territory, held until at least the late 7th century BCE by the Kingdom of Urartu, came under Iranian influence first during the Median expansion of the late 7th and early 6th century BCE; while Greek historiography suggests Median rule in this region had been established only under Astyages (585–550 BCE),[2] other sources would have an earlier date of about 612 BCE.[3]

The first mention of Armenia in historical sources is found in the Behistun inscription of King Darius I (*c.* 550–486 BCE) dating to between 520 and 518 BCE; therein, *Armina* is listed as one of the territories under Darius' rule, and later as one of the

[2] Cf. Xenophon, *Cyropaedia* III.7; Strabo, *Geography* XI.3.5. The fact that the Urartian king Rusa IV supposedly ruled until 585 BCE may further substantiate a later date.

[3] Cf. Movsēs Xorenacʻi, *History of the Armenians* I.22.

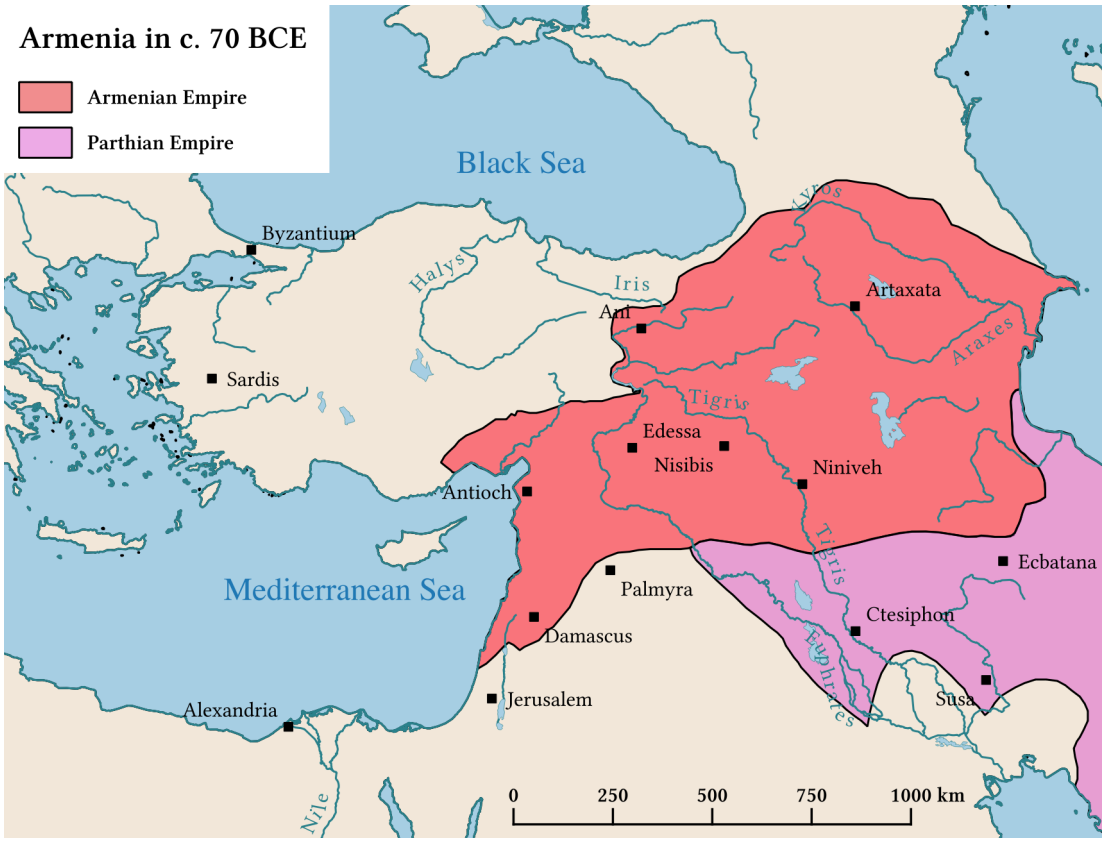

Figure 1.1 – *Simplified map of Armenia and surrounding area in c. 70 BCE, at its largest extent under Tigran II, the Great*

regions that unsuccessfully rebelled against him.[4] Part of the Achaemenid Empire throughout its existence, and subsequently of the Macedonian and Seleucid Empires, both Greater and Lesser Armenia, viz. Sophene, gained independence in 189 BCE under Artašes (Artaxias) and Zareh (Zariadres).[5] Under Tigran II, the Great, the two Armenian kingdoms would be united once more, further incorporating territories previously conceded to the Seleucids; the time of the Armenian Empire (83–69 BCE; see Figure 1.1)[6] was cut short by its defeat at the hands of the Romans during the Third Mithridatic War and Tigran's submission to Pompeius in 66 BCE.[7]

Although nominally a vassal state of Rome, the territory of Armenia and the loyalty of the local *naxarar*s was often divided between Roman and Parthian sympathies.

[4] Cf. DB I.15 and II.29ff.
[5] Cf. Strabo, *Geography* XI.14.15.
[6] The maps in Figures 1.1 and 1.2 are based on Mutafian and van Lauwe (2001:29, 37).
[7] Cf. Movsēs Xorenac'i, *History of the Armenians* II.15ff.

After some time as a Roman protectorate, the Parthian king Vologaeses I installed his younger brother Trdat I on the Armenian throne in 53 CE; this decision would later be ratified in the agreement of Rhandeia in 61 CE and the coronation of Trdat I by Emperor Nero in 66 CE. Henceforth, the Armenian king would be chosen from a minor line of the Parthian Arsacid, viz. Aršakunikʿ, dynasty and his appointment confirmed by Rome. It is under the Arsacids, who ruled Armenia until 428 CE,[8] that the Armenian language underwent the most intense Iranian influence; they remained in power even after the fall of the Parthian Empire and the succession of the Sasanians in 224 CE, and the Christianisation of the Armenians at the beginning of the 4th century. After certain territorial concessions to the East Roman Empire in the late 4th century (see Figure 1.2), and the conversion of the kingdom into a marzpanate in 428 CE, Armenia remained a part of the Sasanian Empire until its fall in 651 during the Arab invasion, after which Armenia was made a principality in 654.

Whilst political and cultural contact with the Iranians did not end then, the linguistic influence of Modern Persian on Armenian would be far more limited than that of earlier Iranian languages.

Although the relationship between the Armenian people and their Iranian overlords may have varied between full acceptance and outright hostility, it must be kept in mind that the Armenian ruling class was Iranian, either in origin or by marriage, since the Orontid dynasty under the Achaemenid Empire, as is betrayed *inter alia* by Armenian nobles' names.[9]

In this context and for the purpose of this study, it must finally be borne in mind that, owing to the kind of literary and linguistic sources available, only the language use and cultural identity of the upper strata of Irano-Armenian society can be investigated. The literary works from which most of the data and information is gleaned were written by, on behest of, and mainly for members of these strata. Accordingly,

[8] This rule was only briefly interrupted between 114–118 CE when the kingdom was integrated into the Roman Empire as a short-lived province under Trajan; cf. Cassius Dio, *Roman History* LXVIII.20.

[9] Cf. Garsoïan (1997*b*:46–7). The Iranian origin of names such as Artašir (cp. MP *'rtḥštr* /ardaxšīr/, a hypocoristic form of CIr. *arta-xšaθra- 'whose rule is order') and Trdat (cp. MP *tyldt* /tīrdād/, < CIr. *Tīra-dāta- 'given by Tīr') had already been recognised by Hübschmann (1897:28–9, 87–9); further cp. Gignoux (1986, supplement 2003:II/46, II/167).

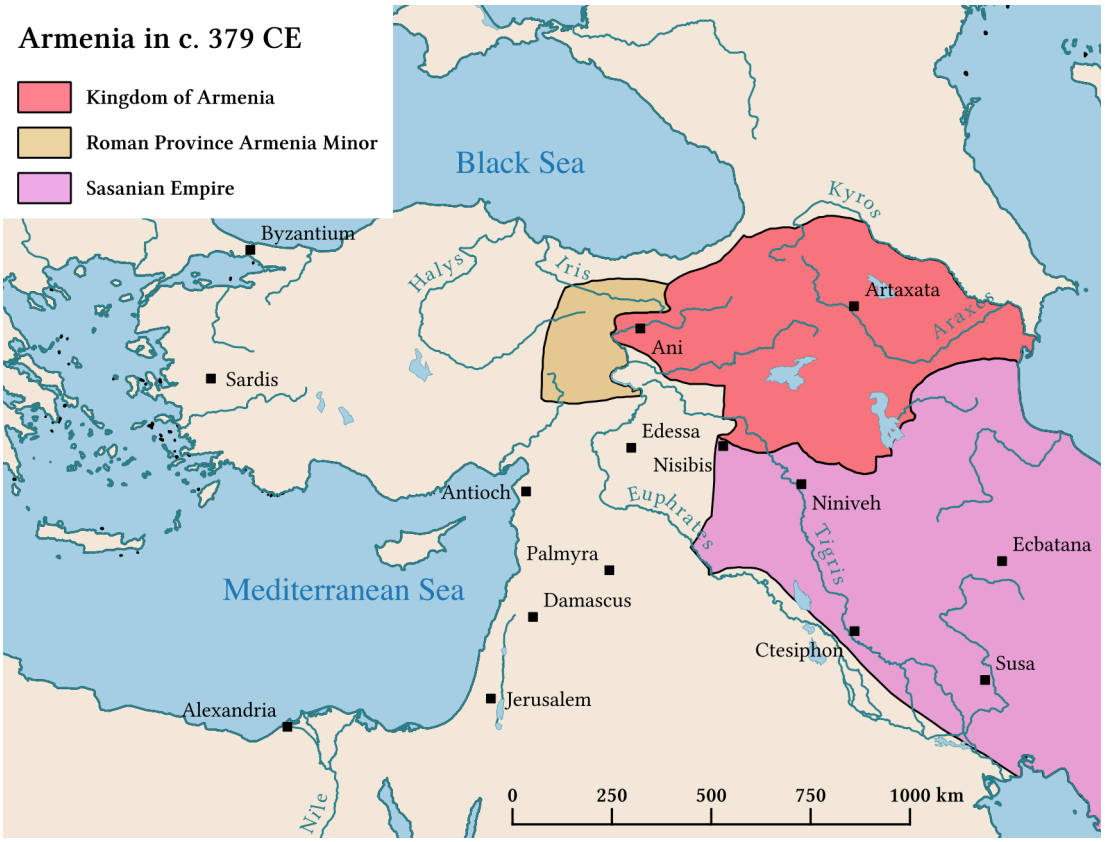

Figure 1.2 – *Simplified map of Armenia and surrounding area in c. 379 CE, at the death of the Sasanian King Šāhpuhr II*

it is impossible to determine to what extent the language of the majority of the Armenian population at the times in question would have resembled the particular register under investigation here.

1.2 Brief history of scholarship

The history of scholarship concerned with the relationship between Armenian and the Iranian languages is of singular importance for the understanding of the current *status quaestionis*, and will serve to direct future research.

For until Heinrich Hübschmann's seminal 1875 paper *Ueber die stellung des armenischen im kreise der indogermanischen sprachen*, the Armenian language had been thought to pertain to the Iranian group of Indo-European languages, as still asserted by Bopp (1857-61). Yet, it is of note that the 'Vater der modernen, wissenschaftlich be-

triebenen armenischen Sprachwissenschaft' (Bolognesi 1988*a*:561) was not the first to recognise that the Armenian lexicon was composed of multiple layers, including inheritance from Indo-European and many other strata of loanwords; in his 1711 treatise,[10] Johann Joachim Schröder successfully distinguishes a stratum consisting of 'Antiqua Parthica ab Arsacidis in Armeniam introducta vocabula, Persis etiam & Turcis communia' (1711:46) from lexical items 'ex vocibus ejus propriis' (cf. Bolognesi 1988*b*:563). Schröder's data are based on shared lexical items between Classical Armenian and Modern Persian; nonetheless, his attribution of said loans to the Northwest Iranian language Parthian and to Arsacid period coincides exactly with the later findings of Hübschmann.

After his proof that Armenian is indeed "ein eigener zweig des indogermanischen" (1875:38), Hübschmann went on to provide further material in his *Armenische Studien* (1883), in which are collected 232 words of pure Indo-European heritage; this project was later supplemented by the *Armenische Grammatik* (1897), discussing loanwords and names from Iranian, Syriac, and Greek, as well as *echtarmenische* words.

A pioneer in his field, Hübschmann's work suffered from a lack of Middle Iranian evidence that came to light only over the course of the 20th century and would allow for the differentiation of distinct loan sources of the Iranian material in Armenian.[11] Only the work of Meillet (1911–2) revealed the largely North and Southwest Middle Iranian, viz. Parthian and Middle Persian, origin of loanwords in Armenian; with the help of the publications of Friedrich W. K. Müller and Friedrich C. Andreas, Meillet established on the basis of phonetic differences between the two Middle Iranian languages that Parthian was the source of most loanwords.[12] The work of later scholars interested in Iranian and Armenian, most notable amongst whom are Émile Benveniste, Giancarlo Bolognesi, John A. C. Greppin, and Rüdiger Schmitt, has since sought to develop and refine the understanding of dialect stratification, time-

[10] Cf. Schröder (1711); for a longer discussion of this work, see Bolognesi (1988*a*). Hübschmann (1897:XII) acknowledges this work only briefly in the foreword to his *Armenische Grammatik*.

[11] As noted by Considine (1979:213), Hübschmann could not provide Middle Iranian evidence for more than 40 per cent of the lexicon thought to be of Iranian origin.

[12] Meillet (1911–2:245) compares, for example, Arm. *boyr* 'scent, smell' with Manichaean Parthian *bwd-*, found e.g. in *bwdyst'n* /bōδestān/ 'garden', cp. Arm. *burastan* 'id.'; the regular development of Parthian intervocalic -d- /δ/ to Arm. -r- cannot be explained on the basis of the Middle Persian forms, where historical intervocalic *-d- has yielded MP -*y*-, cp. MP *bwy* /bōy/ 'smell, scent'.

frame and context of language contact, and replicated material. Next to confirmations of Hübschmann's etymologies, much of 20th-century scholarship has been dedicated to the systematisation of Irano-Armenian loan processes, the addition to and rectification of Iranian etymologies for Armenian lexical items, as well as the expansion of scope to include both morphological items and syntactic calques; research into the latter is, however, still in its infancy.

1.3 Strata of Iranian lexical and phonological influence on Armenian

As is evident from even the briefest account of Armenian and Iranian shared history, the influence of the latter on the former has extended over more than a millennium, albeit ranging in degree and level of attestation from minimal to extensive.

According to the amount of data available, the source languages can be identified either more or less unequivocally, as is the case with Parthian, Middle and Modern Persian, or with lesser certainty, esp. as regards very early loans from Old Iranian language(s) and from East Iranian. The (potential) strata are here discussed individually in their likely chronological order; special attention will be paid to the type of lexical material that Armenian has borrowed, and the phonological peculiarities of such loans (if any).

1.3.1 Old Iranian

The evidence for Old Iranian words in Armenian is relatively scant; morphological and phonological peculiarities do, however, point to a pre-Middle Iranian, and thus most likely Achaemenid Old Persian origin for a small number of lexical items.

Attested in OP *ariya-*, Av. *airiia-* 'Aryan', this self-designation of the Iranians conspicuously has been borrowed into Armenian twice, first as *Arik'* and later as *Eran*.[13] Owing to its gen. pl. *Areac'*, an *-ea-* stem like *teł*, *tełeac'* 'place', the former is deemed

[13] The form Arm. *Eran* derives from inscriptional MP *'yr'n* /Ērān/; inscriptional Pth. *'ry'n* /Aryān/ cannot be the basis for Arm. *Arik'*.

to be a reflex of the Old Persian form, where Arm. *-ea-* reflects the Iranian *-ya-* stem.[14] A similar age is envisaged for Arm. *t'šnami* 'enemy, hostile', cp. Av. *dušmainiiu-* 'id.'.[15]

The culturally significant term Arm. *partēz* 'garden, park; paradise' is of particular interest for relative chronology; if indeed borrowed in Achaemenid times, the word must have undergone an inner-Armenian sound-change *-d-> *-t-* (cp. Av. *pairidaēza-* 'fenced area', Gk. παράδεισος), but clearly not *p- > *p'- / h- / Ø*.[16]

Whilst these few loans from Old Persian are relatively secure, suggestions concerning (Middle) Median material in Armenian are largely unfounded, since knowledge of this language is restricted to a severely limited set of forms attested largely in Old Persian.[17] The Armenian name of the Iberian king *P'arṙnawaz*, which Frye (1969) takes as a remnant from imperial Median, corresponds far more closely to the Greek Φαρνάβαζος than a hypothetical Median form *farnah-.[18] Other attempts at demonstrating a distinctly Median stratum in Armenian are of similarly limited success: on the basis of the name *'ḫštrsrt* /Axšahrsart/, cp. Arm. *ašxarh* 'land; country', Av. *xšaθra-* 'rule, power', Périkhanian (1966) suggests that the prothetic vowel *a-* is an indicator of Middle Median origin, as found also in *ašxet* 'reddish, chestnut-coloured', cp. Av. *xšaēta-* 'radiant'. Schmitt expresses his doubts about this analysis owing to the poor evidence.[19]

[14] Cf. Meillet (1911–2:249–50), Schmitt (1983:77), de Lamberterie (1989).

[15] Cf. Schmitt (1980:422–3) concerning the derivation of *t'šnami* through nasal metathesis and assimilation, and its meaning for the history of the Armenian accent.

[16] Cf. de Lamberterie (1978:246–50) who further advocates a derivation of Arm. *arcat'* 'money, silver' from Iranian *ɣdzata- at about the same time as the loan of *partēz*; this suggests that the phonological development of the dental series (*d > Arm. *t*, *t > Arm. *t'*) occurred after that of the labials. Schmitt (1983:77 n. 9) remains skeptical of the early loans suggested by de Lamberterie, but mentions Arm. *gušak* 'informer, denouncer' (cp. OP *gaušaka- 'id.', preserved in Aram. *gwšk*).

[17] Such Medisms include OP *vazṛka* 'great' and *xšāyaθiya* 'king', where the expected outcome of Southwest Iranian Old Persian should be *vadṛka and *xšāyašiya. Mayrhofer (1968:22) points out that apart from certain phonological differences, Median and Old Persian were likely very close to one another; mutual intelligibility may have prevented the transmission of Median as a discrete language.

[18] Cf. Movsēs Xorenac'i, *History of the Armenians* I.22 for an Armenian attestation; Thucydides, *Histories* VIII.80ff. for Greek occurrences; and Frye (1969:84–5) refuted by Schmitt (1983:78).

[19] Cf. Périkhanian (1966:23–6). Another such case can be made for Armenian names such as *Šawasp* and *Šawarš*, cp. Av. *Siiāuāspi-* and *Siiāuuaršan-*; the fricative realization of *šaw-* 'black' contrasts with the standard sibilant in Arm. *seaw* 'black', cp. Av. *siiāuua-* 'id.' and Manichaean Pth. *sy'w* /syāw/ 'id.'; while Bolognesi (1960:24) argues for an isolated Southwest Iranian origin, and Benveniste (1964:3) for an North-Eastern derivation, Périkhanian (1968:24–5) maintains a Middle Median interpretation. Mayrhofer (1968:12) follows Gershevitch (1964) in assuming

While replication of lexical material from the Old Iranian languages did occur, it was severely limited in its extent and of little overall significance, presumably because Iranian influence at the time of interaction was far more limited than at later stages; the lack of Median data makes any assertions in relation to that language speculative. There is, however, some evidence for a third West Middle Iranian dialect which has had some influence on Armenian, and may be related to Median.[20]

1.3.2 Parthian

Of all languages that have exerted influence on Armenian over time, that of Parthian is indubitably the most significant, both in terms of quantity of loan material as well as quality, viz. types of loans; in view of the almost 400 years that Armenia was under immediate Parthian rule, this is hardly surprising.

After a brief layout of the common core of sound correspondences between all Parthian loans in Armenian follows an account of a small set of features, allowing for a binary stratification of these loans into an early and late period (cf. Bolognesi 1951). Finally, owing to the nature of the contact between Armenian and Parthian, a consideration of the word classes affected is called for. Morphological and phraseological influences will be discussed separately below, see 1.4.

1.3.2.1 Phonological correspondences and developments

Schmitt (1983:80–1, 96–7) provides very useful tables delineating both the dialectal differences between Northwest Parthian and Southwest Middle Persian forms, and the correspondence of Armenian and Parthian sounds. As a result of the different phonemic inventories of both languages, this correspondence is not biunique, but reasonably straightforward nonetheless. With the exception of *c*, *č‘*, *c‘*, and *l* all Armenian sounds have at least one correspondence in Parthian, e.g. Arm. *b* < Pth.

an Old Persian dialectal differentiation as the origin of this fricative, without however specifying the nature or origin of these dialects.

[20] This is exemplified well by the question of Arm. *-nj-* clusters, e.g. in *ganj* ‘treasure’, which cannot immediately relate to Manichaean Pth. *gzn* /gazn/ ‘id.’. Manichaean MP *gnz* /ganz/ (whence NP *ganj*) must be related to a Median form *ganza-* in Old Persian, whence may be derived the Armenian form; evidence for other loans containing this cluster (e.g. *brinj* ‘rice’, *płinj* ‘bronze’) is scant, however, and thus renders a secure dating of the loan impossible; cf. Henning (1963).

b.[21] Where Armenian does not have a sound corresponding to that of Parthian, it is merged with a close approximation, so for example Arm. *g* < Pth. *g*, *γ*.

Table 1.1 below provides examples[22] of and, where necessary, brief commentaries on the correspondences between consonant sounds.

Arm.	Pth.	Examples
b	*b*	Arm. *band* 'prison' < WMIr. *bnd* /band/; Arm. *baž* 'tax, levy' < Pth. *b'z* /bāz/; Arm. *biwr* '10,000' < WMIr. *bywr* /bēwar/
g	*g, γ*	Arm. *gund* 'troops' < WMIr. *gwnd* /gund/; Arm. *marg* 'meadow' < Pth. *mrg* /marɣ/; Arm. *črag* 'candle, light' < WMIr. *cr'g* /čarāɣ/
d	*d*	Arm. *dēpk'* 'accident, fate' < WMIr. *dyb* /dēb/; Arm. *drawš* 'banner, flag' < WMIr. *drfš* /drafš/; Arm. *azd* 'sensation, advice' < WMIr. *'zd* /azd/ 'known'
z	*z*	Arm. *zawr* 'army' < Pth. *z'wr* /zāwar/ 'force, might'; Arm. *bazmim* 'to sit down (to dinner)' < WMIr. *bzm* /bazm/ 'meal, feast'
t'	*t*[23]	Arm. *tawt'* 'heat' < Pth. *tft* /taft/ 'burning hot'
ž	*ž*[24]	Arm. *žir* 'active, busy' < Pth. *jyr* /žīr/; Arm. *žamanak* 'time' < Pth. *jm'n* /žamān/; Arm. *aržan* 'worthy, proper' < Pth. *'rj'n* /aržān/
x	*x, xw*	Arm. *xrat* 'wisdom, reason' < WMIr. *xrd* /xrad/; Arm. *xoyr* 'headgear, diadem' < Pth. *xwwd* /xōδ/ 'helmet'

[21] No loans from Parthian could be found where Pth. *l* is rendered as Arm. *l*; instead, Arm. *ł* appears to be preferred.

[22] The examples given below are drawn from the font of securely attested Parthian forms; some elements reconstructed on the basis of the *Nebenüberlieferung* are discussed below, 1.5. Some of the forms listed as potential reconstructions in Schmitt (1983) have since been attested (cf. e.g. Durkin-Meisterernst 2004).

[23] Parthian loans containing the aspirated dental *t'* are rare; its aspiration may be secondarily effected by its environment. In the majority of instances, t' is indicative of loans from Middle Persian; cf. Pisowicz (1986, 1987).

[24] For the question of alternative spellings with ǰ and phonological considerations, see Korn (2010); Durkin-Meisterernst (2014:90–7).

Arm.	Pth.	Examples
k	*k*	Arm. *patker* 'image' < WMIr. *ptkr* /patkar/; Arm. *kam* 'wish, will' < WMIr. *k'm* /kām/; Arm. *bžišk* 'doctor, physician' < WMIr. *bzyšk* /bizešk/
h	*h, f*	Arm. *pah* 'guard' < WMIr. *p'hr* /pāhr/; Arm. *hazar* '1,000' < WMIr. *hz'r* /hazār/; Arm. *hreštak* 'angel, messenger' < Pth. *fryštg* /frēštag/
j	*z* (after n, r)	Arm. *ganj* 'treasure', cp. MP *gnz* /ganz/, Pth. *gzn* /gazn/ (and fn. 20 above); Arm. *brinj* 'rice', cp. MP *brynz* /brinz/
ł	*l*	Arm. *sałar* 'general in chief' < WMIr. *s'l'r* /sālār/; Arm. *taławar* 'tent' < Pth. *tlw'r* /talawār/
č	*č*	Arm. *čarak* 'meadow, nourishment' < WMIr. *crg* /čarag/;[25] Arm. *tačar* 'temple' < Pth. *tcr* /tažar/
m	*m*	Arm. *hraman* 'command' < WMIr. *frm'n* /framān/; Arm. *murhak* '(sealed) deed' < Pth. *mwhrg* /muhrag/
y	*y*	Arm. *yawēt* 'always' < Pth. *y'wyd* /yāwēd/; Arm. *hramayem* 'to command' < WMIr. *frm'y-* /framāy-/
n	*n*	Arm. *nizak* 'spear' < WMIr. *nyzg* /nēzag/; Arm. *zēn* 'weapon, armour' < WMIr. *zyn* /zēn/
š	*š*	Arm. *dašt* 'field, plain' < WMIr. *dšt* /dašt/; Arm. *anoyš* 'sweet, fragrant' < WMIr. *'nwšyn* /anōšēn/
p	*p*	Arm. *aparank'* 'house, palace' < Pth. *'pdn* /apaδan/; Arm. *psak* 'crown' < WMIr. *pwsg* /pusag/ 'garland'
ǰ	*ǰ*	Arm. *aspnǰakan* 'hospitable; host' < Pth. *'spynj* /ispinǰ/, MP *'spnc* /aspinǰ/

[25] The unvoiced consonants *p, t, k* undergo voicing to *b, d, g* in intervocalic and postvocalic position in West Middle Iranian (Durkin-Meisterernst 2014:87); this is either undone by Armenian, or only occurred after the loans into Armenian were completed. The former option may be more likely in view of the fact that the Parthian voiced consonants *b, d, g* develop to fricatives or approximants *β, δ, γ* in the same position, and are partly reflected as such (e.g. Pth. *δ* > Arm. *r*; *pace* Schmitt 1983:98); whether these non-occlusive sounds have obtained phonemic status or are simply allophones is debated (cf. Durkin-Meisterernst 2014:87–90).

Arm.	Pth.	Examples
ṙ	*r, rr*	Arm. *aṙat* ‘abundant, generous’ < WMIr. *r’d* /rād/; Arm. *p‘aṙk‘* ‘glory’ < WMIr. *frn̲* /farrah/; Arm. *ṙot* ‘river’ < WMIr. *rwd* /rōd/
s	*s*	Arm. *seaw* ‘black’ < Pth. *sy’w* /syāw/; Arm. *aspar* ‘shield’ < WMIr. *‘spr* /ispar/; Arm. *aspet* ‘knight’ < WMIr. *’sppt* /asppat/
v	*w, b*	Arm. *hrovartak* ‘edict, decree’ < WMIr. *frwrdg* /frawardag/; Arm. *varagoyr* ‘curtain, veil’ < Pth. *bryẉd* /baryōδ/
t	*t, d*	Arm. *paterazm* ‘battle, war’ < Pth. *p’tlcm* /pādrazm/; Arm. *patmučan* ‘garment’ < Pth. *pdmwcn* /padmōžan/; Arm. *tēg* ‘spear(head)’ < Pth. *tyg* /tēγ/
r	*r, δ*	Arm. *hramatar* ‘ruler’, cp. WMIr. *frm’nd’r* /framāndār/; Arm. *burastan* ‘garden, orchard’ < Pth. *bwdyst’n* /bōδestān/
w	*w, β, f*	Arm. *awrēnk‘* ‘custom, law’ < Pth. *’bdyn* /aβδēn/; Arm. *awar* ‘loot’ < Pth. *’w’r* /āwār/; Arm. *tawt‘* ‘heat’ < Pth. *tft* /taft/ ‘burning hot’
p‘	*f, p*	Arm. *p‘owt* ‘rottenness; foul, spoiled’ < Pth. *pwd* /pūd/ ‘decay’; Arm. *p‘aṙk‘* ‘glory’ < WMIr. *frn̲* /farrah/
k‘	*k*	Arm. *k‘ēn* ‘hate, enmity’ < WMIr. *kyn* /kēn/; Arm. *k‘anduk* ‘jar, vessel for corn’ < Pth. *kndwg* /kandūg/

Table 1.1 – *Phonological correspondences between Armenian and Parthian consonants*

While a large number of the Armenian sounds above occur in both the inherited lexicon and in Iranian loanwords, some consonants and consonant clusters are indicative of non-indigenous material; these include Arm. *p* and *č*, and in many instances *š*, *ž*, and *x*.[26] Similarly symptomatic are the clusters Arm. *hr* <WMIr. *fr*, and with

[26] Arm. *p* can derive from PIE *b (e.g. Arm. *əmpem* ‘to drink’ < PIE *pi-ph$_3$- with analogical nasal infix (cf. Martirosyan 2010:277–8), but the latter sound is rare in Indo-European; some lemmata suggest that PIE *p may result in Arm. *p* in consonant clusters, e.g. Arm. *aṙaspel* ‘myth, fable’, cp. *spel-, Goth. *spill* ‘fable’, OE *spell* (cf. Beekes *apud* Kortlandt 2003:197). Arm. š occurs in

Arm.	Pth.	Examples
a	*a, ā*	Arm. *azat* 'free, noble' < WMIr. *'z'd* /āzād/; Arm. *marz* 'border, province' < WMIr. *mrz* /marz/
e	*e*	Arm. *pet* 'chief, head' < WMIr. *-byd* /-bed/
i	*i, ī*	Arm. *dpir* 'scribe' < WMIr. *d(y)byr* /dibīr/; Arm. *Mihr* 'Mihr, sun god' < WMIr. *myhr* /mihr/
ea	*ya, yā*	Arm. *seaw* 'black' < Pth. *syāw*
u	*u, ū*	Arm. *bun* 'root, origin' < WMIr. *bwn* /bun/; Arm. *bazuk* 'arm' < WMIr. *b'zwg* /bāzūg/

Table 1.2 – *Phonological correspondences between Armenian and Parthian vowels*

metathesis[27] Arm. *šx* and *rh* < WMIr. *xš* and *hr*.[28]

A somewhat more complex correspondence scheme emerges from the consideration of vowels. In a few instances, Armenian creates prothetic vowels (*a-*, *e-*, or *i-*) in loanwords with complex onsets, such as WMIr. *xš*, but also before WMIr. *r*, which have no correspondence in the Iranian source language;[29] this prothesis presumably reflects a phonotactic constraint against such onsets.

A further complication is added by the application of ablaut conditioned by word-final stress in Armenian, not infrequently resulting in loss of vowels in pre-tonic syllables. The pattern of regular correspondence in tonic syllables applicable to all stages of contact with Parthian is described in Table 1.2.

In pre-tonic environments, the *a*-correspondence remains unaffected. WMIr. *i*, *u*, however, may be represented in Armenian by *ə* or *Ø* (e.g. *dpir* above; Arm. *vzurk* 'great' < WMIr. *wzrg* /wuzurg/), whereas pre-tonic WMIr. *e* results in Arm. *i* (Arm.

some inherited words such as *šun* 'dog' < PIE **ḱu̯ōn*, cp. Gk. κύων. These and the other sounds mentioned are, however, only sparsely attested in Indo-European heritage words.

[27] While clusters of occlusive and *r of Indo-European pedigree regularly undergo metathesis in Armenian (e.g. PIE *bhréh$_2$tēr > Arm. *ełbayr* 'brother'), words of Iranian origin do not undergo this change, thus Arm. *draxt* 'garden, paradise' < WMIr. *drxt* /draxt/ 'tree'.

[28] Cp. Arm. *ašxarh* 'land, world' and WMIr. *šhr* /šahr/, Av. *xšaθra-* 'rule, power'; the cluster Ir. *xš is not always simplified in West Middle Iranian as *š*, cp. Arm. *ašxat* 'trouble, labour' and Pth. *'xš'dyft* /ašxādīft/ 'wretchedness'. The retention of these clusters may point to an early, possibly pre-Middle Iranian age of such loanwords. By contrast, the correspondence of WMIr. *fr* with Arm. *hr* likely reflects dialectal variation or actual pronunciation at the time of borrowing, since the *hr* variant occurs also in Middle Persian, e.g. *hrystg* /hrēstag/ 'messenger' (cp. Arm. *hreštak*), and as a loanword in Aram. *hrmn'* 'command' (cp. Arm. *hraman*).

[29] For prothetic vowels before *r*, see 1.3.2.2. Prothesis with *i-* is less common than that with *a-* or *e-*; no conditioning factors for the choice between the three options have as yet been discovered (cf. e.g. Greppin 1982). Périkhanian (1966) holds *a-* prothesis to be a sign of very early loans.

nizak ‘spear’ < WMIr. *nyzg* /nēzag/).

Furhtermore, the following consonant clusters are characteristic of Parthian loans: *-zd, -zm, -xt, -nd, -nj, -šx, -šk, -št, -sp, -st, -rd, -rz, -rk, -rh, -rt.*[30]

1.3.2.2 Stratal differentiation

Next to the correspondences delineated above, a great number of which also apply to loans from Middle Persian, it is possible to differentiate two chronological strata[31] in the material modelled on Parthian as was demonstrated clearly by Bolognesi (1951). Table 1.2 above does not make reference to the treatment of WMIr. *ē* and *ō* (< Ir. *ai and *au, respectively) in Armenian, since their outcomes are at the core of said differentiation.

One set of loans show a correspondence Pth. *ō, ē* Arm. *oy, ē* (tonic) and *u, i* (pre-tonic): Arm. *boyž* ‘cure, remedy’, *bužem* ‘to cure, heal’< Pth. *bwj-* /bōž-/ ‘to save, redeem’; Arm. *dēmk‘* ‘face’ < WMIr. *dym* /dēm/, Arm. *spitak* ‘white’, cp. Pth. *‘spyd* / ispēd/, MP *spyt* /spēd/. As both sounds undergo ablaut alternation within Armenian (*dēmk‘*, gen. *dimac‘*), and coincide with the outcome of the PIE diphthongs *eu̯, *ou̯ > PArm. *ou > Arm. *oy* and *oi̯, *ei̯ > PArm. *ei> Arm. *ē*, the Parthian loans in question must date to a time where Pth. *ō, ē* were still true diphthongs and close to the Proto-Armenian stage described.

The second set of loans, by contrast, yields Arm. *o, e* < Pth. *ō, ē*, and shows no differentiation between tonic or pre-tonic position: Arm. *den*, gen. *deni* ‘religion, faith’ < Pth. *dyn* /dēn/, Arm. *hreštak* ‘angel, messenger’ < Pth. *fryštg* /frēštag/; Arm. *ṙot* ‘river’ < WMIr. *rwd* /rōd/, Arm. *tohm* ‘family, seed’, cp. Pth. *twxm* /tōxm/, MP *twhm* /tōhm/. These developments suggest that at the time these words were replicated in Armenian, ablaut alternation was no longer productive, and the former

[30] Cp. for example Arm. *azd* ‘sensation, advice’, *uxt* ‘covenant’, *band* ‘prison’, *dašt* ‘field’, *asp-* ‘horse-’, *vard* ‘rose’, *marz* ‘region, border’, *parh* ‘guard’, ašakert ‘student, disciple’. While most of these endings are common to both Parthian and Middle Persian, the following, amongst others, are indicative of an originally Parthian word: *-rd* (MP *-l*, cp. MP *gwl* /gul/ ‘flower’), *-nd* (MP *-nn*, cp. MP *bn* /bann/ ‘prison’), *-sp* (MP *-s*, cp. MP *’sw’r* /aswār/ ‘horseman, rider’), *-rh* (MP *-s*, cp. MP *p’s* /pās/ ‘guard’).

[31] Bolognesi’s choice of the terms ‘paleopartico’ and ‘neopartico’ for these two strata is unfortunate in that it suggests clearly differentiated stages of the language rather than a fluid development (1951:162).

Parthian diphthongs had completely monophthongised.[32]

This stratal differentiation finds further expression in the rendition of Pth. *r-* in Armenian. While the chronologically earlier layer of borrowings shows prothetic vowels prepended to *r-*, the later layer uses Arm. *ṙ-* instead: Arm. *eram* 'troop, flock' < WMIr. *rm* /ram/ 'flock; Manichaean community'; Arm. *ṙazm* 'fight, battle' < WMIr. *rzm* /razm/.[33] Table 1.3 summarises these findings.

Arm. (early loans)	Arm. (later loans)	Pth.
oý, u	*o*	*w* /ō/
é, i	*e*	*y* /ē/
er-	*ṙ-*	*r-* /r-/

Table 1.3 – *Stratal differentiation of loans from Parthian*

A more than relative dating of the differences between layers of loanwords is, unfortunately, impossible owing to the lack of continuous evidence from Parthian and its imprecise writing system. Bolognesi's (1960) assertion that both strata date to the Arsacid period is corroborated by the lexical nature of the loans; an earlier import cannot be excluded in principle, but is unlikely for the very same reason.

1.3.2.3 Types of lexical material

The features that make Parthian loanwords in Armenian standout are their categorical pervasiveness and general abundance;[34] Parthian material is not restricted to any part of the lexicon, or indeed any one grammatical category, but is found across the spectrum in both the basic lexicon (items concerning nature, body parts, abstract vocabulary of everyday life, *etc.*) and in more specialised segments (e.g. martial and

[32] In a few instances, mixed (or possibly transitional) forms can be observed, in which Pth. *ē* is still rendered as Arm. *ē*, but shows an ablaut variant Arm. *e* (as opposed to *i*). These include the names *Šahēn*, *Karēn*, and *Surēn* (gen. *-eni*) and Arm. *yawēž* 'eternal, immortal' (gen. *yaweži*), cp. Pth. *y'wyd* /yāwēd/. On the issue of Arm. *e* and *ē* in Armenian manuscripts, cf. Weitenberg (2014:217–221)

[33] Contrary to Bolognesi's belief (1951:158), Meillet's proposal (1936:46) concerning prothetic vowels in, e.g., Arm. *erek* 'evening', cp. Skt. *rájas* 'dust, mist', Gk. ἔρεβος 'darkness (of the underworld)' is likely amiss. Word-initial laryngeals explain these 'prothetic' vowels more neatly; thus Arm. *erek* < PIE *$h_1$regw-e/os- (cf. Martirosyan 2010:259–61).

[34] Belardi (2003*a*:98–102), based on the material in Hübschmann (1897), has calculated that 35 per cent of the material contained therein is of Middle Iranian origin (with another 9 per cent of Modern Iranian provenance), whereas only 22 per cent are *echtarmenisch*; while these figures are likely imprecise given the more recent corrections to Hübschmann's work, they are still indicative of the general composition of the Armenian lexicon.

technical vocabulary), in both of which they may occur as nouns, adjectives, adverbs, verbs, even invading closed classes such as prepositions and numbers.[35]

Examples of such unusual borrowings are few in number, but significant nonetheless. The preposition Arm. *vasn* 'on account of, because of', for instance, has its origin in a form related to Pth. *wsn'd* /wasnāδ/, MP *wšn* /wašn/, OP *vašnā* 'by grace of', although it formally corresponds to none of the above fully; Szemerényi (1966) suggests that the original Parthian form was *wasn, which was contaminated by Pth. *r'd* /rāδ/ 'for, owing to' to *wsn'd* /wasnāδ/. For numbers, the evidence is even clearer: Arm. *hazar* '1,000' < WMIr. *hz'r* /hazār/ and Arm. *biwr* '10,000'< WMIr. *bywr* /bēwar/ are exact matches.[36]

Since Hübschmann's (1897) work, there has as yet been no comprehensive study or lexicon that discusses the entirety of Parthian or generally Iranian lexical items borrowed into Armenian; some efforts in this direction have been made in Schmitt (1983), which contains a thematically grouped list of some common loanwords, and in Gippert (1993), discussing Iranian loans common to Georgian and Armenian at some length.[37] Instead, research in the latter half of the 20th century focused on supplementing, specifying, or correcting the compendium provided by Hübschmann in smaller contributions, often etymological studies of a small set of words.[38]

In a few extreme cases, single words, such as Arm. *napastak* 'hare', have received extensive attention. As the suffix *-ak* and the consonant *p* would suggest, the word is likely of Iranian origin, possibly from Pth. *ni-pasta-ka 'the one who hides, nests', and

[35] Although adjectives are less commonly borrowed than nouns and verbs, Armenian shows a significant number of Iranian adjectives, esp. those referring to colour: Arm. *seaw* 'black' < Pth. *sy'w* /syāw/, Arm. *spitak* 'white', cp. Pth. *'spyd* /ispēd/, MP *spyt* /spēd/. The borrowing of adjectives, and the invasion of closed classes demonstrate the intensity of the Irano-Armenian linguistic relationship; cf. e.g. Thomason and Kaufman (1988:74–5).

[36] The etymology of Arm. *hariwr* '100' is far less secure; while an Iranian loan cannot be excluded, the derivation suggested by Bailey (1987) cannot hold for phonological reasons.

[37] For Irano-Armenian onomastics, cf. Hübschmann (1897), Ačaṙean (1942–62), Nalbandyan (1971), and Schmitt (1984), the latter of which rightly points out that a distinction between Iranian names used for Iranians (e.g. Arsacid or Sasanian kings), and those that have found their way into the Armenian language needs to be made.

[38] Some examples of such augmentations and corrections are given by Bolognesi (1991); Arm. *k'rk'um* 'saffron', initially thought to reflect Syr. *kurkəmā*, is clearly a better fit for the WMIr. *kwlkwm* /kurkum/, a form unknown to Hübschmann. Similarly, the supposed Syriac loanword Arm. k'nar 'lyre' < Syr. *kennārā*, is more likely to be derived immediately from WMIr. *kwn'r* /kunār/ with regular loss of pre-tonic *u*; cf. also Bolognesi (1984, 1990*a*,*b*,*c*); Greppin (1993).

by extension 'fearful' (Périkhanian 1982).[39] The question is complicated, however, by the existence of dialectal forms with different consonantism: *alapaztrak* and *lapastak* already in Vardan Aygekc'i (12th–13th century CE), and further *lapəstrak* in the Van region, *ələbastrak* in Karabagh, *etc.* The *n*/*l*-alternation and *r*-epenthesis are recurring features of Armenian dialects, but raise the question of evidentiary primacy: which forms are original? Bailey (1989), for instance, regards the *l*-forms as primary, arguing for an adjectival derivation in *-e/os-to- related to Pth. *lb* /laβ/ 'lip; hanging organ', nominalised with *-ka.[40] Yet another reconstruction suggests a connection to Iran. *tak- 'to run', without, however, providing a precise etymology (cf. Considine 1984).

While the sheer number of Parthian loans in Armenian is immensely important both for the understanding of its linguistic relationship with that language, and by extension the relationship between Armenians and Parthians, and often serves as a guideline for the reconstruction of otherwise unattested Middle Iranian forms, the recognition of Iranian loans and the establishment of correct etymologies rely heavily on comparative evidence from other, largely Iranian, languages; unfortunately, such parallels are wanting in a significant number of cases.

1.3.3 Middle Persian

Direct, extended contact between Armenian and Middle Persian, going beyond interactions resulting from trade relationships, are likely to have commenced only with the fall of the Parthian Empire and the take-over of the Sasanians, but most probably only began properly with the integration of Armenia into the Sasanian Empire as a marzpanate.

Loanwords from Middle Persian are therefore much more restricted in scope, per-

[39] Périkhanian (1982) assumes a root *pad- 'to fall or *pat- 'to fly' with a prefix *ni-; her argument and the semantic development of the word are based on the assumption that the word for 'hare' was taboo, thus receiving a *Deckname*. Although phonologically plausible, the lack of comparative evidence for the connection of this root and 'hare' means that the reconstruction must remain speculative (cf. Considine 1984:55), esp. in view of other Iranian words for the same concept (cp. MP *hlgwš* /xargōš/, NP *xarguš*).

[40] Although a greater variety of *l*-forms exists in the dialects, their late attestation and other evidence of such *n*/*l*-alternations (cf. Martirosyan 2010:508–9, 734) speak against reconstructions based on these forms.

taining only to a limited number of lexical fields; between Parthian and Middle Persian loans there is, as Bolognesi summarises,

> una differenza qualitativa fondamentale …: [i prestiti medio-persiani] sono essenzialmente costituiti da nomi di professioni e di monete, titoli onorifici, nomi di mesi, di luoghi e di persone, termini tecnici insomma. (1980:33)[41]

They do not show the same categorical diffusion as their Parthian counterparts in only yielding nominal loans. Most borrowings are found in military and administrative terminology; [42] examples of these include: *šah* and *šahanšah* '(high) king' < MP *š'h* /šāh/; Arm. *marzpan* 'governor' < MP *mrzb'n* /marzbān/; Arm. *payman* 'condition, state' < MP *pym'n* /paymān/; Arm. *p'uštipan* 'defender, bodyguard' < MP *pwštb'n* /puštbān/ (cp. an earlier loan, potentially from Parthian, Arm. *paštpan*); Arm. *tohm* 'family, tribe' < MP *twhm* /tōhm/ (cp. Pth. *twxm* /tōxm/).[43]

Middle Persian loans can further be differentiated from those of Parthian origin by means of diverging phonological developments, which are particular to Southwest Iranian languages;[44] the most important of them are illustrated in Table 1.4.[45]

Further to these differences, there are a number of *Doppelentlehnungen*,[46] words which have been borrowed from both Parthian and Middle Persian at different stages; they include, for example, the above-mentioned Arm. *sparapet* (< Pth.) and *spayapet* (< MP), as well as Arm. *mogpet* (< Pth. *mgpyt* /maɣbed/) and *movpet* (< MP). As in the case of Arm. *kušt* 'flank, side, belly' and *k'ust* 'region', cp. MP *kwstg* /kustag/, a differentiation of such terms lies both in their specific meaning and in their respective

[41] Bolognesi goes on to point out that such borrowings are frequently either *hapax legomena* or otherwise restricted to specific authors, and are not productive in Armenian, as opposed to their Parthian counterparts.

[42] Particularly frequent are loans regarding administrative or military ranks and positions; cf. Benveniste (1961); Gignoux (1985–8).

[43] The case of Arm. *tohm* is curious, since Parthian and Old Iranian forms of the word are attested, cf. OP *taumā-*, Av. *taoxman-*, but do not fit phonologically. This raises the question whether the lemma was newly introduced by Middle Persian, or a previously borrowed form replaced by the Middle Persian variant.

[44] It must be noted, however, that some Middle Persian forms may have found their way into Armenian through the mediation of Parthian, since both languages were in contact and borrowings in both directions are well attested. Such is the case with Arm. *dast-* < MP *dst* /dast/, where a *z-*anlaut in Parthian would be expected.

[45] For a fuller account, cf. Bolognesi (1960).

[46] Schmitt (1983:81) also mentions the pair Arm. *zawr* and *zōr* 'army', suggesting that they relate to the different Iranian words, Pth. *z'wr* /zāwar/ and MP *zwr* /zōr/; given the general tendency for monophthongisation of Arm. *aw* > *ō*, this feature may well be an inner-Armenian development.

SWIr. (MP)	NWIr. (Pth.)	Arm.
h	*s*	*akah* 'knowledgeable' < MP *'g'h* /āgāh/ (Pth. *'gs* /āgas/)
d	*z*	*dastak* 'wrist, palm', cp. MP *dst* /dast/ (Av. *zasta-*)
y	*δ*	*spayapet* 'general-in-chief', cp. Arm. *sparapet* (Av. *spāda-* 'army')
l	*rd*	*sałar* 'leader' < MP *s'l'r* /sālār/ (cp. Pth. *srd'r* /sardār/)
d	*b*	*darapan* 'porter', cp. MP *dr* /dar/ (cp. Arm. *barapan* < Pth. *brb'n* /barbān/)
s	*sp*	*sah* 'army', cp. Av. *spāda-*

Table 1.4 – *Phonological differences between Parthian and Middle Persian loans*

productivity and frequency: while *kušt* is attested already in the 5th-century Bible translation and in Agat'angełos, *k'ust* only occurs infrequently in the *Ašxarhac'oyc'* of Anania Širakac'i (7th century).[47]

This example also illustrates another indication that an Armenian loanword is of Middle Persian heritage. According to Pisowicz (1986, 1987), Middle Persian unvoiced stops could be rendered as Armenian unvoiced, aspirated stops (as opposed to the expected unaspirated outcome) already in the 5th century; cp. e.g. Arm. *t'ošak* 'provision, pay' < MP *twšg* /tōšag/;[48] this correspondence would later also apply to loans from Modern Persian.[49]

The limited occurrence of Middle Persian loans in Armenian, their categorical restriction to nouns, and their unproductivity are a reflection of the far more basic level of language contact that existed between the two languages, particularly as contrasted with Parthian. Indubitably, this difference was conditioned to some extent by the political and religious differences that put Armenians and Sasanians at odds (cf. Garsoïan 1997*a*).

[47] More detailed accounts can be found in Bolognesi (1960:35), Benveniste (1945:74–5) and Nyberg (1928–31:II.102).

[48] For a different opinion, see Greppin (1993); as he points out, the number of words contained in Hübschmann (1897) showing this outcome is small, and not all have clear Iranian counterparts. Despite the lack of other conditioning factors, and the existence of other regular outcomes, the attribution of this spurious correspondence to Middle Persian remains likely in view of later developments.

[49] Pisowicz (1987:236) cites as examples of such modern loans MEA *p'alas* 'thick cloth, old carpet' < NP *palās*, and Arm. (Yerevan) *k'oṙ* 'blind' < early NP *kōr* (cp. classical Arm. *koyr*).

1.3.4 Modern Persian

Very little research dealing with Modern Persian material in Middle or Modern Armenian is available beyond commentaries on particular texts.[50] On the whole it seems most probable that loans should be restricted to the lexicon in general, and more specifically to nouns, although the situation in dialects and specific communities may vary.[51] Further complications arise from the possible mediation of Persian loanwords through a Turkic language with which the Armenians may have been in contact.[52] The kind of material borrowed into Middle Armenian, as attested by Hübschmann, is restricted mainly to technical terminology, often relating to plants and foodstuff, cp. Arm. *sparak* 'turmeric' < NP *asparak*; dialect loanwords may be more diverse.

Yet, some correspondence mechanisms and features typical of loanwords from Modern Persian can be extracted. Apart from the above-mentioned rendition of Persian unvoiced, unaspirated consonants as Armenian unvoiced, aspirated ones, the palatalisation of velar stops before front vowels (/a/, /e/, /i/) is reflected also in the Armenian loans; cp. e.g. Arm. (Urmia) *kʻarvansara* 'inn, caravanserai' < NP *kārvānsarā*, but *kʻyælæm* 'cabbage' < NP *kalam*.[53] A more diverse pattern arises in the rendition of the Persian uvular stop /q/ and its fricative allophone /χ/ or /ʁ/,[54] which are rendered in standard Modern Armenian as /ɣ/ or /ʁ/, cp. Arm. *łarib* 'stranger, wanderer' < NP (<Arab.) *qarib*, Arm. łuran 'Qur'an' < NP (<Arab.) *qor'ān*. Dialectal treatment differs, however, since both the Tiflis and Urmia varieties maintain Persian /q/ as such, viz.

[50] Cf. e.g. Mirzoyan (1967) on the language of Sayatʻ-Nova.

[51] Hübschmann (1897) provides a number of loans from (early) Modern Persian, occurring largely in Middle Armenian texts, and often only once. In turn, Armenian is the source language for some loanwords in Kurmanci; cf. Asatrian (2001); Bakaev (1969). Kurmanci loanwords in Armenian, in turn, are rare; Asatrian only mentions one early loan in the Vaspurakan dialect, Arm. *gyäv* 'pace' < Kurm. *gāv* (2001:66).

[52] Cf. Pisowicz (Pisowicz 1995; Pisowicz 1986:113–4); Ałayan (1974). Pisowicz suggests that the most common indicator of Turkic mediation is the occurrence of front rounded vowels /ö/, /ü/ instead of Persian /ŭ/, /ū/, or /au/; cp. Arm. (Urmia) *nökʻyær* 'servant' < Az. *nökyær* < early NP *naukar*. Many other correspondences between Persian and Armenian are mirrored by, e.g., Azeri, wherefore a definite source language cannot be clearly determined. For an etymological study of lemmata shared between Turkish and Armenian in the Hemşin area, cf. Bläsing (1992, 1995).

[53] Lack of palatalisation in this environment can be a sign of an early loan; cp. Arm (Urmia) *kʻabab* 'kebab' < NP *kabāb* (Pisowicz 1986:116).

[54] In Persian, these sounds occur almost exclusively in Arabic loanwords; Pisowicz (1986) provides a brief history of their phonological development.

Arm. (Urmia) *qælæmtʻəraš* 'pencil-sharpener, pen-knife' < NP *qalam-tarāš*.[55]

As far as the vowel system is concerned, the following patterns emerge: a differentiation of NP *a* /æ/ and *ā* /ɒ/ does not occur in the standard language, nor in all dialects, cp. MArm. *šarab* 'fruit juice, syrup' < NP (< Arab.) *šarāb* 'drink, wine', Arm. (Ararat) *tʻambal* 'lazy' < NP *tambal*, and *bazar* 'market, bazaar' < NP *bāzār*. Some dialects, however, have maintained the phonemic distinction, e.g. Arm. (Mełri) *dærya* 'sea' < NP *daryā*, and *bazbænd* 'bracelet' < early NP *bāzūband*. Some dialects preserve an early Modern Persian opposition of /ē/–/ī/ and /ō/–/ū/ in early loans, which has since been lost in favour of the closed vowels in the source language; thus Arm. (dial.) *tʻez* 'quickly', *dost* 'friend', but NP *tiz*, *dōst* /dust/. Similarly, the vowels /e/ and /o/ of Modern Persian, deriving from early Modern Persian /ĭ/ and /ŭ/, most commonly occur in these earlier guises, so Arm. *čʻinar* 'plane-tree' < early NP *činār* (modern *čenar*).

As in the case of the Old and Middle Iranian lexical items in Armenian, a comprehensive list or updated etymological dictionary of Modern Persian loanwords is still wanting;[56] it is furthermore unfortunate that the modern loans have generally been neglected by scholarship thus far, with most papers treating of Classical Armenian vocabulary only.

1.3.5 Other Iranian influences

1.3.5.1 East Iranian

The considerable influence that Western Iranian, esp. Parthian, has had on the Armenian lexicon is unparalleled by other dialects, whether coeval or not. It is noteworthy, however, that in addition to these loans, a small number of items of East Iranian heritage have been replicated by the Armenians.[57]

[55] The pronunciation of the Tiflis dialect has most likely been influenced by Georgian phonology, since the stop is articulated with glottal constriction as an ejective /q'/.

[56] In their dictionary of Middle Armenian, Łazaryan and Avetisyan (2009) present all listed Armenian lemmata with their Persian, Turkic, Arabic, *etc.* etymology (where available), without, however, entering into a detailed discussion of the material.

[57] These were first observed by Gauthiot (1916); see also Benveniste (1964:3) concerning the phonology of compounds in Arm. *šaw-* 'black-', and fn. 19.

These seem to correspond most closely to forms otherwise almost exclusively attested in Sogdian, such as: Arm. *margarē* 'prophet; sorcerer', cp. Sogd. *m'rkr'y* /mārkarē/ and Pth. *m'rygr* /mārēgar/;[58] Arm. *kari* 'very' < Sogd. *k'δy* /kāδi/; Arm. *baw* 'enough', cp. Sogd. *β'w* /βāw/ 'satiety' (cf. Bolognesi 1966:574–5 n. 18). More recent suggestions for East Iranian loans into Armenian, e.g. Arm. *zawr* 'troops, army' < Sogd. *z'wr* /zāwar/, are unlikely to withstand closer scrutiny, since the forms in question are attested as such also in Parthian.[59]

Since direct interactions between Armenians and Sogdians seem unlikely, the *communis opinio* is still based on Henning's (1958) proposal that the East Iranian material is of Parnian origin. The Parnians, whose language is otherwise unattested, are said to have conquered the Parthians in *c.* 240 BCE, and then to have adopted their language (cf. Lecoq 1986). Remnants of Parnian vocabulary would thus have found their way into Armenian by mediation of Parthian, in which some Eastern Iranian material is attested, e.g. Pth. *hnd* /hand/ 'blind' (contrast MP *kwr* /kōr/ 'id.').[60]

1.3.5.2 A third West Middle Iranian dialect

Similar to the set of words attributed to Eastern Iranian, certain loanwords from the Middle Iranian period suggest that there must have been a third West Middle Iranian dialect.

On a phonological level, this assumption is based on the development of CIr. *d > *h* in a small number of Armenian borrowings; these include Arm. *zrahk'* 'cuirass', cp. YAv. *zrāδa-* (contrast the Aramaic loanword *zrd'* /zardā/), which also occurs in Zoroastrian Middle Persian as *zryh* /zrēh/; Arm. *srah* 'hall, courtyard', cp. CIr. *srāda-, and Zoroastrian MP *sr'd*, *sr'y*. A particularly curious case are the derivations of CIr. *spāda- 'army', cp. OAv. *spāda-*, YAv. *spāδa-*, Pth. *'sp'd* /ispāδ/, Zoroastrian MP *'sp'h* /ispāh/, since all possible Middle Iranian forms are reflected in Armenian:

[58] This etymology is no longer accepted by all scholars. Korn and Olsen (2012:212 n. 41) reject it on the basis of Gippert (2005*a*), who cites the lack of exact phonological correspondence between Parthian and Armenian form, and a potential Caucasian Albanian parallel *marġaven* 'prophet, augur' as reasons to expect a different etymology.

[59] Cf. Ritter (1997–8); his suggestion that the East Iranian material found its way into Armenian as part of a Manichaean mission is rather unlikely, particularly since Sogdian missionary activities only commence at a later point in time, and in different regions (as he admits himself).

[60] For more examples, cf. Henning (1958:93–4).

spah, *spar (cp. Arm. *sparapet* 'commander in chief', Arm. *r* < Pth. *δ*), and *spay* (reflecting CIr. *d* > MP *y*).

Furthermore, recent forays into this field suggest that the Armenian adjectival suffix *-agin* 'like X, endowed with X' was derived from a third West Middle Iranian dialect; a similar suffix, Arm. *-kēn* < Pth. *-gyn* /-gen/, cp. CIr. *-k-aina (Av. *zaran-aēna* 'golden', OP *aθang-aina* 'from stone'), is also attested and illustrates the phonological difficulties of deriving Arm. *-agin* from its known Middle Iranian counterparts, wherefore Korn and Olsen's (2012) suggestion of an origin in a third dialect is potentially interesting (*pace* Schmitt 2001:85). Yet, there is a caveat: borrowing of derivational morphology usually requires prolonged and extensive language contact, such as in the case of Parthian; it is unclear how the third dialect with its few identifiable loans fits into this picture.[61]

Since this hypothesized dialect has left few traces beyond what has been mentioned above, it cannot be securely identified; a connection to the equally poorly attested Median language as suggested by Périkhanian (1968), e.g. as Middle Median, is not to be excluded *a priori*, but cannot be verified.

1.4 Iranian morphology and phraseology in Armenian

While the Iranian influence on Armenian is most readily observable in its lexical loans, its derivational morphology has also adopted a significant number of affixes of Iranian, particularly Parthian, origin, which are used productively from the beginning of literary attestation onwards.[62]

[61] Other derivations have been suggested: PIE *-g^{h}eh$_1$-ni- 'going; gait' (Klingenschmitt 1982:95), or an unspecified substrate influence (Greppin 1974:65), both of which are successfully rejected by Korn and Olsen (2012:206–7).

[62] Note that Armenian inflectional morphology is not affected by foreign influence. According to Meillet (1911–2:249), nominal borrowings are to be subcategorised depending on their stems: the oldest group retains the same stem-class as its Iranian counterpart, e.g. Arm. *ašxarh*, *ašxarhac'i* and Av. *xšaθra-* (a-stems); Arm. *uxt*, *uxtic'* and Av. *uxti-* (i-stem); Arm. *xrat*, *xratuc'* and Av. *xratu-* (u-stem); *etc.* Later loans either exhibit multiple stems, for instance Arm. *mog*, *mogac'* or *moguc'* (a-/u-stem) and Av. *magu-*, or a stem different from the original form, e.g. Arm. *dat*, *datic'* (i-stem), but Av. *dāta-* (a-stem). Such a chronological stratification, requiring the apocope of final syllables in Armenian to be dated in Arsacid times, is, however, not sup-

These derivational affixes can be separated into two groups: that of true affixes, which occur as such also in Parthian, and that of nominal or adjectival compounds, parts of which have been grammaticalised as affixes in Armenian. Some of the affixes belonging to the first group are given in Table 1.5.[63]

A selection of Armenian affixes going back to parts of Iranian compounds is provided in Table 1.6.[64]

Arm.	CIr.	Examples
-ak[65] / *-eak*	*-aka- / *-ya-ka-	*bažak* 'cup'; *spaseak* 'assistant; guardian'
-akan	*-akāna-	*paštōnakan* 'official, ministerial'; *sovorakan* 'usual, common'
-ean	*-iyāna-	*aṙawelean* 'eastern'; used for patronymics
-ik	*-ika-	*spasik* 'servant'; *martik* 'fighter, combatant'
apa-	*apa- / *upa-	*aparank'* 'palace; house'; *apagovem* 'to blame'
aw-	*abi-	*awgnem* 'to help, assist'; *awrēnk'* 'custom'
dž- /t'š-	*duš-	*t'šnami* 'enemy'; *džuar* 'difficult'
pat-[66]	*pati-	*patrastem* 'to prepare'; *patmučak* 'wardrobe keeper'

Table 1.5 – *Armenian affixes derived from Iranian affixes*

ported by the evidence, since some unequivocally early loans show unexpected stems. A less problematic explanation, advanced by Bolognesi (1954:124), suggests that in those cases where stem classes do correspond, they were analogically created or restored on the basis of derivatives or compounds; also cf. Schmitt (1983:98–9).

[63] A more complete account of Iranian suffixes adopted in Armenian can be found in J̌ahukyan (1993); Leroy (1958–60, 1961, 1964); also cf. Greppin (1974–5), with the corrections suggested by J̌ahukyan, and Olsen (1999:1097–8).

[64] A further frequent suffix, Arm. *–u(r)hi*, marks feminine nouns; the suffix is likely to derive from re-analysis of the loanword Arm. *t'agu(r)hi* 'queen' < Ir. *tāga-brθr̥yā, the feminine form of *t'agawor* 'king', owing to which the suffix was generalized; cf. Benveniste (1945:74).

[65] For a dedicated treatise on -ak, cf. Asatryan and Muradyan (1985); also cf. Bolognesi (1980: 31).

[66] For a more detailed discussion, cf. Belardi (1961), according to whom this prefix is no longer productive already in the classical period.

Arm.	Iran.	Examples
-astan	*-stāna-	*aspastan* ‘(horse) stable’; *datastan* ‘judgement; lawsuit’ (cp. WMIr. *d’dyst’n* /dādestān/ ‘id.’)
-aran	*dāna-	*ganjaran* ‘treasury’; *graran* ‘library; bookcase’ (cp. OP *daivadāna-* ‘daiva temple’)
-arēn	*-ādayana-	*yunarēn* ‘Greek language’; *asorarēn* ‘Syriac’ (cp. NP *āyīn* ‘norm, manner’)
-kar /-ker	*-kara- / *-kāra-	*koškakar* ‘boot-maker’; *xohaker* ‘cook’ (cp. MP *xw’štygr* /xwāštīgar/ ‘doer of good actions, beneficient’)
-kert	*-kr̥ta-	*dastakert* ‘building, village’; *Tigranakert*, city founded by Tigran (cp. WMIr. *yzdygyrd* /yazdegird/ ‘divine, made by the gods’)
-pan	*-pāna-	*partizpan* ‘gardener’; *darapan* ‘door-keeper’ (cp. MP *mrzb’n* /marzbān/ ‘governor’)
-pet[67]	*pati-	*hazarapet* ‘chiliarch’; *nahapet* ‘patriarch, prince’ (cp. Pth. *mgpyt* /maɣbed/ ‘priest’)
ham-	*hama-	*hamahayr* ‘with the same father’; *hamajayn* ‘concordant’ (cp. Pth. *hm’xwnd* /hamāxwand/ ‘united’)

Table 1.6 – *Armenian affixes derived from Iranian compounds*

Both tables further show instances of affixes of Iranian origin combined with Armenian heritage words (*hamajayn*, *graran*, *martik*), which illustrate the productivity and pervasiveness of Parthian influence; some of these suffixes are still productive in Modern Armenian. In the case of the affixes derived from Iranian compounds, the lexical items were re-analysed and reduced to affix status through grammaticalisation; in addition to the ones listed above, which tend to occur only in compounds even in Iranian, some words which otherwise occur also on their own in Iranian have

[67] Benveniste (1961:639–30) remarks that while *pati- and derivatives are hardly ever found as words in their own right, Arm. pet ‘chief, commander’ does exist as a proper lexeme.

similarly been re-interpreted; cp. Arm. *goyn* 'colour' < MP *gwn* /gōn/, and *erknagoyn* 'sky-coloured, blue', where the word occurs in its original meaning, both alone and as a compound, and *lawagoyn* 'better', demonstrating the usual comparative force of the suffix.[68]

In addition to the lexical and morphological loans surveyed above, lexical calques (or loan translations) of varying kinds occur as well. Nominal calques occur on a spectrum, from loanword proper (no adaptation to Armenian) to calque proper (replacement of Iranian material with Armenian counterparts); the following sub-types of calques can be recognised:[69]

(a) loan proper: Iranian words, particularly compounds, are replicated in Armenian without any changes to their composition; e.g. Arm. *vattohmak* 'of low birth' < MP *wttwhm* /wattōhm/ (with an optional suffix *-ak*).[70]

(b) adapted loans: Iranian compounds into which the connective vowel *-a-* has been inserted; e.g. Arm. *barapan* 'porter' < Pth. *brb'n* /barbān/, Arm. *vatabaxt* 'unfortunate' < MP *wtb'ht* /watbāxt/.

(c) semi-calques: an Iranian compound is replicated by replacing one of its parts with an Armenian word; e.g. Arm. *č'arabaxt* 'unfortunate', cp. MP *wtb'ht* /watbāxt/; or Arm. *barekam* (< *bari-a-kam) 'friend', cp. Pth. *šyrg'mg* /šīrgāmag/, with an original meaning 'well-wisher' (cp. WMIr. *k'm* 'wish, desire').[71]

(d) calque proper: an Iranian compound is replicated through substitution of all its parts by Armenian forms; e.g. Arm. *jerbakal* 'prisoner (lit. taken by the hand)', cp. Pth. *dstgrb* /dastgraβ/, with an exact correspondence of *jerb-* (cp.

[68] Similarly, Arm. *pēs* 'as, like', which in Modern Armenian still serves as an adverbial suffix, is derived from Iranian, cp. Av. *paēsa(h)-* 'manner, way'; cp. Arm. *nmanapēs* 'in like manner', *mecapēs* 'greatly'.

[69] Cf. Bolognesi (1993) for a more detailed discussion of calques and their grouping; also cf. Bolognesi (1988*c*) for compounds in Arm. *-kal(u)*.

[70] Adaptation only refers to the morphological alteration of the material; phonological changes, e.g. loss of unstressed vowel, may occur, e.g. Arm. *vatnšan* 'bad sign' < WMIr. *wat-nīšān.

[71] Cf. Benveniste (1945:78) which presupposes the existence of an unattested form with different consonantism. In a different analysis, *barekam* could be a calque proper, where both *Vorderglied* and *Hinterglied* have been replaced. Accordingly, *-kam* (cp. Arm. *kamk'* 'will, wish') could have been used instead of the phonologically less transparent *-g'mg* to make the calqued compound more readily analysable.

jeṙn ‘hand’) and *dst* as well as *-kal* (cp. *kalay*, suppletive aorist of *unim* ‘to have, hold’) and *-grb* (cp. Pth. *gyrw-* /gīrw/ ‘to take, seize’); or Arm. *čʿarakn* ‘envious (lit. evil-eye)’, cp. MP *dwšcšmyẖ* /duščašmīh/ ‘envy’, where both *čʿar-* and *dwš-* ‘evil’, as well as *akn* and *cašm* ‘eye’ correspond.

Type (d) is particularly difficult to recognise owing to the frequent lack of any actual Iranian material in the newly created word; only dedicated search and comparison with possible Iranian models (and lack of comparanda in other related languages) can provide sufficient evidence to allow for a definite designation of origin.[72]

These lexical calques are accompanied by phraseological calques, largely complex predicates consisting of a noun or adjective and a verb, which are similarly difficult to recognise as being of Iranian origin. The set of verbs is restricted to a handful of common ones, viz. *aṙnel* ‘to do, make’, *harkanel* ‘to throw’, *unel* ‘to have, hold’, and *tal* ‘to give’;[73] combinations with other verbs can also be found.[74] Examples for each verb are provided below; some combinations have no correspondences in the West Middle Iranian languages, and are instead attested in Modern Persian.

- Combinations with *aṙnel*: Arm. *vatanun aṙnel* ‘to defame, slander’, cp. *bad nām kardan*; Arm. *azat aṙnel* ‘to set free, liberate’, NP *āzād kardan*; Arm. *heṙi aṙnel* ‘to make remote, remove’, cp. Pth. *dūr kar-*, NP *dūr kardan*; Arm. *yišumn aṙnel* ‘to make memory, remember’, cp. Pth. *ʾbyʾd kr-* /aβyād kar-/, NP *yād kardan*.

- Combinations with *harkanel*: Arm. *xoran harkanel* ‘to strike a tent; to camp’, cp. NP *čādor zadan*; Arm. *hur harkanel* ‘to strike fire; to set alight’, cp. NP *ātaš zadan*; Arm. *pʿoł harkanel* ‘to sound the trumpet’, cp. MP *nʾy pzd-* /nāy pazd-/.

- Combinations with *unel*: Arm. *gorc unel ənd* ‘to have interest in; to have to do with’, cp. NP *kār dāštan bā*; Arm. *akn unel* (and secondarily *aknkalel*) ‘to have

[72] This presupposes, of course, that the concepts underlying these expressions were borrowed from Iranian, too, rather than being indigenous to Armenian thinking.

[73] Combinations with *aṙnel* and *harkanel* are particularly common, and frequently correspond directly to phrases retained in Modern Persian containing the verbs NP *kardan* ‘to do’ and *zardan* ‘to beat’; cf. Schmitt (1983:104), Bolognesi (2006:264–6).

[74] For example Arm. *erkiwrac* / *erknčʿim i* (with ablative) ‘to be afraid of’, cp. OP *tṛs- hacā* (with ablative), WMIr. *t(y)rs- ʾc, ʾz, ʾž* /tirs- az, až/, NP *tarsīdan az*; Arm. *i kʿun ertʿal* ‘to go to sleep’, cp. NP *ba-xvāb raftan*; cf. Bolognesi (1961:670–84).

an eye; to hope, expect', cp. NP *čašm dāštan*; Arm. *pah unel* 'to keep watch; to watch', cp. NP *pās dāštan*.

- Combinations with *tal*: Arm. *hraman tal* 'to give an order, to command', cp. NP *farmān dādan*; Arm. *patasxani tal* 'to give an answer, to reply', cp. NP *pāsox dādan*.

1.5 Relevance of Armenian evidence for Iranian

The above account illustrates to what extent, and in what way knowledge of Iranian material is of importance to the study of Armenian and its historical linguistic development. It has been shown that an overwhelming amount of Armenian lexical material has been replicated on the basis of Iranian, largely Parthian, models, and that its morphology and phraesology have similarly had a certain, if less thoroughly studied, impact on the historically attested forms of the Armenian language and its onomastics.[75]

In turn, the importance of the Armenian evidence for the study of Iranian must not be neglected, nor underestimated:

> An der Spitze [der] indirekten mitteliranischen Sprachzeugnisse stehen nach Zahl und Gewicht die ins Armenische übernommenen Wörter und Namen, gegenüber denen die aus anderen Sprachen … zurücktreten. Von besonderer Bedeutung waren und sind diese iranischen Wörter und Namen armenischer Überlieferung deshalb, weil sie im Armenischen in einer Schrift mit vollständiger und eindeutiger Vokalbezeichnung geschrieben sind, wodurch sich die … armenische Schrift grundlegend von den auf iranischem Gebiet gebräuchlichen Konsonantenschriften semitischer Herkunft unterscheidet. (Schmitt 1989:101)[76]

In like manner, and as shown above, the rendition of Pth. /ō/, /ē/ in Armenian as *oy*/*o*, *ē*/*e* serves to show that the monophthongisation of certain inherited Iranian diphthongs occurred during the Arsacid period, when interactions between the two languages were at their height.

[75] For treatises and short treatments on onomastics, cf. Hübschmann (1897), Ačaṙean (1942–62), Nalbandyan (1971), Mayrhofer (1979), Schmitt (1984); the volume concerned with Iranian personal names in the Armenian *Nebenüberlieferung* in the series *Iranisches Personennamenbuch* (V/3a), compiled by the late Ralf-Peter Ritter has not (yet) appeared.

[76] Also cf. Durkin-Meisterernst (2014:29–84).

On the lexical level, Armenian has preserved in their quasi-original forms many words which have not survived into Modern Persian, e.g. Arm. *azd* 'sensation, advice', *bužem* 'to free, save', *oyž* 'force, strength' (so-called *verlorenes Sprachgut*).[77] In other instances, words of clearly Iranian origin are not attested in any of the modern or historical Iranian languages, and purely on the basis of their phonology are deemed to be of such an origin, thus providing important comparative data; e.g. Arm. *nirh* 'sleep' < WMIr. *nihr < Ir. nidrā-, cp. Ved. *nidrā*; Arm. *patuhan* 'window' < WMIr. *pătfrān < CIr. *păti-frāna-, cp. Skt. *prāṇa-* 'breath'.[78]

Beyond the linguistic data, Armenian has also proved invaluable in other regards:

> Les iranistes peuvent encore tirer profit de l'arménien en ce qui concerne la sémantique. L'œuvre de Benveniste est vraiment exemplaire à cet égard aussi. Il a bien compris que l'arménien peut aider à préciser, définir et interpréter le sens des mots non seulement parthes et moyen-perses, mais aussis d'autres dialects iraniens. (Bolognesi 1990*b*:66)[79]

With the continuous discovery of new Middle Iranian evidence of various dialectal origins, this statement is likely to remain true for the foreseeable future.[80]

1.6 Issue I: syntax

As is the case with the study of language contact situations in general, syntax is the least studied aspect of Irano-Armenian contact, too. In part, this is due to the fact that the study of syntactical loans of whatever kind is more difficult than that of lexical, phonological, or morphological influences, since its results are less transparent: no immediately 'visible' material is taken over, but only less readily recognisable use

[77] Cf. Bolognesi (1980:32; 1990*c*); Asatryan (1997–).

[78] Schmitt (1983:109), rightly points out that not all such reconstructions are uncontested as a result of the lacking attestation in Iranian. But next to the phonological argument, Benveniste (1964:2) points out that in cases such as Arm. *surb* 'pure, holy', Ved. *śubhrá-* 'ornament' an Iranian intermediary is most likely, since there are no exclusive lexical isoglosses between Armenian and Old Indic, which cannot sensibly be reduced to a missing Iranian link.

[79] See here also for a detailed bibliography of the relevant works of Émile Benveniste.

[80] On a different, more limited level, Armenian also functioned as a mediating language between Iranian and Georgian; not all Georgian loanwords of Iranian origin have arrived there thus (cf. Andronik'ašvili 1966), but at least a few must have taken this path, esp. owing to phonological correspondences typical of Armenian loans from Iranian (e.g. Ir. /δ/ > Arm. *r*); for example Geo. *xoiri* 'headgear' < Arm. *xoyr* 'headgear, diadem' < Pth. *xwwd* /xōδ/ 'helmet'; Geo. *ambori* 'kiss' < Arm. *hamboyr*, cp. Pth. *'mbwy-* /ambōy-/. Iranian loanwords in Georgian are, however, not of an importance comparable to their counterparts in Armenian; for further examples, cf. Schmitt (1983:87), Gippert (1993).

patterns. Furthermore, syntactic influence in language contact situations is generally less common than other kinds of interactions owing to the necessary prerequisites, viz. enduring and relatively intense contact with at least some degree of bilingualism.

To date, investigations into syntactic loans have suggested three potential Armenian patterns that may have been influenced by Iranian to one extent or another: nominal relative clauses (cf. Benveniste 1964:35; Ajello 1973, 1997:251; see 5.1), anaphoric pronouns (cf. Meyer 2013; see 5.2), and the construction of the Armenian periphrastic perfect (cf. Meyer 2016; see chapters 2–4). The latter, in particular, is a complex topic that has attracted the interest of numerous scholars over the course of the 20th century, and will constitute the main topic and focus of investigation in this study.

The two other topics (relative clauses and anaphoric pronouns) will also be discussed, but in a more concise format. In addition, one further potential syntagma will be considered, namely the use of the complementiser Arm. *(e)t'ē* to introduce reported speech.

1.7 Issue II: language contact

This study aims to provide arguments and data illustrating the plausibility of assuming an Iranian origin in the syntactic structures listed above. Of course, owing to the lack of attestation of Armenian prior to contact with the Iranian languages, and a lack of documents that show 'contact in progress', e.g. code-switching or code-mixing, the explanations and aetiologies suggested in what follows must not be considered as an attempt at a proof or even as evidence beyond reasonable doubt for an Iranian origin; instead, they and their probative force can only be compared to other attempts at explaining these syntagmata (where available), or to the assumption of independent parallel developments in Armenian and Iranian.

In addition to a discussion of linguistic data and the contact between Armenian and Iranian, this study will also consider the implications of a new perspective on Irano-Armenian loans for the interpretation of historical interactions between speakers of Armenian and Iranian, specifically that of the Armenian and Iranian nobility. Since

the borrowing of syntactic patterns suggests a greater degree of contact and bilingualism than even the extensive lexical and morphological loans discussed above, a thorough (re-)consideration of what is and can be known about the cultural interactions between these two peoples is warranted and necessary.

1.8 Research questions and outline

Arising from the account above, the following primary research questions arise:

1. Are there any Armenian syntactic patterns that can be shown, at least plausibly, to have been constructed on the basis of, or significantly influenced by, similar patterns in an Iranian contact language?

2. If such loan patterns do exist, what does that mean for Irano-Armenian language contact? Can the linguistic data provide any insights into, or at least clues about, the kind and degree of interaction between these languages, esp. when taken together with evidence from literary sources?

Inevitably, both of these questions require breaking down into smaller sets of questions, which will be outlined at the beginning of each of the following chapters.

Chapters 2 and 3 deal with previously advanced explanations of the Armenian periphrastic perfect. Chapter 2 considers in detail the morphology of the Armenian *-eal* participle on which the periphrastic perfect is based. It is suggested that previous explanations have not taken into account all the necessary data, specifically the variability of participial formation and stem choice as well as the semantics of the participle, and have thus erroneously related its formation to that of the Armenian aorist. It is proposed, instead, that the participle is an independent formation, originally based on the verbal root with an intransitive suffix *-i̯e-/-i̯o- and the nominalising suffix *-lo-.

With this morphological derivation in mind, chapter 3 provides a discussion of previous attempts at explaining the syntax of the Armenian periphrastic perfect, which differentiates passive-intransitive constructions on the one hand (nominative subject,

optional copula in subject agreement), and transitive constructions on the other hand (genitive agent, accusative object, optional 3.SG copula in Ø-agreement). The Armenian construction is compared to a similar pattern in West Middle Iranian. This is preceded by a discussion of verbal alignment patterns and their typology in general, which illustrates both that Armenian shows tripartite alignment in the periphrastic perfect, and that the particular pattern shown is comparable to those in other languages transitioning between ergative-absolutive and nominative-accusative alignment. On this basis, it is argued that, owing to the semantics and historical morphology of the participle and the problems arising from previous explanations, it is more plausible to assume that the syntax of the Armenian periphrastic perfect is based on an Iranian model. The chapter ends by outlining expectations concerning the usage and semantics of the participle and the perfect construction, as well as their development over time, should this analysis stand.

Chapter 4 discusses and evaluates in detail the data gleaned from a corpus study of five major works of Classical Armenian historiographic literature from the 5th and early 6th centuries CE. Next to a statistical analysis of the occurrence of different patterns, and the description of small-scale diachronic trends in their usage, this chapter provides an in-depth, non-framework-specific discussion of all grammatical variants of the periphrastic perfect construction and an attempt at an explanation of less common or 'divergent' patterns. The discussion goes on to show that the general description of the perfect in grammars and textbooks needs to differentiate more clearly the usage of participles in the perfect proper from its converbial use. The statistical data and usage patterns outlined confirm the expectations listed at the end of chapter 3 and thus speak in favour of an origin of the perfect in contact with Iranian.

Chapter 5 offers broader discussions of three further syntactic patterns that may be based on Iranian models. As set out in 1.6 above, these are: nominal relative clauses, which may be based on the West Middle Iranian *ezāfe*-construction; the usage of the Armenian pronoun *ink'n* as intensifier, resumptive pronoun, andswitch-reference marker in parallel to a similar functional distribution of Pth. *wxd* /wxad/, MP *xwd* /xwad/; and the occurrence of the Armenian complementiser *(e)t'ē* as an introductory

particle for reported speech, including *wh*-questions, as is the case in West Middle Iranian with the particle *kw* /kū/. Owing to the less complicated nature of these patterns, the analysis is not based on a large-scale corpus study, but on a discussion of numerous examples illustrating common use patterns. The discussion concludes that it is difficult to determine with any degree of certainty whether these three patterns have their origin in language contact with Iranian, but that, at the very least, there are striking functional parallels in Iranian that may point in this direction.

Chapter 6 takes the insights gained from the previous discussions and evaluates to what extent they fit in with the current understanding of language contact, and what that means for the understanding of Classical Armenian as a language. It is argued that, based on the linguistic data available, it is most plausible to assume a superstrate shift of Parthian speakers to Armenian as their main language of communication as the origin of at least Iranian syntactic loans in Armenian. This explanation is then corroborated by an analysis and evaluation of extra-linguistic evidence, specifically literary, epigraphic, and other historical sources, and a comparison with another oft-cited instance of superstrate shift, namely that of Norman French speakers to English in post-Conquest Britain.

Chapter 7, finally, summarises the outcomes of this study and discusses potential issues of the data, its analysis, and interpretation. It outlines what direction future research into Irano-Armenian contact, specifically its syntactic manifestations, might take and the development of which tools would benefit such future studies.

2 Excursus: Historical morphology of the Armenian aorist and past participle

Since one of the foci of this study is the development and usage of the Armenian periphrastic perfect, it seems pertinent to talk about its main 'ingredient', that is the Armenian *-eal* participle. For reasons that will become apparent in the discussion of the syntax of the perfect, 3.2 below, it is helpful to understand the historical morphology and derivation of this form, which is not entirely unproblematic, and, according to some, entails a prior understanding of the formation of the aorist. This chapter is, therefore, a brief excursus into the historical morphology of the Armenian aorist and *-eal* participle; it does not try to be exhaustive or overly detailed, but attempts to condense material where possible to give an essential overview. For understanding the syntax of the perfect, 2.3 and following will be most relevant.[81]

The discussion of the Armenian past tenses first arises to any great extent in the second edition of Bopp's *Vergleichende Grammatik* (1857-61) in which, amongst other things, he notes the potential relationship of the Armenian aorist with the imperfect in, e.g., Sanskrit and Greek (1857-61:I.374, II.458), and the coincidence of periphrastic perfects in Latin and Armenian (1857-61:I.XVIII). Hübschmann, the father of modern Armenian linguistics and philology, however, is less forthcoming in his evaluation of potential relations between Armenian aorist and similar formations in other languages, stating that

> [d]ie armenische Sprache hat offenbar ihre alten Formen zum grössten Theil durch Neubildungen ersetzt und durch diese völlig vertilgt, und da uns die Geschichte der alten Sprache gänzlich unbekannt ist, so ist wenig

[81] Infinitival and other adjectival verb forms, although historically without doubt related to the participle, will only be discussed where pertinent to determining the history of the participle, since in themselves they afford little insight into the development of either participial morphology or syntax, and constitute a topic of investigation in their own right.

> Hoffnung vorhanden, dass wir die überlieferten Formen jemals sicher erklären werden. (1883:95)

As will be examined in detail below, in-depth discussions of these phenomena only set in with the publication of the first edition of Meillet's *Esquisse d'une grammaire comparée de l'arménien classique* (1903).

At first, it will be necessary to provide a synchronic overview of the Armenian aorist formation; it will be suggested that an approach which organises Armenian verbs according to their synchronic aorist and participle formation yields groups which show a certain coherence also in their historical morphology.

Thereupon follows a discussion of the debate concerning the provenance of the Armenian weak aorist marker *-c'-* which will detail the various arguments in favour of both originally sigmatic aorists and former imperfects, respectively; in view of the grouping suggested previously, a relative chronology for the spreading of the weak aorist will be proposed.

The chapter then moves on to the formation of the past participle, commonly thought to be based on the aorist stem. Here, it will be argued that aorist and participle formation are, in fact, originally unrelated. The participle will be shown to be a verbal adjective based on a passive-intransitive verbal stem whose vocalism by chance resembles that of the weak aorist; incongruities in participle and aorist formation within the same verbal class, as yet explained unsatisfactorily in treatises on the historical morphology of the participle, will be shown to be the result of analogical levelling across different classes of verbs.

In a final section, the findings of this chapter are summarised; it will be suggested that, in view of the arguments presented, the historical syntax of the participle and the associated periphrastic perfect need to be re-evaluated, and that a different historical morphology, one not linked to the aorist formation, may be called for.

2.1 Aorist formation

This section is concerned with the synchronic subgrouping of verbal classes according to their respective aorist and participial formation, and will in turn elucidate the re-

lationship between the existing subgroups in Classical Armenian and their historical origins. After a brief overview of the types of present, aorist and participial formations occurring in Classical Armenian, each proposed group will be treated individually on the basis of examples illustrating common features and issues. The summary at the end of the section will detail to what extent this grouping is helpful in determining the development of certain morphological formations.

2.1.1 Synchronic overview

Armenian distinguishes the following categories in the morphology of its finite verb: person (1, 2, 3), number (singular, plural), tense (present, past or imperfect, aorist, perfect, and pluperfect), voice (active, medio-passive), and mood (indicative, subjunctive, imperative). The following notes ought to be borne in mind: the perfect and pluperfect are periphrastic tenses, formed with a past participle in *-eal*; a morphological voice distinction does not occur in all classes of verbs or in all tenses; all tenses form an indicative, but there is no imperfect or pluperfect subjunctive, and imperatives do not occur outside the present and aorist.

Synchronically, the Armenian aorist is formed on the basis of the aorist stem of a verb and, as just indicated, differentiates two voices, active and medio-passive. The verb *sirem* 'to love' may serve as a model: as a verb of the *-e-* conjugation, it can form a present medio-passive with the thematic vowel *-i-*, thus *sirim* 'to be loved'; it forms a regular aorist active *sirec'i* 'I loved', and an aorist medio-passive *sirec'ay* 'I was loved'.[82] Of the five conjugational classes, differentiated according to their theme vowel as *-e-, -i-, -a-, -u-*, and *-o-* conjugation, a voice distinction in the present is only morphologically expressed in the first two, *-e-* and *-i-*. For the most part, the *-e-* conjugation furnishes transitive active verbs, which have a corresponding intransitive, medio-passive form in the *-i-* conjugation, thus *sirem* 'to love', but *sirim* 'to be loved'.

In terms of usage, the aorist is employed as the main *tempus narrativum* in Classical Armenian (Lyonnet 1933:7-8), and apart from being a past tense also represents the

[82] Like in other Indo-European languages, however, not all verbs can form both voices. Intransitive verbs such as *meṙanim* 'to die' usually only form one aorist, here *meṙay*, while certain transitive verbs, e.g. *čanač'em* 'to recognise' do not differentiate voice in the aorist, thus *caneay*.

perfective, punctual aspect (Meillet 1909-11:102; Godel 1975:40).

Synchronically, a general distinction can be made between two large classes of aorist formations. Firstly, so-called strong or root aorists, which occur with a wide set of present formations, and in the aorist show either the bare verbal root or a synchronically non-transparent variation on it; for example:[83]

- 1.sg.prs 'meaning' – 1.sg.aor, 3.sg.aor
- *ber**em*** 'to carry' – *beri, eber*
- *tes**anem*** 'to see' – *tesi, etes*
- *nst**im*** 'to sit' – *nstay, nstaw*
- *ank**anim*** 'to fall' – *ankay, ankaw*
- *daṙ**nam*** 'to turn' – *darjay, darjaw* (*-rjn- > -ṙn-)
- *heł**um*** 'to pour' – *heł, eheł*
- *ǰeṙ**num*** 'to warm myself' – *ǰeṙay, ǰeṙaw*
- *erd**num*** 'to swear' – *erd**u**ay, erd**u**aw*

Secondly, weak aorists in -c'-, the origin of which is debated (see 2.2 below):

- *as**em*** 'to say' – *as**ac'**i, as**ac'***
- *gorc**em*** 'to work' – *gorc**ec'**i, gorc**eac'***
- *nman**im*** 'to resemble' – *nman**ec'**ay, nman**ec'**aw*
- *gn**am*** 'to go' – *gn**ac'**i*, *gn**ac'***
- *yus**am*** 'to hope' – *yus**ac'**ay, yus**ac'**aw*
- *ima**nam*** 'to understand, know' – *im**ac'**ay*, *im**ac'**aw*
- *l**num*** 'to fill' – *l**c'**i, eli**c'***

[83] Each of these verbs represents a subgroup as suggested by Schmitt (2007:146-7). Differentiating features have been set in bold.

As these lists suggest, there is no immediately transparent correspondence scheme between present and aorist formation in all cases. Schmitt (2007:146-7) lists no fewer than 17 correspondence groups, while Kortlandt (1996:35-9) finds 26 different groups. It is not the goal of this discussion to explain in detail the formation and differentiation of the different types of aorist formations; rather, they are given here exemplarily as an introduction of the following issue: while the above categorisation is arguably valid for the aorist formation,[84] the related past participle, frequently said to be formed on the basis of the aorist stem (Meillet 1936:116; Jensen 1959:105-6; Godel 1975:129), does not adhere to the same pattern.

In the root aorists, the participle is formed on the basis of the verbal root as expected, thus:

- 1.SG.PRS – 1.SG.AOR – PTCP
- *berem – beri – bereal*
- *tesanem – tesi – teseal*
- *nstim – nstay – nsteal*
- *ankanim – ankay – ankeal*
- *daṙnam – darjay – darjeal*
- *hełum – heł i – heł eal*
- *ǰeṙnum – ǰeṙay – ǰeṙeal*
- *erdnum – erduay – erdueal*

The situation is somewhat different, however, in the case of the *-cʻ-* aorists. Some classes form their participle based on the aorist stem, others on the verbal root. The latter are marked in bold below:

- *asem – asacʻi – asacʻeal*

[84] There is no general consensus whether aorists in *-acʻi*, *-ecʻi* and *-Ccʻi* can be grouped together; see the discussion below and 2.2.2.

- ***gorcem – gorcecʻi – gorceal***
- ***nmanim – nmanecʻay –nmaneal***
- *gnam – gnacʻi – gnacʻeal*
- *yusam – yusacʻay – yusacʻeal*
- *imanam – imacʻay – imacʻeal*[85]
- *lnum – lcʻi – lcʻeal*

With these formations and in mind, the following division of the formations of aorist and participle can be arrived at:

A synchronic root aorists and root participles;

B *-cʻ-* aorists and root participles;

C *-cʻ-* aorists and participles based on the *-cʻ-* stem;

D other patterns.

These do not include verbs forming suppletive aorists or not attested in the aorist. This grouping raises the question whether any morphological or semantic commonalities between the verb classes pertaining to each group, respectively, can be found, and whether such commonalities allow for any insight into the reason why the groups show different developments of aorist and participle formation.

The following discussions of each group aims to illustrate briefly that clear formational tendencies have determined the appurtenance of verbs to their respective group, and that to some extent, morphological formation and semantics are correlated.[86]

[85] Some verbs in *-anam* follow a slightly different pattern; in the case of *arbenam, arbecʻay* (< *arbiacʻay), for example, the unusual participle *arbeal* may be explained as the result of a contamination with the suppletive aorist of *ǝmpem* 'to drink', AOR *arbi, arb*, which regularly presents with the participle *arbeal*. It is noteworthy, however, that *arbeal* is also found as a lexicalized adjective with the meaning 'drunk, inebriated' (AWETIKʻEAN ET AL. 1979-81:342.1).

[86] It is not the purpose of this discussion to explore issues of the Armenian present tense formation, nor of verbal etymologies; therefore, only a small selection of verbs is presented for each group.

2.1.2 Group A: root aorists with root participles

Both Arm. *berem, beri* 'to bear' < *b^{h}er-e/o- and *acem, aci* 'to lead' < *h$_2$aĝ-e/o-[87] are classified as thematic present stems with an e-grade root (Meillet 1936:105; Klingenschmitt 1982:273-4). It seems likely that their respective aorist forms relate to earlier imperfects, as evidenced by Skt. *ábharat*, Gk. ἔφερε < *e-b^{h}er-e-t, Arm. *eber*, and Skt. *ā́jat*, Gk. ἦγε, Arm. *ac*. Klingenschmitt (1982:128) argues that the usage of an old imperfect[88] as the aorist was caused by the lack of an aorist of Indo-European age for those verbs, attested in the occurrence of suppletive or innovative forms in Greek, and complete lack thereof in Indo-Iranian.[89] The verbs in *-(a)nem* are retraced to *-n-infix presents by Klingenschmitt (1982:159), who suggests that they were secondarily thematised by analogy with the 3.pl *-ent(i). The formation thus lost its infix character and turned into a suffix.[90] The largely innovative nature of this subgroup is demonstrated by, *inter alia*, Arm. *lk'anem, lk'i* 'to leave, abandon', Skt. *riṇákti*, Lat. *linquo* 'to remain', Lith. (dial.) *liñka* 'id.', all of which < *le$\underset{\frown}{\text{i}}$k^{w}-, showing *-n-infix presents. Given the aorist formation in other languages, e.g. Skt. *áricat*, Gk. ἔλιπον, it seems plausible to assume that the Armenian aorist, too, is a built directly on the root.

Arm. *tesanem, tesi* 'to see', cp. Skt. °*dṛ́ś-*, 1.sg.aor *adarśam*,[91] Gk. δέρκομαι, aor.ptcp δρακείς,[92] all of which are derived from the root *derḱ,- paints a similar picture: while

[87] This verb has also been derived from *h$_2$eĝe/o- (Clackson 2004–5:155); in either case, the expected *h-* reflex of the laryngeal is lost.

[88] The imperfect of Classical Armenian is an innovation.

[89] Not all verbs in this subcategory of **A** are as readily explained; the etymology, and thus formation, of e.g. *hanem, hani* 'to drag, draw' is unclear (Martirosyan 2010:389); Brugmann and Delbrück (1897–1916:II.3.130) and Meillet (1936:105) assume a connection with Skt. *sanóti* 'to win, gain', Gk. ἀνύω 'to accomplish' < *senh$_2$-, which Klingenschmitt (1982:131) deems to be semantically unlikely. He prefers to relate OCS *-pьnǫ* 'to spread, expand', Lith. *pinù* 'to weave, braid', Goth. *spinnan*, Gk. σπάω 'to draw, pull', the latter < *(s)ph$_2$-ái̯e/o- (Pokorny 1959-1969:988). Klingenschmitt's argument presumes, however, that the Armenian present form is derived from an aorist with an innovative nasal suffix *-ne/o-, from which is also derived a secondary aorist in analogy to the thematic verbs, since the original aorist *pā- would not have withstood the phonological decay of its component sounds in Armenian (1982:132). While Klingenschmitt's suggestion is plausible, it relies very heavily on analogy; his rejection of Meillet's etymology on semantic grounds may be hasty.

[90] The details of this formation cannot be discussed here, but see Klingenschmitt (1982:159, 177) concerning original and secondary formations.

[91] °*dṛ́ś-* also forms thematic and sigmatic aorists, but is more likely to have an original root aorist (Hoffmann 1960).

[92] While δέρκομαι forms a regular thematic aorist, the aorist participle δρακείς, δρακεντ-, attested

the nasal present is not inherited, the root aorist formation originates within PIE. While some verbs secondarily form their present on the basis of an aorist stem, it is unclear (but not unlikely) whether this is the case here, too, since the etymology of *tesanem* is debated.[93]

Other verbs falling in this category, most notably *anicanem, anēc* 'to curse', *hecanim, heci* 'to ride', etc., will be discussed in 2.2.1 below; suffice it to say here that it is more than likely that they formed sigmatic aorists on the basis of which new nasal presents were formed secondarily.

Verbs ending in *-(a)nam*, e.g. *baṙnam, barjay* 'to pick up, lift, carry', can partly be grouped into **A** as well; here, primary and secondary, viz. denominative, formations can be separated along both semantic and morphological lines. The primary formations will be discussed here, whilst their secondary counterparts fall into group **C**, see 2.1.4 below.

As primary *-(a)nam* verbs may be counted *daṙnam, darjay* 'to turn (around)' < *d^{h}reĝ^{h}-, cp. Gk. τρέχω, Alb. *dreth*, AOR *dródha*, and *baṙnam, barji* 'to pick up, lift, raise' < *b^{h}erĝ^{h}-,[94] cp. Hitt. *pár-ak-ta-ru* 'let him rise', TA/B *pärk-* 'rise (the sun)', and some other verbs (cf. KLINGENSCHMITT 1982:107-18); these verbs are similar to another type in group **A**, verbs in *-anem/-anim*, with the exception that the present verbs were not thematised.[95]

in Pindar, speaks in favour of an original root aorist, which was later remodelled; cf. FORSSMAN (1964); BEEKES (2010:317–8).

[93] KLINGENSCHMITT (1982:228) suggests either *deḱ- 'to receive, accept' (with secondary semantic change to 'to see') or a conflation of *speḱ- 'to peer' and *derḱ- 'to look' (cp. the situation in Sanskrit, PRS *páśyati*, AOR *ádarśat*) to PArm. *deḱ- as its origin. A more conservative approach is advocated by MARTIROSYAN (2010:741) and WINTER (1966:205), who suggest loss of *r in unaccented syllable before sibilant, which in itself, however, is not without exception.

[94] The Armenian forms are most probably based on the aorist stems, Ø-grade *d^{h}r̥ĝ^{h}- and *b^{h}r̥ĝ^{h}-, which explains the vocalism (cf. KLINGENSCHMITT 1982:109). The difference in consonantism between present and aorist is *lautgesetzlich*, since *-rj-n- results in Arm. *-ṙn-*; cf. SCHMITT (2007: 45-6), and, on the phonologically similar Arm. *taṙamim* 'to whither', cp. Skt. *tr̥ṣyati* < *°tr̥s-*, BEEKES *apud* KORTLANDT (2003:196).

[95] The verb *spaṙnam, spaṙnac'i* 'to threaten', however, clearly belongs in a different subcategory since it retains its nasal in the aorist and builds a regular *-c'-* aorist. Whether a derivation from *sp^{h}erh$_1$- 'to kick with one's foot', cp. Lat. *sperno* 'to push away, despise', Gk. σπαίρω 'to twitch' is correct, is questionable, on the one hand owing to its semantic remoteness, on the other hand since the attestation of *sp > Arm. *sp* is scant at best; BEEKES *apud* KORTLANDT (2003:197) suggests that *sp > Arm. *p'* may be more likely, if similarly hard to prove. It is not implausible to assume that, instead, this may be a borrowing from West Middle Iranian in view of Arm. *spay* 'army, troops', Pth. *'sp'd* /ispaδ/ (DURKIN-MEISTERERNST 2004:86), a cognate of which is Arm. *sparapet* 'commander-in-chief' < *spaδ-a-pet, since WMIr. /δ/ > Arm. *r* (cp. Arm. *apirat* 'wicked, iniquitious' < MP *'pyd't* /apēδāt/ 'id.', Pers. /bēdādī/ 'id.'). Hypothetically, then, Arm. *spaṙnam*

Verbs like Arm. *t'ołum, t'oł* 'to let, allow' are similarly derived from *-n-infix presents which were replaced by suffixal *-neu̯-/-nu- stems,[96] cp. Lat. *tollere* 'to take up, take away', OIr. *tlena* 'to steal', TB *tallaṃ* < PT *tälnā-, all of which < *tl-n(e)-h_2- (cf. Rix and Kümmel 2001:622). The precise stem formation process is unclear; Klingenschmitt (1982:243-4) suggests a number of possibilities: either a derivation from the o-grade perfect stem, a denominative formation on the substantive *t'oyl* 'permission', or a direct formation from the Ø-grade stem *tl̥-nu- with analogical introduction of *-o-* on the basis of the plural (in which case an e-grade suffix might be expected in the singular).[97]

As a final subgroup in **A**, verbs like *aṙnum, aṙi* 'to take, receive', Gk. ἄρνυμαι 'to obtain, win', Av. *ərənauu-* 'to procure, grant', all of which derive from the root *h_2r̥-neu̯-/-nu-, thus reflecting a root originally using a *-neu̯-/-nu- suffix, as opposed to those who acquired the suffix secondarily. Other verbs grouped with *aṙnum*, such as *zgenum, zgeay* 'to dress, clothe oneself' and *ǰeṙnum, ǰeṙay* 'to warm oneself' either have a less transparent heritage or are not attested with the same stem formation in other IE languages.

Verbs in group **A** continue exclusively old imperfect and aorist formations as their synchronic aorist stem, which partly forms the basis of their present stem, too.[98] It is tempting to suggest, therefore, that they may constitute the chronologically earliest or most conservative layer of the verbal system.

If that is the case, most verbs in this group ought to have a clear Proto-Indo-European pedigree, since loanwords are *a priori* less likely to continue old, unproductive formations.[99]

may have originally meant 'to do military things/militarise'.

[96] This is phonologically regular since *l > Arm. *ł* before consonant (except *y), cp. Arm. *eln* 'deer cow', Gk. ἔνελος (with metathesis), OCS *jelenъ*, all from < *$h_1$el-(h_1)en-.

[97] Klingenschmitt suggests, however, that the differentiation between full grade *-neu̯- and Ø-grade *-nu- might have been remodeled as *-nū-/-nŭ- (1982:246).

[98] In some cases, this includes historical sigmatic aorists, as in e.g. *anicanem*, which by the time of Classical Armenian, however, had been re-analysed as the verbal root; see 2.2.1 below.

[99] As indicated in the discussions of groups **B** and **C** below, most loan words from Iranian or other language families are modeled on these more innovative morphological paradigms. A parallel pattern may be sought in English: verbal stems adopted from the Romance languages, e.g. NE *innovate, stabilise, diverge*, etc., all form their past tense in *-(e)d*, as opposed to older, ablauting formations such as *sing, drive, catch*.

2.1.2.1 Group A verbs with problematic etymologies

Taking Klingenschmitt's catalogue as a basis of comparison (1982), it turns out that this holds true for the most part. In each subgroup, there are some verbs whose etymology is less clear, as the following examples will illustrate.

hiwsem, hiwsec'i (but note the intransitive *hiwsim, hiwsi*) 'to pleat, weave' next to Arm. *hiwsn* 'carpenter' is considered problematic by Klingenschmitt (1982:133-5), who unsuccessfully attempts to relate it to Lat. *texō* 'id.'; in his opinion, a phonologically more plausible derivation is based on *peḱ-, reduplicated *pi-pḱ-e/o-, cp. Gk. πέκω 'to comb', Lat. *pectere* 'id.', which, although semantically explicable, still leaves open the relationship to Arm. *hiwsn*. Martirosyan (2010:410-11), however, suggests that next to the etymology suggested later by Klingenschmitt, namely *peu̯ḱ- 'to make dense', Av. *pusā-* 'diadem', Gk. πυκνός 'dense', and supported by de Lamberterie (1982:83), a connection with a reduplicated form of *seu̯k-, Lith. *sùkti* 'to twist, turn, deceive', Slav. *sukati* 'to turn', is more plausible owing to its semantics (cf. J̌ahukyan 1986-1987). Since no participle is attested for the classical period, it is impossible to determine whether it would have ended in *-eal* or *-ec'eal*, which, as will be argued below, may have aided in determining a formational origin. As it stands, *hiwsem*, if it is originally reduplicated, belongs not in group **A**, but in **C**, where other reduplicated presents are found.

tanim 'to lead away, take away', aor *taray*, raises questions concerning its aorist formation and the coherence of the lexeme; Klingenschmitt (1982:201) rejects Pedersen's connection with Arm. *tarac* 'extended' (1906:372-3), a derivation from *deh$_2$(i̯)- 'to share, split' (cf. Rix and Kümmel 2001:103–4), on the basis of semantic incongruities, and rather suggests that the aorist stem is derived from Iranian, comparing it with Av. *tarō* 'beyond'. At the same time, he argues for a formation of the aorist on the basis of the imperative *tar*, cp. *linim, ler*; *lsem, lur*; *tam, tur*.[100] The connection with the present stem is then no longer etymological, but arrived at only secondarily.[101] Yet, basing the aorist formation on the imperative seems entirely *ad hoc* and has

[100] It is difficult to see how a verb should be derived from a preverb or preposition, and equally how the imported form should be interpreted immediately as an imperative.

[101] Klingenschmitt's derivation of Arm. *tanim* as an innovative nasal stem *dh$_3$-n̥H- on the basis of

no systematic basis; since the argument in general could be clearer, the suggestion should therefore be viewed with caution.

arkanem 'to throw' would appear to find no clear cognate at all; Klingenschmitt (1982:204-5) rightly rejects a relationship with Ved. *°srj-* 'to let go, send off', since the root of the latter requires a root-final palatal which cannot result in Armenian *-k-*; similarly, a congruence with Ved. *sṛ́ká-* 'point, tip',[102] cp. Gk. ἕλκω 'to pull', is untenable since *-k- would have yielded Arm. *-k'-*. A suggestion of Ačaṙean and Nersisyan (1971-1979:321) that *arkanem* may be an Iranian loan word is difficult to substantiate: Av. *harəka-* is attested only in iterative forms, e.g. *harəčayāṯ* (Vidēvdāt 5.60) whence a borrowing is unlikely (cf. Bartholomae 1904:1788-9); according to Cheung (2007:131) only MP *°hrg-* 'to refuse' is tentatively attested as a cognate in Middle Iranian, wherefore borrowing seems an unlikely explanation. The etymon therefore remains undetermined.

xp'anem 'to close, shut', and with it *xp'em* 'id.' and *xup'* 'cover' show a phonological form which 'schließt von vornherein die Möglichkeit einer Herkunft aus der indogermanischen Grundsprache aus' (Klingenschmitt 1982:211); Olsen (1999:211) disagrees, suggesting a connection with *sk$^{(h)}$eu̯pp-, cp. Goth. *skufta* 'hair', OIc. *skauf* 'tuft, tassel' (cf. Pokorny 1959-1969:956), which is, however, semantically less plausible. Ačaṙean and Nersisyan (1971-1979:423), quoting Marr, suggest a loan from Heb. *kōba* 'helmet', which seems unlikely; it is unclear whether Geo. *xupi* 'id.' is borrowed from Armenian, or whether both words have a common origin. Although words containing Arm. *x* are at times linked to Hurro-Urartian influence, cp. Arm. *xnjor* 'apple' and Hurr. *hinzuri* 'id.' (Greppin 1988:188-9), no corresponding form is attested.[103] Phonologically and semantically closest may be Hitt. *ḫuu̯app-* / *ḫupp-* 'to hurl, throw' with a noun *ḫūppa-* 'heap' (cf. Kloekhorst 2008:369); the meaning seems close enough to be plausible ('throw in order to cover', 'throw sth. over sth.'), but is a little tenuous phonologically. The attested aorist forms are a further issue;

*deh$_3$- is semantically and morphologically plausible; the relationship to the aorist *taray*, however, remains unclear.

[102] Cf. Mayrhofer (1986–2001:II.743); the older rendering of *sṛ́ká-* as 'arrow' is now obsolete.

[103] This is not remarkable, since the amount of loanwords clearly identifiable as stemming from Hurro-Urartian is comparatively small; cf.greppinDiakonoff91, Greppin (1996).

the earliest attested forms are *xp'eac'* and *xp'eal*, suggesting that this verb belongs in group **B** below.[104]

As exemplified above, there is a small number of verbs with unsure etymologies grouped under **A**. This, however, does not necessarily entail that these verbs cannot all have an Indo-European origin.

A more substantial issue is thrown up by the verbs in *-um*, grouped also under **A**. Klingenschmitt (1982:239-46) lists a number of verbs, such as *herjum* 'to split, tear apart', *lesum* 'to crunch, squash', *k'ercum* 'to peel', *kizum* 'to burn down sth.', whose etymology is either wholly unclear or which might be borrowed from contact languages.

In some instances, a loan is readily recognisable: Arm. *zenum* 'to slaughter' is likely to be a loan from West Middle Iranian, related to Manichaean MP *zn-* /zan-/ 'to smite' (cf. Cheung 2007:224; Durkin-Meisterernst 2004:383-4). Most, however, seem to have no clear cognates in Iranian or other contact languages.

The verbs in *-num* are, generally speaking, less problematic, although here, too, roots with unclear etymologies are found. Klingenschmitt (1982:253) rightly warns that some members of this subgroup, such as *zbałnum*, aor *zbałec'ay* 'to busy oneself, to toil', may be secondary formations since forms like *zbałim* and ptcp *zbałeal* are attested; in this specific example, the phonologically unusual combination -łn- speaks in favour of this hypothesis.

2.1.2.2 Summary of group A verbs

Group **A** therefore largely consists of thematic verbs, and those with a nasal infix of diverse origin; the majority of verbs show 'simple' semantics, viz. their suffixes are only of morphological, not semantic relevance (no factitives, causatives, etc.). While not without exception, and despite a number of as yet unresolved etymological issues, it seems plausible to suggest that owing to their aorist formation, be it an inherited root or sigmatic aorist, or the result of an Indo-European imperfect formation, and

[104] *xp'anem* and *xp'em* either have the same aorist forms (*pace* Awetik'ean et al. 1979-81:995.3), or it stands to reason that, since no separate aorist is attested for *xp'anem*, it may be a secondary formation. Equally, however, *xp'em* could be an analogical backformation on the basis of *xp'anem* and its regular aorist.

their (at least largely) Indo-European origin, this group of verbal formations constitutes one of the earliest strata in the history of the Armenian verbal system. Notable exceptions, viz. those with a deviating aorist formation or loan words, can be explained as analogical formations or secondary imports. It is of further note that, barring some exceptions, the vast majority of verbs in group **A** are not denominal; this will prove to be a contrastive feature with regard to groups **B** and, in part, **C**.

2.1.3 Group B: -c‘- aorists with root participles

The group of verbs in *-em/-im* with an aorist in *-ec‘i* is considered to continue original denominative stems or roots, to which the present suffix *-e̯i̯e/o- > Arm. *-e-* is added (Klingenschmitt 1982:139-40).

Besides straightforwardly Indo-European roots such as Arm. *gorcem* ‘to work’, cp. Gk. ἔργον, Myc. *wo-ze*, Av. *varəz-*, prs *vərəziia-* < *u̯erĝ-, in Armenian derived from the nominal o-grade *u̯orĝ-, and potentially *lmem* ‘to press, knead’, cp. OCS *lomiti* ‘to break’, this group also includes denominative formations on the basis of Iranian terms adopted into Armenian, e.g. *bžškem* ‘to heal’, cp. Arm. *bžišk* ‘physician, doctor’, Pth. *bzyšk* /bizešk/, Skt. *bhiṣaj*; Arm. *nšanakem* ‘to signify, make clear’, cp. Arm. *nšanak, nšan* ‘sign’, Pth. *nyš(’)n* /nišăn/; and Arm. *nmanim* ‘to be like, resemble’, cp. Arm. *nman* ‘like’,[105] Pth. *m’n-* /mān/ ‘to resemble’, MP *m’n’g* /mānāg/ ‘like’.[106] In addition to denominative formations and the class of inherited *-i̯e/o- formations, verbs borrowed as such from West Middle Iranian have been integrated into this group as well, thus, e.g., Arm. *aržem* ‘to be worth’, Av. *arəja-*, Pth. *’rj’n* /aržān/; *hramayem* ‘to order’, WMIr. *frm’y-* /framāy-/ (Durkin-Meisterernst 2004: 156); *awhrnem* ‘to bless’, WMIr. *’fryn-* /āfrīn-/ (Durkin-Meisterernst 2004:26-8).

Whilst attributing most **B** verbs to denominative derivational mechanisms, Klin-

[105] The Armenian presumably goes back to an unattested Iranian form with a prefixed *ni-* as occurs frequently in Indo-Iranian languages; further cp. Pth. *nydrynj* /niδrenǰ/ ‘to oppress, subdue’ and YAv. *θraχta* ‘compressed’ < *trenk$^{(w)}$- (cp. Cheung 2007:395-6).

[106] The occurrence of Iranian loan words in this group suggests that the denominative formation in *-em* was still productive *nachursprachlich.* While West Middle Iranian, specifically Parthian, loans undergo a small set of Armenian-internal sound changes (see chapter 1 above), they are unlikely to have entered Armenian before the onset of their intensive contact with Parthian in the 1st century CE. To a more limited extent, Syriac loans show the same derivation, cp. Arm. *k‘arozem* ‘to preach, announce’, and Arm. *k‘aroz* ‘preacher, herald’, Syr. *krwza* /kārōzā/.

GENSCHMITT also suggests that some may be thematic in nature. In the case of Arm. *erewim* 'to appear, seem', cp. Gk. πρέπω 'to excel, draw attention to oneself', a derivation from *prep- is traditional (1982:143-4); as has been noted, however, both the Greek and the Armenian forms may as well derive from *k^{w}rep-, cp. Skt. *°kŕ̥p-* 'beauty', Lat. *corpus* 'body' (SCHINDLER 1972; CLACKSON 1994:165-6; OLSEN 1999: 516-7), in which case a denominative formation of Arm. *erewim* < *k^{w}rep-i̯e/o- is not implausible, esp. in view of related nominal forms such as Arm. *eresk'* 'face' < *k^{w}rep-sa-h$_2$ (OLSEN 1999:64).[107]

Similarly problematic is the etymology of Arm. *sxalem/-im* 'to err, stumble', which KLINGENSCHMITT derives from *sk^{w}h$_2$al-e/o-, cp. Gk. cφάλλω 'to make fall, trip' (1982:144); as MARTIROSYAN (2010:517) points out, however, the expected outcome of *sk- in Armenian is *-c'-*, further noting that *sxalem/-im* is the only instance in which Arm. *sx-* is supposed to be the outcome of *sk$^{(w)}$(H)-; he assumes that the stem is a loan word.[108] While potential cognates exist in Indo-Aryan languages, neither a direct loan nor one mediated by an Iranian language is plausible since the initial consonantism required to render Arm. *sx-* would not have been preserved.[109] Given the existence of *sxal* 'error, mistake', it seems most plausible to assume that the verb is denominative.[110]

The verb *malem* 'to grind, mill' is more problematic. A derivation from *melh$_1$- seems indisputable, but the precise formation is debated; KLINGENSCHMITT suggests a thematic present on the basis of a Ø-grade root *mḷh$_2$-e/o- next to OUmbr. *kumaltu*, *kumultu*, Cymr. *malu* (1982:145). This, however, stands in contrast to a distinctly athematic formation in Lat. *molō* 'id.' (DE VAAN 2008:386-7), and the related denominative formation Lat. *immolāre* 'offer, sacrifice, immolate' from *mola* 'millstone' < *molh$_2$-h$_2$-. Since a laryngeal in the sequence *-VRH- is presumed to disappear,[111]

[107] Gk. πρέπω cannot be a denominative formation, since the cluster *-pi̯- would be expected to yield -πτ-, cp. Gk. κλέπτω 'to steal', Lat. *clepo* 'id.' < *k̂lep-. Since Armenian often innovates, however, this is not an insurmountable barrier.

[108] Similarly, VOGT (1938:333) assumes this to be a borrowing from Geo./Zan *sxl̥* < *sxal-.

[109] Cp., e.g., YAv. *sciṇd-*, *scaṇd-* 'to break, cleave' (CHEUNG 2007:342-3), MP *'škn* /iškenn/ 'id.' (DURKIN-MEISTERERNST 2004:92); the cluster is phonotactically unproblematic.

[110] Cf. AČAŘEAN AND NERSISYAN (1971-1979:224); whether this root is of direct Indo-European descent or a loanword is of no immediate concern for its classification as denominative.

[111] Evidence is scant, cf. BEEKES *apud* KORTLANDT (2003:189); for the question of laryngeal colour, cf. OLSEN (1999:779).

and given that it is possible that *-o- > Arm. *-a-* in an open syllable, assuming the loss of *-H- preceded this change, a denominal formation of *malem* on the basis of PArm. *mol- is not impossible; a reduplicated form, Arm. *mamul* 'press', is attested (Ag. §106), but no original simplex is extant. A different, but possibly preferable derivation sees *molem* as a secondarily thematised form based on an old ablauting athematic formation; this would also explain the productive *-c'-* aorist, which is likely secondary, too.

In other instances, it is plain that the present is formed with a *-i̯e/o- suffix, whether it be primary or denominative; as verbs of this type may be counted *cicałim* 'to laugh',[112] *diem* 'to suck (milk from the breast)',[113] *ačem* 'to grow, increase',[114] *mrmnǰem* 'to murmur, mumble'.[115]

Yet, not all **B** verbs can be explained without issue or controversy.[116] Given that a large number of the roots upon which group **B** verbs are based have been borrowed from, *inter alia*, West Middle Iranian languages and Syriac, the formations in group **B** are presumably younger than those in **A**, evidenced further by the usage of aorist markers that have arisen only in Proto-Armenian; at the same time, it must be noted that the participles of these verbs, as described in section 2.1.1 above, do not contain the innovative aorist marker Arm. *-c'-*, and are instead based on the historical present stem, which synchronically may have been perceived as the root.

[112] Whilst it is plausible that this word should continue a reduplicated formation *ĝel-ĝ̣lh2-i̯e/o- as suggested by Klingenschmitt (1982:147), comparable in formation to Gk. δαιδάλλω 'to work cunningly, embellish', Martirosyan (2010:340-1, 766-7) points out that reduplications of the pattern Ci-Ce/aR- are most common in nouns, cp. Arm. *šišał* 'demon', wherefore *cicałim* may well be a denominative formation.

[113] Cf. Martirosyan (2010:239); J̌ahukyan (1987:119); Klingenschmitt (1982:148); Godel (1975: 88-9).

[114] For the etymology of this root, cf. Martirosyan (2010:43) with references.

[115] Cf. Klingenschmitt (1982:154-5); verbs derived from onomatopoetic expressions appear to often be built on *-i̯e/o- stems, cp. also, e.g., Gk. μορμύρω (Godel 1975:81). The associated noun *mrmunǰ* 'mutter, maundering, lamentation' is likely to be secondary.

[116] A case in point is Arm. *aracem* 'to pasture', derived differently by Klingenschmitt (1982:153-4), Olsen (1999:92-93, 775, 811), and Martirosyan (2010:125). While it does not explain the stem formation or the connection with *arawt* 'pastureland', Martirosyan's derivation from *treh$_2$ĝ-, cp. Gk. τρώγω 'to nibble, knaw', τράγος 'he-goat', appears to be the most sound one. Klingenschmitt's suggested formation from *pr̥-peh$_2$-d- is problematic in numerous ways (unparalleled prefix *pr̥ > PArm. *ar-; Arm. outcome of *-d-i̯e/o- rather *-č-* than *-c-*), and Olsen's connection to *srHu-d-i̯e/o-, cp. Lat. *servō* 'to serve, preserve', is both semantically and phonologically improbable. For a few other doubtful cases, cf. Klingenschmitt (1982:154).

2.1.4 Group C: -c‘- aorists with -c‘- stem participles

The verbs pertaining to group **C** are in many respects the most diverse as concerns their formation. While they share the general aorist formans *-c‘-* and a participial formation based on this stem, viz. *-c‘eal*, their present and aorist stems are evidently of heterogeneous origins.

2.1.4.1 Arm. *asem, gitem, karem,* and *mart‘em*

The smallest subgroup within **C** is constituted by the four verbs *asem* ‘to say’, *gitem* ‘to know’, *karem* ‘to be able, have the power’, and *mart‘em* ‘to be able, possible, have the power’, all of which construe an aorist in *-ac‘-* and a participle in *-ac‘eal*.

The clearest etymology is that of *gitem* ‘to know’, which is undeniably related to Gk. οἶδα, Ved. *véda*, Goth. *wait*, all of which < *u̯oi̯d-h₂e, a perfect formation. Klingenschmitt suggests that the formation of a thematic present is based on the 3.sg form *u̯oi̯d-e to which the thematic 3.sg.prs marker *-ti is added, yielding *u̯oid-e-ti as the basis of an analogical restructuring of the verb (1982:135);[117] for another perspective, cf. Peters (1997).

A similar perfect origin is traditionally allotted to *asem* ‘to say’, which is compared to Gk. ἦ̃, Lat. *aiō*.[118] The other two verbs are of uncertain etymology.[119]

[117] Klingenschmitt’s proposition concerning the aorist formation of this and other classes will be discussed below, section 2.2.2.

[118] Arm. *ase-* < *h₁e-h₁eĝ-t and analogical generalisation of the resulting *-s-* < *-ĝ-t-; for discussion and bibliography, cf. Martirosyan (2010:118), Klingenschmitt (1982:137-8).

[119] Cf. Gauthiot (1914:160; 1930:83). Klingenschmitt (1982:138-9) compares Sogd. *k’δy, k’δw* ‘very’ and Av. *kāθa* ‘affection’, which may change the meaning of the Sogdian words to ‘lovingly, with pleasure’. In both instances, the semantics remain tenuous; a potential relation to WMIr. *kr-* /kar-/ ‘to do, work’ seems less problematic, if still not semantically unobjectionable; cp. Ačaŕean and Nersisyan (1971-1979:542-3); Durkin-Meisterernst (2004:207-8). Since *karem* is likely to be a denominative on Arm. *kar* ‘strength, ability’, an Indo-European derivation from *gʷr̥H-i-, cp. Cymr. *bryw* ‘strong’, OIr. *brig* ‘strength, fortitude’ is not implausible; but cf. de Lamberterie (1982) for a derivation from an old perfect of this root.
mart‘em is similarly likely to be a denominative on Arm. *mart‘* ‘possibility, possible’; Klingenschmitt (1982:139) stipulates that *magʰ-tro-, Germ. *maɣ-, Slav. *mogǫ- ‘to be able’, is the only plausible Indo-European connection.

2.1.4.2 Athematic verbs in *-am*

A further subgroup of *-am* verbs is constituted by the Arm. *bam* 'to say' (defective), *keam* 'to live', *tam* 'to give', *gam* 'to come', and *kam* 'to remain, stay'. Within Armenian, all five verbs form athematic root presents. *bam* 'to say' functions only as a conjunction after *asem* 'to say', and may be related to *$b^{h}ah_{2}$-, Gk. φημί, Lat. *fātur*; an aorist is not attested (Klingenschmitt 1982:84).

The verb *keam* 'to live' is thought to reflect *$g^{w}eih_{3}$-, cp. Gk. βέομαι 'I shall live', Skt. *jī́vati*. Both Klingenschmitt (1982:84-5) and Martirosyan (2010:256-7) argue in favour of an athematic present, although Martirosyan points out that a development *-eih_{3}- > PArm. *-e(i̯)a- is problematic, wherefore appurtenance to the *-am* verbs may be secondary. According to Barton (1990–1:45 n. 58), however, such a formation is less likely owing to the full-grade shape of the root in other Indo-European languages as *$g^{w}i̯eh_{3}$- (Rix and Kümmel 2001:215); he prefers a reconstruction as *g^{w}(i)i̯h_{3}-i̯e-, cp. Gk. βιό-ω, or a formation with stative *-a-.

The case of *gam*, aor *eki* 'to come' is somewhat more complicated. Both Martirosyan and Klingenschmitt agree that the aorist form is a regular athematic root aorist on the basis of *g^{w}em-, Skt. *gam-*, 1.sg.aor *ágamam*, Gk. βαίνω, Lat. *veniō*, at least for the 3.sg: *ekn* < *h_{1}é-g^{w}em-t (Klingenschmitt 1982:279; Martirosyan 2010:249). The augment occurs in all forms of the aorist tense of this verb as in all otherwise monosyllabic, consonant-initial Armenian aorist forms, and has accordingly fully integrated into the paradigm and stem. The 1.pl form of the aorist paradigm *ekakʻ* suggests, however, that here a reconstruction on the root *$g^{w}eh_{2}$- is required, while the 1.sg form *eki* is secondarily reformed. Complications arise in the determination of the present. Klingenschmitt (1982:86) rejects Meillet's derivation from *u̯eh_{2}-(d^{h})-mi (1936:134; cf. Martirosyan 2010:196) on semantic grounds; his suggestion that Arm. *gam* be related to Gk. κιχάνω 'to reach, arrive, meet' < *$g^{h}eh_{1}$- is rightly rejected by Martirosyan, since Skt. *já-hāti* 'to leave, abandon' and Av. *za-zā-mi* point to a root with a palatal velar. The aorist Arm. *eki* has a related present in Arm. *kam* 'to stand, remain', which in turn forms a weak aorist *kacʻi*.

Arm. *tam* 'to give', like *kam* above, stand in contrast to cognates in other Indo-

European languages which show reduplicated present roots: for Arm. *tam*, cp. Gk. δίδωμι, Ved. *dádāti* < *dé-deh$_3$-; for Arm. *kam*, cp. Ved. *jígāti* 'to stride', Homeric Gk. βίβαc 'walking along' (Rix and Kümmel 2001:205). Klingenschmitt (1982:85) assumes that 'in diesen Fällen eine Umbildung der reduplizierten Stämme durch Weglassung der Reduplikationssilbe stattgefunden hat'. The verb *tam* forms an athematic root aorist *et* like *ekn*.[120]

The small group of athematic presents therefore only partly fits into group **C** since *tam* has retained an old aorist formation, and *gam* provides a similar, but suppletive formations, wherefore both should belong in group **A**. *keam* and *kam*, on the other hand, have adopted younger *-c'-* aorists. Due to the small number of these verbs, however, and the general heterogeneity of group **C**, these few outliers do not undermine the make-up of the group.

2.1.4.3 Denominatives in *-am*

A separate group of *-am* verbs consists of denominatives of the type *-ah$_2$-i̯e/o- built mainly on o-stem nouns and adjectives and endowed with the meaning 'to have, do, deal with, be like X'; whilst it is phonologically unclear whether *-ah$_2$-i̯e/o- > PArm. *-ă̯e/o- > Arm. -a- is plausible owing to a lack of comparable data, this seems the most economical assumption (Klingenschmitt 1982:89-91).[121] Among this group may be counted verbs such as *yusam* 'to hope' (*yoys*), *ołbam* 'to lament' (*ołb*), *p'ut'am* 'to hasten' (*p'oyt'*), and *šnam* 'to commit adultery' (*šun* 'dog; adulterer') as well as

[120] Bonfante (1942) observes that the 3.sg.aor of both *dnem* 'to put' and *tam* 'to give' corresponds well to the respective forms in Vedic (Arm. *ed*, *et* and Ved. *ádhāt, ádāt*). The 1.sg.aor forms *edi* and *etu*, however, cannot be cognate with Ved. *ádhām* and *ádām* owing to Proto-Armenian word-final apocope. Bonfante, and with him later on Kortlandt (1987), therefore assumes that like Slavonic, Armenian has continued in these forms a sigmatic aorist *dhēsom, *dōsom as evidenced by e.g. Slav. *děchŭ*, *dachŭ*; he further suggests that there are indications of comparable forms also in Avestan and Albanian. Yet, no indication of a sigmatic aorist for *deh$_3$- can be found in Avestan, whilst *d^{h}eh$_1$- shows a stem Av. *dåŋh-*, cp. Ved. *dhās-* (Hoffmann and Forssman 2004:229); Rix and Kümmel (2001:136), however, see in this form a desiderative marker. Also cf. Barton (1973–4).

[121] Klingenschmitt also raises the question whether this type may have been merged or contaminated with a similar suffix *-ah$_2$- as occurring in, e.g., Lat. *novāre* < *neu̯ah$_2$-; there is no semantic evidence that a factitive meaning is contained within the verbs in question (this function is taken up by a younger formation, Arm. *-anam*), nor any way of phonologically determining its validity, wherefore it remains insubstantial.

ateam 'to hate'.[122]

As Klingenschmitt points out, many verbs contained within this type are etymologically problematic. *ert'am* 'to go, leave' may serve as a case in point. Forming a suppletive indicative aorist *č'ogay* (all other moods are built upon the stem *ert'*-), the verb is of interest for present purposes since it shows a participle *ert'eal*. Historically linked to Gk. ἔρχομαι, Ved. *ṛcchá́ti* (Meillet 1898:276; 1935:249; Rix 1970:98), all deriving from *h_1ṛ-sḱe/o-, this etymology leaves open the question of the *-am* type conjugation; Klingenschmitt (1982:99) mentions other explanations, most plausibly that of Barton (1963:620),[123] but points out that so far all have failed at explaining the cluster *-rt'*-, which cannot derive from *-rt- (> Arm. *-rd-*). His own solution, deriving *ert'am* from a prefixed verb *per-stah$_2$-, cp. Lith. *pérs-stoti* 'to stand elsewhere, to change place', Gk. περιίστημι, specifically from a reduplicated present stem *per-sti-sth$_2$a-, seems somewhat *ad hoc* as far as semantics are concerned. Martirosyan's explanation of *ert'am* as a denominative verb from Arm. *ert'* 'journey, going' deriving from *h_1ṛ-sḱ-ti- > PArm. *er-c'-t'i > Arm. *ert'*, seems more plausible on semantic and systematic grounds, aligning this verb with most others of its class (2010:263).

2.1.4.4 Verbs in *-anam*

A further subgroup is constituted by verbs in *-(a)nam*, which are continuations of original Indo-European nasal-infix presents (Klingenschmitt 1982:106). This type is diachronically differentiable in primary and secondary, viz. denominative stems; the former have been treated in 2.1.2 above.

Klingenschmitt counts amongst the above-mentioned 'primary' formations also factitives in *-anam* which morphologically belong in group **C**; these, however, align synchronically with the denominatives in forming aorists and participles in *-c'*-, thus, e.g., *stanam*, aor *stac'ay* 'to purchase, receive', cp. Lat. *dēstināre* 'to make fast, decree' (also a factitive), both < *steh$_2$-, and *banam*, aor *bac'i* 'to open', cp. Gk. φαίνω

[122] For a discussion of this verb, cf. Klingenschmitt (1982:94-5). It is noteworthy that *ateam* shows two different participial forms in the oldest sources already: *ateal* and *atec'eal*; this will be further discussed below, section 2.4.

[123] Barton expands on Winter's thoughts concerning metathesis in Armenian; he proposes to derive Arm. *ert'am* from *treh$_2$-, cp. Gk. τρᾱνής 'piercing', Skt. *trā́yate* 'to rescue', *tárati* 'to pass', Lat. *intrāre* 'to enter', with *tr- > Arm. -rt'- before 'velar vowel'.

'to bring to light, cause to appear', both < *b^{h}eh$_2$-; Klingenschmitt (1982:112-3) proposes original nasal infix presents in both cases, although in most other instances in which from an Indo-European perspective such present stems would be expected, they have been replaced by *einzelsprachlich* developed nasal-suffix presents (1982:109, 159-61; cp. also Schmitt 2007:135). Given their aorist formation, and their clearly derivative semantics, it is doubtful whether the designation primary is appropriate.[124]

The largest group of *-anam* verbs, however, are secondary formations, mainly fientive or stative denominative verbs (Klingenschmitt 1982:119); some of them have, however, turned into transitive verbs, e.g. *bokanam* 'to take off (shoes); lit. to be(come) barefoot' < *bok* 'barefoot', *gołanam* 'to steal; lit. to be(come) a thief' < *goł* 'thief'. While the vast majority of these verbs derive from Indo-European roots, Iranian and Syriac loan words, e.g. *tłanam* 'to be(come) a child' < Syr. *ṭly'* /ṭalyā'/ 'boy', or *hiwandanam* 'to be(come) ill' < Pth. *hēwand 'ill', cp. MP *hy(w)ndkyh* /hēwandakēh/ 'illness' (Salemann 1908:92-3; Olsen 1999:303 n. 229; Yakubovich 2009:270). Other semantic types exist, too, but are both severely limited in number and most likely very late developments (Klingenschmitt 1982:122-3). In all secondary cases, it is likely that the formation should rely on a nasal suffix added to 'urindogermanische mittels eines Suffixes *-h$_2$- von thematischen Adjektivstämmen abgeleitete faktitive Denominativa', viz. the type *neu̯e-h$_2$- < *neu̯o- 'new' (Klingenschmitt 1982:124).

2.1.4.5 Verbs in *-num*

The final subgroup in **C** consists of verbs in *-num.* This category is mainly represented in group **A** with verbs such as Arm. *aṙnum* 'to receive', cp. Gk. ἄρνῡμαι, forming synchronic root aorists and participles. A few verbs, however, fall into group **C**; those which have a more or less securely determinable etymology seem to show not a pri-

[124] The morphological alignment with the *-anam* denominatives of group **C** has, of course, no *a priori* probative value. It is possible that the verbs forming root aorists like *daṙnam* and *baṙnam*, owing to their different semantics, had a different morphological path, or are simply of greater antiquity; alternatively, it is conceivable that the *-anam* facititves showed original root aorists, and only later were analogically adapted to the perceived standard of this type, whilst *baṙnam*, *daṙnam*, etc. kept their strong aorists because of frequency effects or, in avoidance of *barj-cʿay-, for euphonic reasons.

mary *-neu̯-/-nu- suffix but rather one used in a secondary function.

The case of Arm. *zgenum*, AOR *zgecʻay* 'to put on sth.', cp. Gk. ἕννῡμι '(act.) to dress someone; (mid.) to get dressed' < *u̯es-nu- (prefixed in Armenian with *zu-), according to KLINGENSCHMITT (1982:248) reflects a 'Faktitivbildung zu der einen medial flektierten rhizotonen athematischen Präsensstamm bildenden Wurzel *u̯es-' and is an innovation in both Greek and Armenian.

A similar innovation as compared to Indo-European cognates may be present in *lnum*, AOR *lcʻi* 'to fill'; whilst Gk. πίμπλημι and Ved. 3.SG.IMP *ápiprata* suggest a reduplicated present, Vedic and Old Avestan also show reflexes with nasal infix presents, viz. Ved. *pṛ́nāti*, OAv. 2.SG.IMV *pərənā*. Neither KLINGENSCHMITT (1982:253-5) nor MARTIROSYAN (2010:309-10) take a clear position on the formation of the Armenian reflex; owing to its semantics, a factitive formation does not seem too farfetched.[125]

The etymology of *ənkenum*, AOR *ənkecʻi* 'to throw, make fall' is somewhat debated. MARTIROSYAN (2010:280), with AČAŘEAN AND NERSISYAN (1971-1979:II.128b) and GODEL (1965:26, 37; 1975:74, 125-6; 1982:10) relates it to Arm. *ankanim* 'to fall'. The formation is based on a causative *song^{w}-eu̯e/o-, with a further causative-transitive suffix *-nu- as in Arm. *lnum* and *zgenum*.[126]

2.1.4.6 Summary of group C verbs

Group **C** has been shown to be very diverse as far as the morphological formation of its constituents is concerned, but coheres in that most if not all formations are of a semantically secondary, derived nature, consisting largely of denominatives, factitives, and fientives built on both Indo-European and borrowed Iranian or Syriac roots. Moreover, those few verbs whose historical morphology patterns with types grouped within **C**, but which show closer affinity to groups **A** or **B** have been shown to deviate from the main type in some meaningful way; in most cases, however, it remains unclear whether these deviations are archaic or innovative.

[125] OLSEN (1999:805) sees in this formation a late remodeling of a PArm. *lnam; this, however, seems unlikely in view of its aorist formation, see section 2.2.3.

[126] KLINGENSCHMITT's suggestion that the verb is composed of a preverb *ənd- and a root *g$^{(w)}$es-, cp. ON *kasta* 'throw' (1982:249), is rejected by MARTIROSYAN.

2.1.5 Group D: other patterns

In addition to the groups **A**, **B**, **C** mentioned above, one other group with two types has to be distinguished, viz. verbs in *-(n)čʿim* and *-num* whose aorist is neither a synchronic root or *-cʿ*- aorist, but shows an ending *-eay*, e.g., *pʿaxčʿim* / *pʿaxnum*, AOR *pʿaxeay* 'to flee, run away' or *hagnčʿim, hageay* 'to rest, repose'. These forms will not be discussed here since their participial formation is secondary, built upon the causative stem, thus *pʿaxucʿeal*, *hangucʿeal*.

The *-(n)čʿ*- presents are most probably related to an IE *-sḱe/o- formans, and align with, e.g., the Latin formations in *-ēscō* such as Lat. *rŭbēscō* 'to turn red', and signify 'daß das Subjekt in einen bestimmten Zustand gerät' (KLINGENSCHMITT 1982:77).[127]

2.1.6 Summary of verbal groups

It has been suggested above that the overlap between groups **A**, **B**, and **C** is relatively small and largely restricted to verbs in *-num* and *-anam*; occasional exponents of atypical behaviour have been shown to be linked either to secondary formations or frequency effects.

Group **A** therefore consists largely of originally thematic verbs and primary nasal-suffix presents; group **B** is restricted almost exclusively to denominative formations with a mixed Indo-European and contact language heritage. In group **C** are contained Indo-European perfects, athematic, denominative, factitive, and other secondary formations, which are likely to have arisen in their current form later in the development of Proto-Armenian than those in at least group **A**.

All this suggests that there is a correlation between present, aorist and participle formation, the nature of which will be explored in what follows.

To understand the various aorist formations, and in order to determine whether the above grouping has a specific and relevant chronological order, theories concerning the formation of the aorist in general, but most specifically that of the *-cʿ*- aorist, must be consulted and compared. It is on this basis that further comments concerning

[127] It is to be noted that the *-sḱe/o- suffix had other reflexes as well, thus *-cʿ*- in, e.g., *harcʿanem* 'to ask, request', cp. Ved. *pṛchá-*, Lat. *poscō*, all < *pṛḱ-sḱe/o-.

the underlying reasons for the grouping suggested above and its relevance to the formation of the participle will be made.

2.2 Historical overview

In view of the grouping proposed in section 2.1.1, the question arises whether the innovative *-c‘-* aorists may have originated within one of the above-established groups or subgroups, and what precisely its likely Indo-European ancestry is.

This section will address these questions in presenting the history of scholarship on the topic, weighing the arguments speaking in favour of various theses against each other and finally proposing which origin seems most likely given the evidence from phonological change, word and stem formation, and cognates in other IE languages.

Approaches that consider a sigmatic aorist the origin of Armenian *-c‘-* will be discussed first, together with an outline of the problems that go along with this hypothesis.

Thereafter, the more widely accepted assumption that the Armenian weak aorist marker derives from an old imperfect formation in *-sḱ- will be presented along with a some parallels in other Indo-European languages.

Finally, the implications of accepting one or the other theory presented with regard to the formation of the past participle will be discussed.

2.2.1 Continuation of PIE *s-aorist

A number of proposals link the Armenian weak aorist in *-c‘-* with the Indo-European sigmatic aorist. In what follows, they are presented briefly according to the derivation of *-c‘-* suggested.

2.2.1.1 Sigmatic aorists in *-ss- (Klingenschmitt 1982)

Klingenschmitt (1982) advocates an extended sigmatic aorist as the basis of the Armenian *-c‘-*, calling into doubt both the possibility that Armenian could have used the PIE preterite as a continuation of the aorist, and that *-sḱ- should yield *-c‘-* in

Armenian.[128] He suggests that *-c‘-* derives from *-ss- by dissimilation of the first dental spirant into a dental stop (cp. Ved. AOR *avātsam* ‘to dwell’ < *a-u̯ās-sam) and subsequent phonemisation (1982:287).

KLINGENSCHMITT does not clarify whether the first *-s- is aoristic or belongs to the stem, thus requiring analogical mechanisms for spreading throughout the paradigm. SOLTA (1984:73-4) calls this suggestion an ‘unglückliche Idee’, and is likely right to reject it as *ad hoc*, as it has no IE backing; it furthermore contravenes Armenian sound laws, since, e.g., *$h_1$es-si > Arm. *es* ‘thou art’, not *ec‘; further cf. KORTLANDT (1995).

2.2.1.2 Sigmatic aorists based on consonant-final stems

PEDERSEN does not treat of the aorist formation in itself in any great detail, but in his discussions of Armenian historical phonology makes two relevant observations: on the one hand that a small set of words with dental-final seem to show a sigmatic aorist from which is then built the present stem, e.g. *anicanem*, 1.SG.AOR *anici*, 3.SG.AOR *anēc* ‘to curse’ < *$h_3$neid̯-s- (cp. Gk. ὄνειδος ‘reproach, rebuke’); *xacanem*, 1.SG.AOR *xaci*, 3.SG.AOR *exac* ‘to bite, chew’ < PArm. *xad-s- (possibly cp. Skt. *khādati* ‘to chew’); and *hecanim*, 1.SG.AOR *hecay* ‘to mount, ride’ < *sed-s- (Gk. ἕζομαι ‘to seat oneself, sit’). In these verbs, Arm. *-c-* reflects a development from *-ds-, so PEDERSEN (1906: 423; also cp. BUGGE 1893:47).

PEDERSEN further lists other instances in which original sigmatic aorists have survived and served as the basis for present stem formation, yielding the same phonological form as taken by the weak aorist, e.g. Arm. *luc‘anem*, cp. Skt. AOR *arociṣṭa*, showing a combination of palatal and *-s- (1906:425).

PISANI follows PEDERSEN and extends the argument by suggesting that *-s- furnishes the weak aorist marker *-c‘-*, too, as well as the GEN.PL marker *-c‘*. He reconstructs the latter ending on the basis of the pronominal *-sōm,[129] where *-c‘* is the result of *-s- combining with preceding consonants, specifically *-t- and the palatal series

[128] He admits, however, that such a change could be analogical (KLINGENSCHMITT 1982:286).

[129] Cp. the analogically created *-sōm genitives in Latin and Greek, e.g. *amicārum* ‘of female friends’ (cf. ERNOUT 1953:22, 32; PALMER 1954:242).

under word-final apocope.[130]

Kortlandt toes the same line as Pedersen regarding *anicanem*, *xacanem*, and *hecanim*. He rejects Godel's suggestions (1975) that these should be the result of consonant + *-ye/o- clusters, which are more likely to yield palatal rather than dental affricates, cp. *mēǰ* 'middle' < *med^{h}-i̯o- (Kortlandt 1987:51).[131]

Even more radically, Kortlandt later also proposes that the weak aorist in *-c'-* derives from sigmatic aorists in general; for him, it is based on analogical levelling from such phonological environments where *-s- follows upon dental or laryngeal (1995:15).

He adduces parallels for analogical processes of such an extent in the formation of secondary aorists in Ved. *-iṣ-*, which were originally restricted to roots with final laryngeal but later spread across classes, as well as the similar case of the spread of OCS *-x-* as the aorist marker, which had originally started as a phonological variant of *-s- after *-i-/-u-/-r- (1995:14).

Specifically, he suggests that *-c'-* is the expected result of *-Ts- and *-K̂s-, whereas *-Hs- yields *-ac'-*. Middle aorists in *-eay* (which do not show this marker) accordingly derive from thematic aorists in *-ēs- (cf. Godel 1975:121).[132]

In a further attempt at integrating the formation of the Armenian aorist with the Indo-European sigmatic aorist, Kortlandt (1996) further argues that next to a group of verbs that form thematic or root aorists, e.g. *mtanem* 'to enter' < *mud-, aor *mti, emut*, there is also a large group of sigmatic aorists, e.g. *mucanem* 'to introduce' < *meuds-, whose present stem is in fact secondarily built on the aorist (1996:42).

[130] This approach is problematic at least in so far as the gen.pl marker is not preceded by consonants of this series in all lemmata. This derivation therefore relies on an analogical spread from a likely quite small number of nouns.

[131] Godel (1965:25) proposes that 'arm. c, comme gr. ζ, est le produit régulier de *dy', suggesting that these verbs continue *-i̯e/o- presents, especially since these verbs all form synchronic root aorists (*hecanim, hecay; anicanem, anēc; xacanem, exac; mucanem, emuc*) comparable to the aorists derived from Indo-European imperfect forms such as *berem* ∼ *beri* 'to carry'. This similarity, however, raises the question why a certain subset of *-i̯e/o- presents should form aorists based on Indo-European imperfects, while a different subset uses innovative *-sḱe- forms, esp. since there is no clear morphological, semantic, or phonological difference between them. The suggestion that Arm. *-c-* < *-T-i̯ -, still advocated by Klingenschmitt (1982:192–3) and Olsen (1999:88), has been refuted on numerous occasions (Pedersen 1905:206, 1906:423-7; Kortlandt 1994; Martirosyan 2010:83).

[132] The expectation that all *-Ts- clusters should yield *-c'-* is contrary to what Kortlandt has suggested before (1987), and raises the question whence derive the forms mentioned there. Similarly, the provenance of the Arm. *-ea-* vocalism is left unexplained.

According to his reasoning, at the time that *-s- was lost in Proto-Armenian, the various previously formed combinations of dental or palatal stop and *-s- had all phonemically coalesced to PArm. *-c‘-, thus providing the new aorist marker for Armenian.[133] Consequently, the root-final consonants were analogically restored in those verbs where other outcomes are phonologically predicted, thus e.g. *mucanem, emuc* with *-c-* < *-ds-.

Apart from the phonological issues mentioned, Pisani's and Kortlandt's proposals fail to explain how or why this aorist formation, based only on a small minority of verbs, should have spread analogically through large parts of the verbal system; the approach is further undermined by the fact that in verbs such as *anicanem*, the aorist is synchronically strong, and does not show the same phonological outcome as do the weak *-c‘-* aorists.

It does remain plausible to assume, however, that sigmatic aorists have been retained in Armenian for a select set of verbs, e.g. those in final dental. Pedersen's observation that all these verbs form a secondary present may in turn entails that synchronically, these aorists were considered akin to root aorists (cf. group **A** above).

2.2.1.3 Summary of proposed sigmatic aorist formations

Numerous attempts at connecting the Indo-European sigmatic aorist with the Armenian *-c‘-* aorist marker have been made, but it seems unlikely that any of these suggestions can cogently account for both the phonological form of the marker and its spread.

The suggestions put forward by Klingenschmitt (1982) and Kortlandt (1996) clearly and openly violate established and, as far as the data permits, well-evidenced sound laws.

An earlier approach of Kortlandt (1995) relies too heavily on analogy, since the number of verbs which form the basis of this supposed analogical change is rather small, and they are unlikely to have been frequent enough to effect such change.

The explanations advanced to explain the etymology of *anicanem, hecanem, xa-*

[133] Kortlandt (1996:43) then concedes that this change is contrary to sound laws, but morphologically sensible and thus an acceptable exception.

canem, *etc.*, however, are cogent with the data from Indo-European sister languages. Accordingly, the Indo-European sigmatic aorist has reflexes in Armenian, but they have not analogically spread across all verbal classes.

The proposal of Kortlandt (1987) concerning the partial retention of sigmatic aorists in some paradigms, on the other hand, may be phonologically plausible, but seems unnecessary; given the other forms of the paradigm, here assuming an analogical replacement would appear more straightforward.

A further possible application of the *-s- marker lies with the *-eay* aorists; Mariès (1930), Godel (1975) and Kortlandt (1995) are in agreement at least concerning the possibility that *-s- should have occurred in this formation, e.g. as *-ēs-; barring any further evidence and parallels concerning the vocalism, it must be left open whether *-e-* is the reflex of a thematic marker, a stative, or another formation of Indo-European origin.

2.2.2 Continuation of PIE *sḱ-imperfect

In this section are collected a number of attempts at explaining the Armenian weak aorist as reflex of an Indo-European formans -sḱe/o-, which in other languages is found as a frequentative or imperfect marker.[134]

All of these explanations, in one way or another, relate to Meillet (1903:85–6), where it is suggested that the weak aorist marker *-c‘-* is cognate with an imperfect marker employed in Greek; the *-ea-* vocalism of the 3.sg.aor is there described as being of unknown or obscure origin.

2.2.2.1 Arm. *-eac‘-* < *-is-ā-sḱe/o- (Mariès 1930)

Mariès' explanation became the *communis opinio* for a long time (cf. Solta 1963:122 n. 8). He expands on Meillet (1903) in attempting to find an explanation for the *-ea-* vocalism of the aorist.

In his view, the derivation of Arm. *-c‘-* from *-sḱe/o- is undeniable, while a connection between the Arm. *-a-* in *-eac‘-* and *-ā-,[135] occurring also in Lat. *erās* ‘thou

[134] For the outcomes of *-sḱe/o- in Greek, cf. Zerdin (1999).

[135] No attempt will be made at identifying or clarifying the original function of this formans, as this

wert', *fēcerās* 'thou hadst done' and Lith. *bùvo* 'he has been' (o < *ā) is 'plus que vraisemblable' (1930:168).

Mariès notes that an *-ā- formans is found in two different functions in Armenian, once in the formation of the present, and in the aorist stem. In the present, the formantia *-ā-i̯e/o- and *-ā-ne/o- are found in regular thematic and denominative verbs such as *orcam* 'to vomit', *yusam* 'to hope', and *loganam* 'to wash oneself', *tkaranam* 'to become weak'. These verbs continue this *-ā- in the aorist, thus *orcac'i, yusac'i*, and *logac'ay, tkarac'ay*.[136] This Arm. *-a-*, accordingly, is not part of the aorist formation, but of the verbal stem.

In other verbs with weak aorists, *-ā- does form part of the aorist formation in the sequence *-ea-*, which is said to derive from a PArm. *-i-a- in hiatus, as seen in, e.g., *teł*i, ins.sg *teł*e*aw* 'place' < *-iaw < *-i̯ab^{h}i. Mariès finds the formans -ii̯a- to be morphologically implausible, and thus suggests *-is-, an aorist marker attested in, *inter alia*, Skt. *ábhāriṣam* 'I carried' and Lat. *ēg-is-tis* 'you drove'. The formation of Arm. *gorceac'* 'he worked' from *u̯orĝ- thus involves a sequence *-is-ā-sḱe/o-. Note here that individually, both *-ā- and *-sḱe/o- are usually found in past tense formations, as indicated above, and further evidenced by Homeric imperfects/injunctives such as Hom. φάσκον 'I said', φύγεσκον 'I fled'. This approach, later adopted by Meillet (1936:115-6), raises some questions. The sequence of formantia envisaged, viz. *-is-ā-ske/o-, seems typologically rather improbable, since aorist and present/imperfect markers would seem incompatible; similarly, the markers *-ā- and *-sḱe/o- are not necessarily expected in company (cf. Karstien 1956:223). Furthermore, it is unclear why there is a marker *-is- as the aorist marker in absence of either a complementary *-s- formans in the same type of formation or plausible phonotactic reasons.

2.2.2.2 Re-analysed imperfect in -sḱe/o- (Karstien 1956)

Karstien, in an influential paper, approaches the problem from a different angle and suggests that there may be a closer relation between the Armenian aorist for-

would go beyond the remit and purpose of this chapter.

[136] Note the difference in treatment of the suffixes: *-ā- is preserved in the aorist formation, whilst the present stem formantia -i̯e/o- and -ne/o- are dismissed; this suggests that for all purposes, the synchronic verbal roots must include the *-ā- marker.

mation and that of the Slavonic imperfect, advocating a relationship between Slav. *-aše-/-acho-* and Arm. *-acʻe-*, that is the aorist of some group **C** verbs such as *mnam*, AOR *mnacʻi* 'to remain'.

He draws on the already mentioned insight that the *-ā- element as a past marker is not uncommon in a number of IE languages, citing, *inter alia*, Lat. *erat* 'he was', *cūrābat* 'he took care' and Lith. *kovójo* 'to struggle, fight', *turėjo* 'to have'; this suggests that this morpheme may be the past formans, while Slav. *-che-/-cho- and related elements can only be allotted 'eine begleitende Rolle als modifizierendes Element' (1956:221).

The suggestions that non-aoristic past tense formations may have been reinterpreted as an aorist is unproblematic in view of forms such as *eber* 'he carried' and *eharcʻ* 'he asked', both of which reflect original Indo-European imperfects, cp. Ved. *ábhārat* and *apṛcchat*. Since Armenian verbs with *-acʻe-* aorists most frequently are secondary, e.g. denominative formations, which in other languages often have no original aorist but only an imperfective past or a suppletive aorist form (cf. KLINGENSCHMITT 1982:128), KARSTIEN's argument is plausible.

To explain all weak aorist formations, KARSTIEN proposes the following distinction between the various *-cʻ-* aorists:

- type *gitacʻ* ∼ *gitem* 'to know', where *-acʻ-* is added directly to the verbal root;[137]
- type *gorceacʻ* ∼ *gorcem* 'to work', where a formans *-e-* appears between verbal root and tense marker;
- type *mnacʻ* ∼ *mnam* 'to remain', *yusacʻaw* ∼ *yusanam* 'to hope', consisting of denominative verbs whose present stem ends in *-a-*, thus showing only a *-cʻ-* aorist.

KARSTIEN does not discuss the first type in great detail, only mentioning *gitacʻ* as a secondary formation on the basis of an old perfect comparable to that of Goth. *wissa*, OHG *wissa, wista*, since *gitem* derives from *u̯oid-, cp. Gk. οἶδα.

[137] There are only four of these verbs, *gitem* 'to know', *asem* 'to say', *karem* 'to be able', *martʻem* 'id.'; see 2.1.4.1 above.

The *-e-* interfix of the second group is identified as continuing either the Indo-European causative-iterative marker *-éi̯e- or the denominative suffix *-i̯é- added to the thematic vowel, the outcomes of which are indistinguishable in Armenian; cp. Gk. φορέω, φιλέω, φοβέω, Ved. *patáyati, svāpáyati, amitrayáti* (1956:222). This analysis squares well with the observation that *-eac‘-* aorists are most commonly found in denominative and other secondarily formed verbs.

The second element of the formation corresponds to the marker already envisaged by Mariès and Meillet, that is *-sḱe-.

While in Slavonic the *-sḱe- marker was restricted to the past, in Armenian it is employed both as a present tense marker, e.g. in *harc‘anem* ‘to ask’ < *pṛ̂k-sḱe/o-, a causative formans (verbs in *-uc‘anem*, cf. Solta 1963:118), as well as in aorists, e.g. *elic‘* < *e-plē-sḱe-t, and subjunctives. On this basis, Karstien (1956:227) concludes that ‘[a]ngesichts dieser Vielfalt des Vorkommens kann von einer bestimmten Funktion des arm. *-c̣e-* [-c‘e-] keine Rede sein, indem es sich sowohl in temporaler als such in modaler Hinsicht als indifferent erweist’. Accordinly, *-sḱe- cannot have been the imperfect marker in either Slavonic or Armenian; rather, this function is taken up by *-ā-.

This does stand in contrast to, and potential contradiction of the Greek evidence, where Homeric imperfects show that the *-sḱe- suffix can function as a past tense marker; this, of course, need not have been the case in Slavonic in Armenian.

Godel generally agrees with Karstien, and in view of the various aorist formations concludes that

> il faut donc qu’à l’époque où on a passé du système indo-européen au système arménien, l’opposition d’aspect qui distinguait l’imparfait de l’aoriste et déterminait les fonctions de ces deux ‘temps’ se soit effacée, et que seul soit demeuré pertinent le trait qui leur était commun: la valeur passé (Godel 1965:34)

In a small set of verbs, however, the hypothesis that *-ā- is the actual tense marker in *-c‘-* aorists is not borne out.

Aorists such as *lc‘i* ∼ *lnum* ‘to fill’, *xc‘i* ∼ *xnum* ‘to stop’, *ənkec‘i, ənkēc‘* ∼ *ənkenum* ‘to throw’ are problematic owing to the lack of *a*-vocalism; an appeal to analogy is unlikely to be fruitful since, e.g., *lc‘i* < *(e-)plē-sḱe- is likely an old, root-based forma-

tion; the most straightforward explanation, as offered already by Meillet (1936:115), suggests that these verbs were vowel-final and thus added *-sḱe- immediately to the root.

The other verbs whose etymology is clear suggest that in addition to the clusters *-ac‘-* < *-ā-ske- and *-eac‘-* < *-(e)i̯e-ā-ske-, a formation in *-e(i̯e)-ske- must be assumed Godel (1965:37).

On this basis, Godel (1969) raises doubts concerning the primacy of the *-ea-*cluster. He suggests that in analogy with the declension of the participle (nom.sg *-eal*, gen.sg *-el-oy*), the *e*-monophthong may be primary (1969:256).[138]

Accordingly, he suggests that the relationship between *-eac‘* aorists and their present stems may be parallel to the one suggested for *-ac‘* aorists: the *-sḱe- formans is added to the present stem directly, and *-ec‘ turns into *-eac‘* under word-final stress.[139]

It remains impossible, however, to determine whether this was done on the basis of Indo-European type formations in e.g. *-āi̯e- and *-ei̯e- still, or whether these had already been simplified to PArm. *-a- and *-e-, respectively. Further, Godel’s pattern is not applicable across all verbal classes forming weak aorists, since, e.g., *asem* ‘to say’, aor *asac‘i* does not follow suit.

Clackson (1994:75), finally, also advocates a derivation of the aorist from an Indo-European imperfect in *-ă-sḱ- based on the present stem. He proposes that the marker spread from the verbal groups in *-num*, *-am* and *-anam* (1994:82), and explains the forms in *-eac‘-* as a combination with the thematic vowel, thus *-e-ā-sḱ-.

[138] This is doubtful, since the main form of the participle is its nominative, all other forms are subsidiary. The same could be said about the aorist itself, but there analogies with other persons in the paradigm seem more likely.

[139] Godel (1975:128) considers the avoidance of forms terminating in tonic *-e(-)* as a potential motivation, citing as a related example form of the aor.imv *grea* for *gre ∼ *grem* ‘to write’. The imperative, however, can hardly be used as an analogical model. Further, Godel does not take into account that other aorist forms, e.g. *egit, eber, eker*, which show similarly labile vowels in tonic position, do not strengthen and diphthongise (cf. already Hübschmann 1895:411; also cf. Clackson 1994:81–2). Klingenschmitt (1982:136) further counters Godel’s suggestion, citing *ənkēc‘* < PArm. *ənd-kéc^{h}e(t^{h}) which was not analogically transformed to *-ea-* (1982:136).

2.2.3 Summary

Phonologically, the derivation of the weak aorist marker Arm. *-c‘*- from *-sḱ- is unproblematic and finds good evidence in other well-attested formations such as *harc‘anem* ‘to ask, request’, cp. Ved. *pṛcchá-*, Lat. *poscō*, all < *pṛḱ-sḱe/o-.

Given the evidence from the denominative verbs and the occurrence of other imperfect formations re-analysed as aorists, it is only sensible to assume that, as suggested by Godel (1965:34), Klingenschmitt (1982:128), and others, a functional shift in tense formation must have taken place.

As far as the vocalism is concerned, a sufficient explanation must account for:

- the occurrence of *-c‘*- right after the verbal root (type *lnum, lc‘i*);
- verbs presenting with an *-ac‘*- aorist (type *mnam, mnac‘*); and
- verbs exhibiting *-eac‘*- aorists (type *gorcem, gorceac‘*).

While tempting, Godel’s view that the *-eac‘*- vocalism is secondary is untenable in view of, *inter alia*, Hübschmann’s and Clackson’s arguments. The latter’s approach, based on the work of Karstien, seems the most logical: the *-c‘*- marker originates with group **C** verbs, consisting largely of denominatives or verbs with otherwise secondary present formations and meanings, which in most other languages, too, would not have had aorists of Indo-European age.[140]

The origin of forms like *lc‘i* ∼ *lnum* ‘to fill’ < *pleh$_1$-sḱ-, cp. Gk. πίμπλημι, Lat. *plĕo*, where the *-ā- does not occur, are difficult to explain; it seems unlikely that they should be analogical formations. Forms in *-eac‘*-, on the other hand, are likely the result of the group **C** type *-ac‘*- aorists spreading to thematic formations in group **B**.

2.2.4 Implications

If the situation and explanation given above is accepted, certain implications for the formation of the past participle arise.

[140] Cf. Schmitt (2007).

As will be shown below, most approaches link the formation, and thus the vocalism, of the aorist in *-eacʻ-* and the *-eal* participle, suggesting that they are based on the same stem. In view of the likely development of the aorist, however, this seems improbable: not only does a significant number of primary verbs, group **A**, form aorists that bear no relation to the *-cʻ-* marker and stem; furthermore, all participles encountered exhibit an *-ea-* vocalism, whilst aorists show differentiated vowel patterns (Ø, *-a-*, *-ea-*). Were the two forms related, it might be expected that they should have developed together.[141]

The following section will therefore discuss proposals concerning the formation of the participle in greater detail, pointing out its issues and, where necessary, suggesting alternative explanations.

2.3 Participle formation

Taking into account the insights won concerning the formation of the aorist and the structure of the Armenian verbal system, the following section is going to attempt to tie in an explanation of the formation of the *-eal* participle that can conform to all synchronic necessities and is semantically as well as diachronically sensible.

First, a very brief synchronic perspective of the participle formation is given, and the formational issues expounded.

Then, the discussion explores whether it is more sensible to link the Armenian past participle to Indo-European *nomina agentis*, or whether is is better described as a reflex of a verbal adjective of Indo-European age.

After a summary of the issues thrown up by previous explanations, a new solution to the question of the *-ea-* vocalism in the participle and its relationship to the previously discussed aorist formation is presented.

[141] The situation in Greek may be adduced in contrast; here, synchronically strong and weak aorists, e.g. λαμβάνω, ἔλαβον 'to take' and παιδεύω, ἐπαίδευσα 'to educate', form related participles λαβόμενος and παιδευσάμενος without one tense formation encroaching on the ground of the other.

2.3.1 Synchronic overview

From a purely synchronic perspective, the formation of the participle is, like that of the aorist, dependent on the conjugational class of the verb in question, and thus on its present stem.

As has been suggested above, section 2.1.1, four classes can be distinguished:

A synchronic root aorists and root participles (*berem, beri, bereal* 'to carry');

B -c'- aorists and root participles (*gorcem, gorcec'i, gorceal* 'to work';

C -c'- aorists and participles based on the -c'- stem (*ateam, atec'i, atec'eal* 'to hate');

D other patterns, esp. intransitive aorists with a participle based on the causative (*kornč'im, koreay, koruseal* 'to perish').

Descriptions in grammars usually state that the participle is built on the basis of the aorist stem, with the exception of certain verbs (groups **B** and some in **D**), where the participle formation is based on the present stem (Jensen 1959:105-6). While the differences in aorist formation have their origin in the difference in verbal semantics and are correlated to present tense formations, as suggested above, the fact that the formation of aorist and participle are, in their respective stems, not coextensive, resulting in the mixed group **B**, is puzzling both synchronically and diachronically.

As will be explained in what follows, there are, over all, two types of proposed derivation of the *-eal* participle: one suggesting an original Indo-European nominal stem, the other proposing derivation from a verbal adjective.[142]

2.3.2 Continuation of PIE nominal

Meillet recognises a formation in PIE *-lo- in the *-eal* participle,[143] corresponding to that of its Slavonic counterpart; he cites the parallel example OCS *nes-lŭ jesmĭ* 'I have

[142] A supposed nostratic connection with Georgian *l*-formations as proposed by J̌ahukyan (1979:87) was discussed and rejected by Stempel (1983:40), and will be given no further attention here.

[143] Next to the participle, the infinitive and deontic verbal adjective are also *-lo- formations, e.g. *berem*, inf *berel*, vbadj *bereli*; it is often assumed that participle and infinitive were at one stage a single form, and split only secondarily (Meillet 1936:129; Klingenschmitt 1982:57; Stempel 1983:67). This relationship is not further discussed here, as all proposals are deemed unlikely.

carried', and notes its assumed original meaning as 'I am a carrier'. It is on this basis that he explains the agentive genitive for the Armenian transitive perfect (based on an otherwise intransitive participle), viz. as an original adjunct to a *nomen agentis*.[144]

While Meillet (1936:116) states simply that the *-lo- formans attaches to the Arm. *-ea*-stem, Mariès (1930) more explicitly links its formation to that of the aorist forms: in the example *gorceal*, he suggests that *-eal* derives from a formation *-is-ā-lo-, where the *-sḱe/o- suffix found in the aorist has been replaced by *-lo-;[145] the formation must be an innovation since it is not based on the verbal root, as found in Slavonic (*nes-lŭ* 'carried' < *neḱ-), but rather on the aorist stem.[146] In his view, the *-lo- form is, in fact, a deverbal *nomen agentis* (1930:170).

On the basis of this formation, Mariès suggests that *-ā- in this formation designates not the past tense, but a state, specifically 'la mise en un état d'action ou de passion', wherefore the Armenian aorist is intrinsically not a past tense. Similarly, the participle is not specified as to tense, but rather aspect and describes 'un changement in instanti de process aboutissant' (1930:172).

Regarding the chronology of aorist formations, Mariès advocates that verbs in *-em*, aor *-ec'i* with participles formed on the verbal root (group **B** above) formed this participle first.[147] This assumption is largely based on their close morphology in aor

Klingenschmitt's proposal that the infinitive must derive from the participle is problematic since only the *-el* infinitive of the *-em* verbs was taken as an analogical basis and not those of other diverse verb class with similar endings (*-am*, *-anam*; *-um*, *-num*), and because no cogent explanation has been given why or how an infinitive analogically transposed into the aorist no longer fulfils an infinitival function or *vice versa*. Since the infinitive is not overtly an oblique-case form of a nominal as many other Indo-European infinitive formations (Disterheft 1980: 9-10), it is not immediately obvious how closely related the Armenian participle, infinitive, and verbal adjective truly are.

144 Meillet is not very clear as to what type of nominal the Armenian participle is meant to be specifically; while the Slavonic form is interpreted as a *nomen agentis*, his translation of the phrase Arm. *nora bereal ē* as 'il y a porter de lui' suggests that for Armenian, he has in mind a *nomen actionis*, instead.

145 Concerning aorists in *-eay*, Mariès notes that, whilst there are no reasons suggesting that verbs with such aorists should not derive from *-is-ā-, too, the formation of their participles speaks against such a derivation. They are formed secondarily on the basis of a factitive stem, e.g. *p'axč'im* 'to flee', aor *p'axeay*, ptcp *p'axuc'eal*. Instead of *-is-ā-, he concludes that *-ea-* in these verbs forms must derive from *-i(i̯)-a-, without, however, giving any indications as to what function that suffix fulfils. In view of his own admission that there are non-secondary participles of some of these verbs based on the verbal root, e.g. *t'ak'eal* ∼ *t'ak'čim*, this analysis does not convince. For a brief introduction to the Armenian factitive/causative, cf. Kortlandt (1999).

146 Mariès does not actually provide a definition of 'aorist stem', at least not in an Armenian context; given his analysis, this might have proved problematic owing to the differences in treatment of verbal suffixes as described above, 2.2.3.

147 There are later, secondary *-ec'eal* participles based on verbs in *-em*, aor *-ec'i* (group **B**). It is

*-is-ā-ske/o-, PTCP *-is-ā-lo-.[148]

DEETERS (1927) rejects MARIÈS's and MEILLET's suggestions that the participle is a nominal form on logical grounds (see 3.2.2.1 below), and voices serious doubts that the *-lo- suffix can attach to an aoristic stem—defended by MARIÈS (1930:170) as a result of 'l'extrémisme arménien'—since the evidence from all the other languages with *-lo- suffixes points to its attaching to the root or present stem; his appeal to the unusual nature of Armenian is uncalled for.

The most recent advocate of a nominal formation is KLINGENSCHMITT, according to whom the *-eal* participle is, in its formation, a relict from a period in which the participle was built by suffixation of *-l* < *-lo to the 'Basisstamm (allgemeinen Verbalstamm' (1982:55)—presumably the verbal root—,[149] whereas all forms based on the *-c'*-aorist stem are secondary. Remnants of such formations are present in participles that are mainly used as adjectives, e.g. *arbeal* 'intoxicated', *merjeal* 'close', relating to the verbs *arbenam, arbec'ay* 'to get intoxicated' and *merjenam, merjec'ay* 'to approach'.

Concerning the rise of participial formations based on the aorist stem, e.g. *aṙnem*, AOR *arari*, PTCP *arareal* 'to do, make' and *gnam*, AOR *gnac'i*, PTCP *gnac'eal*, KLINGENSCHMITT (1982:56) suggests that they are due to the phonological likeness (and thus conceptual conflation) of thematic verbs in *-em* and denominative verbs in *-em*, e.g. *berem* and *gorcem*; while both verb classes build the participle on the verbal root, verbs like *berem* also have root aorists. Owing to the perceived past reference of the participle, and the perception that they were formed on the aorist stem (*berem*, AOR *beri*, PTCP *bereal*), this mechanism was analogically extended to all other verbs.

suggested that they were formed once the repetition of *-is-ā- was no longer perceived (1930:173). With AYTƏNEAN AND ARSĒN (1885:71), MARIÈS assumes a voice differentiation, whereby forms passive in meaning are more likely to show an *-ec'eal* participle; exceptions, however, are not rare and VOGT (1937:6) notes that no difference in semantics or voice is apparent; also cf. ABRAHAMYAN (1953:170ff.). Without any further explanation, the *-ec'eal* form is then reanalysed as derived from the aorist medio-passive imperative, thus for example *sirem* 'to love', AOR *sirec'i*, AOR.IMV.ACT *sirea*, AOR.IMV.MED *sireac'*, whence *sireac'-eal > *sirec'eal* (attested postclassically). ŠAHVERDYAN (1988) suggests that most *-eal* participles are derive from forms in *-ec'eal* by haplology; this explanation, however, cannot convince, owing to the evidently secondary, late nature of such participles in derived *-em* verbs.

[148] MARIÈS (1930:175) further proposes that the largely transitive nature of these verbs predisposes them to become *nomina agentis*; this, however, seems neither a necessary prerequisite, nor indeed in tune with the elementary use of the participle.

[149] KLINGENSCHMITT does not discuss the *-ea-* vocalism with respect to the participle separately, but assumes it is the same vocalism as for the aorist.

2.3.3 Continuation of PIE verbal adjective

A different perspective is offered by Solta who suggests that '[d]ie einfachen l-Bildungen haben den Charakter von Partizipien oder Adjektiven, nicht so sehr von Nomina agentis' (1963:109; cf. Meillet 1932). His claim that the other Indo-European languages apart from Slavonic only show adjectival outcomes of this formation, e.g. Lat. *crudelis* 'cruel', Gk. cīγηλόc 'silent', Got. *sakuls* 'quarrelsome', OE *slápol* 'somnolent' (1963:109 n.4) is somewhat reductive in view of Gk. τρίβολοc 'caltrop', Lat. *figulus* 'potter', which point toward nominal formations.[150]

Godel, too, mainly draws comparisons to *-lo- adjectives in other Indo-European languages, such as Gk. δειλόc 'cowardly', Lat. *pendulus* 'hanging', as well as to the verbal adjectives of Tokharian and the past participle active of Old Church Slavonic, as used in, e.g., the perfect *bilŭ jesmĭ* 'I have struck'.[151]

The vocalism of the participle is left unexplained, partly since no comparative evidence is found in Slavonic or Tokharian. Godel does extrapolates from single forms such as *kʻałcʻeal* < *kʻałcʻi-al 'hungry' and so-called 'archaic' participles, e.g. *edeal* < *edi-al 'given', *leal* < *ley-al 'been', that *-al* must be the real participial marker, whereas *-e-* is the outcome of a variety of stem vowels (1975:129). Since Godel does not discusse the origin of supposed PArm. *-alo-, either, and assumes a very late creation of the participle at a stage when PArm. *edi- < *e-d^{h}eh$_1$-, etc. was already established, this explanations seems unlikely.

Stempel, in turn, focuses on the parallels and differences between the Armenian participle and the Slavonic past participle active in *-lъ*, cautioning that although both forms are a productive part of the verbal system, distinct differences between the formations exist: the Slavonic participle is usually root-based and active in meaning,

[150] Solta's take on the participle formation is also rather simplistic; he only states that the *-eal* participle is primary and originally restricted to *-em* verbs, thence spreading across the paradigms, whilst more complex *-ecʻeal* formations occur both independently and instead of *-eal* forms, thus establishing a voice differentiation as in, e.g., *sireal* 'having loved' vs *sirecʻeal* 'having been loved' (1963:123); but cf. the discussion above, fn. 147.

[151] Godel (1975:128–9) strictly separates *l*-infinitive and *-eal* participle formation, since 'adjectives do not evolve to infinitives' (see fn. 143 above), and suggests that the infinitive developed from less frequently attested *nomina actionis*, originally formed on the basis of the verbal root initially, but later remodelled on the standardised present stem. The Armenian verbal adjectives in *-li*, e.g. *sireli* 'lovely', are taken as denominal adjectives in *-iḭo/ā- and compared with similar formations such as *ałi* 'salty ∼ *aɫ* 'salt', *akani* 'clear-sighted' ∼ *akn* 'eye'.

aligning it with Germanic and Latin *nomina agentis* (1983:44), whilst the Armenian form is historically passive-intransitive. Although Tokharian verbal adjectives are also passive in the main, and are built on the present (and subjunctive) stem, Stempel underlines that owing to the relatively late attestation of Slavonic, Tokharian and Armenian, no certain conclusions may be drawn concerning the value of verbal *-lo- formations in Proto-Indo-European, since all developments could have been *einzelsprachlich* or at least *nachursprachlich*.

Within Armenian, the *-lo- formans seems to have taken over from the *-to- participle which for phonological reasons was unstable in Armenian and is only attested in a small number of words (1983:48). Stempel argues that much speaks in favour of *-lo- as a passive verbal adjective having taken over this function: Arm. *joyl* 'molten, poured, massive' < *ĝʰe/ou̯-lo- suggests an old, athematic formation which attests to such a function separately from the verbal paradigm. As opposed to the *nomina agentis* of similar formation in other Indo-European languages, the Armenian formation must have been an adjective *ab initio*, since the adjectival use of both *joyl* and the *-eal* participle would otherwise have required further derivation with an adjectival formans (1983:47).[152] Weitenberg (1986) objects that there are a number of nominal *-lo- formations in Armenian (*tesil* 'vision', *argel* 'obstacle', *katʻil* 'drop', *erkiwł* 'fear') and other Indo-European languages (OIr. *ól, oul* 'drinking', Ru. *pojlo* 'drink'), which could but need not have arisen through secondary nominalisation.

Regarding the specific formation of the participle in *-eal*, Stempel agrees with Schmitt (2007) that the vocalism *-ea-* in aorist and participial forms is identical (1983: 62), and like him explains the *-cʻ-* formans as a primary imperfective *-sk̂-, later generalised as *-ā-sk̂- on the basis of a-stems, whence *-acʻ-*, and applied to *e*-stems, yielding the formans *-eacʻ-*; for him, the *-ea-* of the participle is an analogical formation.[153]

[152] A further parallel is drawn to the close relationship between infinitive and participle in Germanic, both of which are based on *-no- formantia, mirrored to some extent in parallel Armenian forms, which Stempel derives from *-lo-. The parallel seems argumentatively unhelpful, however, since Germanic uses different ablaut grades for each formation.

[153] Stempel, too, derivies both *-el* infinitive and *-eal* participle from a PArm. *-lo- verbal adjective, suggesting a proportional analogy of the type *gorcecʻ**i*** : ***gorceácʻ*** :: *gorcel**óy*** : *gorc**él*** > ***gorceál***, by which the *-eal* participle has expanded the *-e-* of the infinitive under word-final stress. Thus, infinitive and participle are supposedly separated along aspectual and temporal lines (1983:67). This explanation does leave open a number of questions regarding the formation of other types of infinitives (in *-al*, *-ul*, and *-ol*) and their analogical relationship to their respective aorist forms.

His argument that the *-lo- participle is likely to have taken over from the phonologically infelicitous *-to- formans, continued only in a few lexical items such as *mard* 'man' < *mr̥-to- and *li* 'full' < *pleh$_1$-to-, is based on the assumption that the *-eal-* form is inherently passive-intransitive; he adds that '[e]ine altertümliche Diathesenindifferenz ist für eine so junge Sprache wie das Armenische nicht zu erwarten' (1983: 67).[154] The usage of the participle as part of a perfect active must, accordingly, be secondary.

2.3.4 A new approach to the *-ea-* vocalism in the participle

Based on the hypotheses collected above, two general trends concerning the explanation of the Armenian past participle can therefore be extrapolated: the participle is either directly related to the *-c'-* aorist of group **B** and **C** (denominatives assumed not to have had aorists of Indo-European age), based on a a suffixal pattern *-ei̯-ă-lo-,[155] and has thence been analogically spread to class **A** and the remaining members of **C** (Mariès (1930) and followers); or it is the result of a differentiation between infinitive and participle, in which the *-ea-* vocalism is the analogical product of its corresponding form in the aorist ((Stempel 1983)).

In view of the likely development of the aorist suggested above, however, and various criticisms expressed concerning Stempel's ideas (cf. de Lamberterie 1985; Weitenberg 1986), neither explanation seems entirely viable.

A first issue lies with tense marking: Jasanoff (1983:71, 76) notes that the occurrence of *-ā- < *-eh$_2$- past tenses is likely to be restricted to languages in which presents of the type Ved. *tudáti* 'to beat', viz. thematic verbs with Ø-grade root and accented thematic vowel, occur in significant number; the marker itself occurs with Ø-grade roots. These prerequisites are not met in Armenian, since *tudáti*-type verbs are not well-attested. Were *-ā- the past tense marker in Armenian, the attachment of a second *-sḱe- past tense marker would seem superfluous; a secondary, analogical attachment of this suffix to *-ā- or an *-ea-* past tense suffix of a different origin is

[154] It is doubtful whether this is necessarily true since Stempel (1983) seems to conflate late attestation with late development.

[155] The length of the *-ă- depends entirely on whether it is assumed that the marker relates to other Indo-European preterites, or is the result of an analogical process.

implausible also, since both historically and synchronically the marker of the aorist is *-c‘-* < *-sk̂-, and no remnant of a simple *-ā- past tense remains, whilst forms such as *lnum, lc‘i* are evidence in favour of *-sk̂e- as the primary past tense marker.

Secondly, it ought to be noted that in the two other languages, in which the *-lo- suffix occurs as a productive part of the verbal system, it attaches to the present stem (Slavonic; cf. Lunt 2001:109),[156] or to the present/subjunctive stem (Tokharian; cf. Thomas 1952:11; Malzahn 2010:49).[157] If a secondary, analogical formation à la Stempel is excluded, as argued above, the Armenian formation would be atypical.

Thirdly, occasional occurrences of adjectives in *-eal* which bear no direct resemblance to verbal forms or whose base verb is not attested, suggest that the formation historically proposed is unlikely; amongst these may be counted *ałceal* ‘salted’ < *ałt* ‘salt’, *barjreal* ‘elevated’ < *barjr* ‘height’ (cf. Greppin 1974:205). It remains unclear, however, whether these formations are independent and indicate a nominal-adjectival formation, or whether they relate to unattested or obsolete verbal forms.

Accordingly, a different morphological analysis is called for. Given the morpho-phonological restrictions, the possibilities are severely limited. A promising solution is related to the formation of Armenian *i*-stem verbs, which are largely passive-intransitive. Meillet (1936:107-8) and with him Godel (1975:120) relate these verbs to a non-thematic variant *-i- of the *-i̯e/o- suffix accountable for the *ya*-passives in the Indo-Iranian languages;[158] the non-thematic variant occurs also in Balto-Slavic, e.g. Lith. *sėdi* ‘he is seated’, *tùri* ‘he has’, OCS *sěditŭ* ‘he is seated’, *bŭditŭ* ‘he is awake’.[159]

[156] Trost (1968:88-90), however, points out that the *l*-participle is formed in a variety of ways, e.g. from the synchronic aorist stem in OCS *dalъ* ’having given’ < *da-*, as compared to the present *dadętъ* ‘they will give’ < *dad-*, or from the general verbal stem in OCS *vъpalъ* ‘having fallen’ < *vъpad-lo, prs *vъpasti*, aor *vъpade*, *etc.* Still, it emerges that none of the possible formations are based on secondary, non-inherited stems.

[157] The exact etymology of TA *-l*, TB *-lle* is debated; Thomas (1952; 1977) argues for an origin in *-lo- and secondary differentiation within Tokharian, while van Windekens (1976), Hackstein (2003), and Malzahn (2010) assume that the underlying form is *-li̯o-.

[158] This is not to suggest that *-i̯e/o- necessarily carries a passive-intransitive meaning in Indo-European already. García Trabazo (2011), for instance, suggests that the Indo-Iranian *ya*-passives are developed within that branch. It is clear, however, that the *-i̯e/o- suffix marks intransitivity in Sanskrit class IV verbs (Kulikov 2012:761); a passive development on this basis is, if not predestined, then at least plausible.

[159] Meillet remarks, however, that in some Armenian verbs, such as *nstim* ‘to sit’, the *i*-vocalism should rather be derived from *-ē- or *-ēi̯e-; cf. Klingenschmitt (1982:129-31) for a different view.

On this basis, it may be tentatively suggested that there could have been an analogous thematic variant of this suffix, specifically *-iḭe/o-, which could have furnished the *-ea-* vocalism of the participle.[160]

Phonological parallels for the necessary developments can be found partly in *-ea-*stem nouns of the type *tari* 'year', INS.SG *tareaw*, in which original *-i- is lowered to *-e-* (Olsen 1999:113-4), and other paradigmatic alternations like *jiwn* 'snow', GEN.SG *jean* (1999:135; also cp. Martirosyan 2010:434-5) or *-utʿiwn, -utʿean* (Olsen 1999: 550-1).

Parallels for a development *-e/o- > Arm. *-a-* are less readily available, but *tasn* 'ten' < *deḱm̥- and *vatʿsun* 'sixty' < *sṵeḱs- (cf. Arm. *vec*ʿ 'six') may be adduced for precedent.[161] Further, it is possible to assume a dissimilatory change, since a PArm. *-e-e- would have contracted and thus fallen together with the stem of thematic and some denominative verbs. In the case of an o-grade, a rendition as *-a-* in open syllable is far more common, as delineated by Meillet (1894:153-5); Kortlandt's restriction of *-o- > *-a-* to environments in which the following syllable does not contain another *-o-* (1983:10) is remedied by the apparently late application of this sound change, after apocope of the final syllable. Examples of such a development are Arm. *alikʿ* 'waves, white hair' < *poli̯o-, cp. Gk. πολιός, and *asr* 'wool, fleece' < *poḱu-/ *peḱu- cp. Gk. πόκος, Skt. *páśu* < *peḱu-.[162]

If this phonological development, i.e. *-iḭe/o- > PArm. *-i-e/o- (regular loss of intervocalic *-i̯-) > Arm. *-ea-*, is accepted, it may be assumed that the original development of this form would have occurred in the verbs of group **A** or **B**, which form the participle on the verbal root; in group **A** this often coincides with the aorist stem, but not so in group **B**. Whether it is possible that the participle formation in *-eal*, which —possibly secondarily—replaced the phonologically unstable *-to- participle, should

[160] Since there are no indications that Sievers' Law applied in Armenian, it can only be presumed that form *-iḭe/o- was chosen either as generalisation, or in order to avoid homophony with *-i̯e- > Arm. *-e-*; alternatively, albeit less likely, the suffix could be a secondary thematisation of the non-thematic *-i-, yielding *-i-e/o-.

[161] Bonfante (2002) further cites Arm. *całr* 'laughter', cp. Gk. γέλως < *ǧelh₂-, with *-e- > *-o- possibly under influence of the -u-stem (cf. Clackson 1994:126–32; de Lamberterie 1978:271). For a different, critical perspective, cf. Belardi (2003*b*), who does, however, not discuss all possible cases of *-e- > Arm. *-a-*.

[162] For a thorough treatment of the question of whether Arm. *-a-* can derive from *-o-, cf. Morani (1994), who suggests that it is indeed possible (if somewhat unstable) in pretonic position.

originate in this group **B**, is difficult to tell for certain. Yet, an origin in group **A** would surely have resulted in an analogical formation on the basis of the aorist, as happened in group **C**.

This morphological derivation has the additional advantage of further corroborating the assumption of Stempel (1983) and others, who judge the *-eal* participle to be historically passive-intransitive, confirmed by the quantitative observations of Vogt (1937:51, index locorum) and 4.3.1 below. It is the diathetic alignment of the newly formed participle, too, which allows it to take the place of the ousted *-to- participle, which in itself is not tense-marked. Judging by the other nominal *-lo- formations mentioned above, assuming an analogical replacement of a *-lo- adjective for a *-to- adjective seems plausible also on aspectual grounds, since e.g. *tesil* 'sight' implies a resultative that agrees, at least to some extent, with the past tense function the participle fulfils synchronically.

The syntactic implications of assuming a passive-intransitive participle are considerable: the active usage of the participle with a genitive agent, which requires a diathetically indifferent participle to work, must be explained as a secondary development in Armenian. This will be discussed in the following chapters.

2.4 Conclusion

The Armenian aorist has multiple formational origins, continuing both sigmatic and root aorists of Indo-European heritage as well as some with different formations yet, which have developed into synchronic root or strong aorists; in addition, and more influentially, a former imperfect formation in *-sḱe- has been re-analysed as a novel aorist, initially maybe to furnish denominative verbs which had no inherited aorist form.

This new formation spread throughout the paradigms; yet, while one group of verbs (**C**) built their past participle on this new aorist stem, as do verbs with an inherited root aorist, another group (**B**) took a different route and used the verbal root as the basis of participle formation.

As has been suggested above, the use of synchronic systematisation along forma-

tional and semantic patterns can bring to light issues in diachronic derivational morphology. Group **B**, on the basis of which the aorist is likely to have been innovated, together with group **A** thematic verbs is the point of origin for the past participle. It has here been argued that this participle may be an original verbal adjective in *-iie̯/o-lo-, clearly marked as passive-intransitive; given the frequent identity of aorist and present stems in group **A** and its originally resultative meaning, a re-analysis as a past participle and subsequent alignment with the aorist stem took place, furnishing by analogy the participles of group **C**, most members of which are secondary, derived verbs. The existence of late forms like *sirec'eal* confirms this trend.

Whether or not this derivation of the participle is deemed fortuitous, the majority of attested forms, participial and otherwise, in Armenian and other Indo-European languages point to a mainly passive-intransitive usage, which is further confirmed by the adjectival use of the participle discussed in 4.3.1 below.

As chapter 3 will show, this (or any other) passive-intransitive analysis of the Armenian past participle necessitates that any active, transitive usage thereof, as is so common in the periphrastic perfect, must have developed secondarily. The next chapter will, accordingly, discuss what explanations have been provided for this development, and whether they can hold up to closer scrutiny.

3 Morphosyntactic alignment in West Middle Iranian and Classical Armenian

In the previous chapter, the historical morphology of the Armenian *-eal* participle has been discussed in some detail. The primary conclusion was that its formation pointed towards a passive-intransitive diathesis for the participle, which is at least *prima facie* at odds with one of its primary uses, namely in the transitive-active periphrastic perfect. Taken together with the lack of person and number agreement in the (optional) copula, and the fact that its agent is found in the genitive, this raises a number of questions concerning both the historical syntax of this tense, and specifically about its morphosyntactic alignment.

Since this study is undertaken with a view to investigate the potential influence of West Middle Iranian languages, specifically Parthian, this chapter is structured as follows: after a general introduction to and overview of different morphosyntactic alignments, the syntax of the Armenian periphrastic perfect will be discussed; this will include an analysis of previous attempts at explaining its unusual constituent marking. With this in mind, the final part of the chapter will discuss the morphosyntax of the West Middle Iranian past tense, and illustrate its commonalities and differences with the Armenian construction. It will be argued that owing to a number of weaknesses in previous explanations of the syntax of the Armenian perfect, and given some striking parallels in the expression of the Parthian past tense, it bears investigation whether the Armenian construction may not have been influenced by its Parthian counterpart.

3.1 Morphosyntactic alignment

In order to investigate any potential syntactical similarities in the way that West Middle Iranian and Classical Armenian construe their periphrastic perfects, it is necessary to first enquire about the general nature of such constructions: their precise linguistic definition, the different types of constructions in existence, their diachronic developments where possible, and any correlations that might exist between different patterns and constructions. This falls under the general heading of morphosyntactic alignment, which will be discussed in the following section in some detail.

After the definition of the term morphosyntactic alignment adopted here follows a very brief outline of the most important types of alignment. Then, the typology of alignment is presented with a particular view to alignment splits, alignment change and its conditioning factors, and a brief excursus concerning the question of Proto-Indo-European alignment. Finally, observations made and questions raised during the previous discussions will be summarised and put into context.

3.1.1 Definition of morphosyntactic alignment

Morphosyntactic alignment as a concept refers to a small array of possible ways in which the core arguments of a proposition can be encoded by means of morphological or syntactic features (Bickel and Nichols 2008:305). In the literature, these core arguments are standardly referred to as follows:[163]

S (for subject) refers to the sole argument of an intransitive verb, e.g. NE *James bathes*, where *James* is S; in other terms, S is the sole participant in a one-participant event.

A (for agent) refers to the argument of a transitive verb which controls the action associated with the verb, whilst

[163] A more fine-grained differentiation, which takes into account ditransitive, i.e. trivalent verbs, is of course possible as shown in Bickel and Nichols (2008) and Dowty (1991); for the present purpose, however, this system with three core arguments will suffice.

O (for object, or elsewhere P for patient) refers to the other argument of a transitive verb, which undergoes the associated action, e.g. Fr. *Jean prend la vase*, where *Jean* is A and *la vase* is O. Thus, in a prototypical two-participant event, A is the initiator, and O the endpoint (cf. Næss 2007:27–30).

The references S, A, and O for the present purposes only refer to the syntactic function of the arguments they describe, and do not necessarily reflect semantic roles. Accordingly, an argument as delineated above may take on different roles as required by the individual verb while remaining in the same case; thus, while in NHG *Peter singt* and *Peter friert* the S in both instances is represented by *Peter*, the first verb (*singt*) demands an agentive role, whereas the second verb (*frieren*) requires a patient role.[164] While prototypical semantic roles are encoded within the verb in most languages, resulting in unambiguous assignment of syntactic roles, some languages encode semantics much more directly. Manipuri, a Tibeto-Burman language, for example, morphologically encodes control over the action with the same suffix irrespective of verbal valency (cf. Dixon 1994:24); the marking of S and A is therefore not always predictable on syntactic grounds alone.

As the term alignment suggests, the focus of interest lies with the different patterns in which these core arguments correspond either in form, viz. morphological marking, or position, viz. syntactic marking, or a combination of the above;[165] the following examples demonstrate morphological and syntactic marking:

(3.1) (a) *James reads a book.*
A V O
'James reads a book.' (English)

(b) **A book reads James.*
O V A
('James reads a book.')

[164] While necessary in order to avoid potential misunderstandings, this differentiation will be of very limited importance in this study.

[165] Alignment patterns and its effects are not restricted to clause-level propositions, however. Some derivational or compositional processes, for example, are dependent on alignment patterns: English *bird-chirping* and *fox-hunting* are each nominal compounds consisting of a noun and a verb in the gerund; in the former compound, the noun takes on S function (*bird-chirping* ∼ *a bird chirps*), whereas in the latter, the noun represents O (*fox-hunting* ∼ *one hunts a fox* ≠ *a fox hunts*). In this respect, English aligns S and O where usually S and A are aligned (Comrie 1978:337); cf. van de Velde (2014) for similar examples in Dutch.

(3.2) (a) *Peter deckt den Tisch.*
A_{NOM} V O_{ACC}
'Peter sets the table.' (German)

(b) *Den Tisch deckt Peter.*
O_{ACC} V A_{NOM}
'Peter sets the table.' (in context: 'It is the table that Peter sets.')

English, owing to its lack of nominal inflection, marks the syntactic value of core arguments through word order alone, as shown in example (3.1). German, on the other hand, by virtue of having overt (if not biunique) case-marking in the nominal system, can rely on morphological marking to convey the syntactic function of these arguments, and thus marks its A as nominative, and its O as accusative.[166] The various alignment patterns are delineated below, 3.1.2.

As will become more evident in what follows, morphosyntactic alignment is a complex set of features of a language, and as such neither immutable nor absolute: in a great number of languages, more than one alignment pattern can be found (Comrie 1978:350), and as the history of the Indo-Aryan and Iranian languages in particular illustrate clearly, alignment patterns can change in a variety of directions and may well be in mid-change when observed (Drinka 1999:480–1).

3.1.2 Types of morphosyntactic alignment

The patterns briefly discussed below are abstractions of the five combinatorially possible alignments of S, A, and O; the patterns are not all equally well represented in the world's languages, and some are, for practical reasons that will become evident, less common than others. Further, as already mentioned, languages may share in more than one pattern, restricting each pattern to a particular domain; this will be further discussed in 3.1.3 below.

3.1.2.1 Neutral alignment: (SAO)

In neutrally aligned systems, S, A, and O are each equally morphologically unmarked in most languages (Bickel and Nichols 2008:316; Siewierska 2011:340), so that

[166] Nonetheless, German does have a standardised word order (SVO), deviations from which in independent clauses are normally licensed only by particular pragmatic conditions.

no *a priori* distinction can be made between them. Exponents of this pattern are found in modern European languages such as English, Dutch and French, but also in, e.g., Ju|'hoan, a dialect of the !Kung language in Namibia. In all of the above, core arguments are not marked morphologically for their syntactic function; the latter can only be deduced on the basis of constituent order. These languages therefore rely on a relatively rigid word order, e.g. SV / AVO.

(3.3) (a) *De hond bijt de vrouw.*
Le chien mord la femme.
DET dog_A bites DET woman_O
'The dog bites the woman.' (Dutch, French)

(b) *De vrouw bijt de hond.*
La femme mord le chien.
DET woman_A bites DET dog_O
'The woman bites the dog.'

At some stage in their development, many Middle Iranian languages, including Parthian and Middle Persian, also belonged to this type as far as large parts of their nominal system are concerned; see 3.3.2.1 below.[167] Interestingly, in all of the European languages pertaining to this type mentioned, the pronominal system aligns differently, reflecting an earlier state of the language in which morphological case marking had not yet been lost; this is true, of course, for modern English, too, where pronouns such as *him*, *her*, and *them* indicate non-nominative case.

3.1.2.2 Nominative-accusative alignment: (SA)O

In languages with nominative-accusative alignment, S and A receive the same nominative marking—often remaining unmarked—, whilst O is marked differently as accusative. Languages adhering to this alignment pattern include Latin, Classical Greek, German; early stages of Parthian and Middle Persian are thus aligned in the synthetic tenses, and English, French, and Dutch in their pronominal systems.

[167] A more specific statement is difficult, since different stages of the West Middle Iranian case system are attested; cf. Haig (2008:95–101).

(3.4) *Τῇ ἐπαύριον* *βλέπει* *ὁ Ἰωάννης* *τὸν Ἰησοῦν* *ἐρχόμενον*
altera die videt Iohannes Iesum venientem
the-other-day see.3.SG.PRS John.NOM$_A$ Jesus.ACC$_O$ come.PRS.PTCP.ACC.SG
…
…

'The next day John seeth Jesus coming …' (Jn. 1:29; Greek, Latin)

(3.5) (a) *Hij* *aait* *de* *kat.*
3.SG.NOM$_A$ pet.3.SG.PRS DET cat$_O$
'He pets the cat.' (Dutch)

(b) *De* *kat* *bijt* *hem.*
DET cat$_A$ bite.3.SG.PRS 3.SG.ACC$_O$
'The cat bites him.'

(3.6) (a) *Il* *caresse* *le* *chat.*
3.SG.NOM$_A$ pet.3.SG.PRS DET cat$_O$
'He pets the cat.' (French)

(b) *Le* *chat* *le* *mord.*
DET cat$_A$ 3.SG.ACC$_O$ bite.3.SG.PRS
'The cat bites him.'

Nominative-accusative alignment is the most common alignment patterns (Premper 2001:486), and has been the subject of innumerable studies (cf. Song 2001 with bibliography); in view of its widespread occurrence in such a great variety of languages, and its familiarity to most readers, this pattern will not be discussed here in any greater detail. Notably, however, one of the questions that shall be of relevance later (see 3.4) concerns the correlation, if any, between alignment pattern and word order; the notion that such a relation might exist likely originates with Greenberg (1966: 95–6), whose *Universal 41* suggests that a language with a standard constituent order SOV or OSV almost always has a case system, and subsequently is unlikely to be aligned neutrally or double-obliquely.[168] For a familiar instance of such a patterning, see (3.6) above, where the clause with nominal A and O follows SVO, while clauses with one or more pronominal constituent have a different constituent order, SOV, thus aligning with Greenberg's prediction.

[168] The relevance of constituent order for alignment decisions will be further discussed in connection with the analysis of the Armenian data below, chapter 4. . For a view on the potential limits of this correlation, see Siewierska (1996).

3.1.2.3 Ergative-absolutive alignment: (SO)A

Ergative-absolutive alignment is the other main pattern of morphosyntactic configuration, with approximately a quarter of the world's languages making use of some ergative features (Dixon 1994:2). In this pattern, S and O receive identical absolute marking (often Ø), whilst A is marked as ergative. In a European context, Basque is frequently used as an example of ergative-absolutive alignment; as mentioned above, West Middle Iranian patterns ergatively at least in the pronominal system in the periphrastic perfect, as do a number of modern Iranian languages such as Balochi (Korn 2009*a*) and Pashto (David 2012:422ff.), languages of ancient Mesopotamia like Hurrian and Urartian (Wilhelm 2008*a*,*b*), and most Australian languages, most famously Dyirbal (Dixon 2002:523–4).

(3.7) (a) *kud-u* *kazi* *pille-ne*
fall-JUSS cup.ABS river-DIR
'May the cup fall into the river.' (Hurrian; Wegner 2007:220)

(b) *Kelia-š-nna-an* *paššith-iffu-š* *tive* *andi*
Kelia-ERG-3.SG.ABS-CON emissary-1.SG.POSS-ERG word.ABS DEM.ABS
kul-oš-a
say-PST-3.SG
'My emissary Kelia said this word.' (Wegner 2007:180)

(3.8) (a) *ŋuma* *banaga-n^{y}u*
father.ABS return-NFUT
'Father returned.' (Dyirbal)

(b) *yabu* *ŋuma-ŋgu* *bura-n*
mother.ABS father-ERG see-NFUT
'Father saw mother.'

It is noteworthy that the case employed to denote ergative marking is not infrequently multifunctional and may at times express functions other than the agent of a transitive verb; middle and modern Iranian languages frequently only discern two cases, direct and oblique, in which the oblique marks A in ergative environments, but O in accusative environments.[169] In other languages such as Dyirbal, the North-East Cau-

[169] It has been suggested (Bubenik 1989:189–191) that in languages with, e.g., tense-sensitive ergative split alignment (see 3.1.3.1 below), the terms antiabsolutive and superabsolutive are better

casian Avar and Lak, and the language isolate Burushaski, the morphological realisation of the ergative case is shared by other, normally non-core argument functions, such as the instrumental, locative or genitive (Dixon 1994:57).

More rigorous differentiations between types of ergative languages are possible, for example along the lines of verb agreement and inter-clausal alignment. Late Hurrian and Dyirbal are both deep-ergative or syntactically ergative languages, in which the notion of *subject* is defined on a purely syntactical basis, so that two clauses with a co-referential element cannot combine by conjunction reduction if those co-referential NPs exhibit different case-marking and thus different syntactic roles. Accordingly, when deleting the second occurrence of *father* in conjunction reduction, the two sentences in (3.8) above cannot be combined to mean **Father returned and saw mother*, but only the following:[170]

(3.9) *ŋuma* *banaga-n^{y}u* *Ø* *yabu-ŋgu* *bura-n*
father.ABS$_{i}$ return-NFUT Ø$_{i}$ mother-ERG see-NFUT
'Father returned and mother saw (him).' (Dyirbal)

This pattern is exceedingly rare even amongst the languages with ergative alignment on a large scale.[171] More commonly, languages with ergative alignment restrict this pattern to morphology, and are therefore called morphologically ergative (or subject prominent ergative) languages (e.g. Kurmanci, cf. Matras 1992–3:149). These latter languages, amongst whose number are the West Middle Iranian languages, Basque, and quite possibly early Hurrian, are therefore syntactically, viz. at clause-level, no different from nominative-accusative languages. Their syntactic pivot, controlling Equi-NP deletion, conjunction reduction and command of reflexives, is determined

suited to refer to the cases which mark (SA) in accusative environments, but (SO) in ergative environments, and O in accusative environments, but A in ergative environments, respectively; this is the case in many Middle Iranian languages. This terminology is, however, neither helpful nor does it reflect a particular function of the system described. It seems more efficient and transparent to label these cases as suggested above, and differentiate according to environment.

[170] The two clauses in question can, of course, be joined by means of an antipassive construction, in which the ergative A is demoted to an absolutive S under valency reduction of the verb, thus rendering the co-referential NPs in the same case and allowing for conjunction reduction; the O is deprived of its core argument status, and can optionally be rendered as an adjunct in an oblique case.

[171] There are yet other indicators of syntactic ergativity (cf. Dixon 1994:131ff.); since this phenomenon will play no further role in this study, it will not be discussed here any further.

by a notion of subjecthood that is not coextensive with its morphological marking (Anderson 1977:321).[172]

Next to morphological marking on NPs and their syntactic patterns, ergative alignment can further find expression in verbal agreement; all the logical options, that is agreement with A, O or no constituent in a transitive clause, are in existence, at times within the same language. While in some languages (such as Parthian and Middle Persian) verbal agreement with O at times is the only indication of ergative alignment (Noda 1983), others like some Kurdish varieties show patterning with both S and O (Pirejko 1979:486–7); Talyši, on the other hand, shows an invariant verb form in agreement with no constituent whatsoever (Payne 1979:442).

(3.10) *cy=m'n* *dyd* *hy* *tw*
comp=1.pl.erg see.pst be.2.sg.prs 2.sg.abs
'We saw you.' (M_31_I V; Middle Persian)

(3.11) *dьžmьna* *äw* *köštьnä*
enemy.erg.pl 3.sg.abs kill.pst.3.pl
'The enemies have killed him.' (Kurmanci;[173] Pirejko 1979:487)

(3.12) *av* *vínd-əm-e*
3.sg.abs see.pst-1.sg.obl-3.sg
'I saw him.' (Talyši; Payne 1979:442)

As is transparent from even this short introduction to ergative-absolutive alignment, the possible patterns and variations are considerable, particularly if the fact that some languages only exhibit ergative features in particular environments is taken into account; see 3.1.3 below). As will become evident in further discussion, ergative-absolutive alignment, while perfectly valid and independent in and of itself, appears to be less stable than nominative-accusative alignment, and in the history of numerous languages has been ousted completely or relegated to a particular environment within that language. At times, the transition from one alignment pattern to another turns out to be the source for the occurrence of yet other patterns.

[172] The criteria that determine subjecthood and thus, by extension, the syntactic pivot of a language are useful, amongst other things, for determining whether a language does pattern ergatively or otherwise (Cole et al. 1980); see section 3.4 below.

[173] Orthographic conventions and transcription systems for the various Kurdish languages vary substantially; where quoted, the conventions of the source will be replicated.

3.1.2.4 Tripartite alignment: (S)(A)(O)

Tripartite alignment is often considered to be one of those transitional patterns in two senses: firstly, very few languages exhibit this particular form of alignment as their only pattern. Instead, it frequently occurs in such languages as share in both nominative-accusative and ergative-absolutive marking in an NP-split system; see 3.1.3.2 below, and cf. Næss 2007:179.[174]

Secondly, in the historical, diachronic sense of transitional, it has been argued convincingly that tripartite alignment can be a stage in the development of ergative into accusative patterns (Skalmowski 1974; Payne 1980:150). Yet, in a not negligible number of languages, this type of alignment is, at least synchronically, stable; such languages include Yazgulyami (Indo-Iranian, Pamir; cf. Payne 1980), some dialects of Pahari and Western Hindi (Indo-Aryan; Stroński 2010; also cf. Liljegren 2014:150ff.), and, at least to some extent, Wanggumara, Waga-Waga, Yidin^{y} and Dyirbal (Blake 1977:11; Dixon 1979:86–8).

The rarity of this alignment has been related to its uneconomic nature: S, A, and O are each marked differently, a differentiation deemed unnecessary for unambiguous comprehension (Dixon 1994:40, 55, 70).

(3.13) (a) *áz=əm* *mɔt* *mad*
1.SG.ABS$_S$=be.1.SG.PRS tired become.PST
'I am tired.' (Yazgulyami; Payne 1980:175)

(b) *mon* *š-tu* *wint*
1.SG.OBL$_A$ OBJ-2.SG.OBL$_O$ see.PST
'I saw you.'

(3.14) (a) *ma* *ga-ẽ*
1.SG.NOM$_S$ go-1.SG.PST
'I went.' (Nepali)

(b) *mai-le* *Rām-lāi* *dekh-ẽ*
1.SG-ERG$_A$ Ram-DAT$_O$ see-1.SG.PST
'I saw Ram.'

[174] More recently, it has been argued that instances of tripartite alignment can be explained without resorting to postulating three morphologically different core arguments; cf. Müller and Thomas (2017). For the present purpose, however, the arguments presented there have little impact.

While the differentiation of S, A, and O in Nepali is achieved exclusively by inflectional means, Yazgulyami cannot rely on case inflection alone,[175], but further requires a functional prefix *š-* which marks O (Dixon 1994:202); the latter behaviour is strongly reminiscent of the situation in Classical Armenian, where a prefix *z=* is frequently employed to mark O.[176] This pattern, as will be argued later, appears in Classical Armenian, too, which in its periphrastic perfect does not adhere to nominative-accusative alignment, but instead shows tripartite patterns (*pace* Comrie 1981:181); this hypothesis will be expanded on further in 3.2.3, and will form the major focus of chapter 4.

3.1.2.5 Double-oblique alignment: S(AO)

The last combinatorily possible morphosyntactic alignment pattern is referred to as double-oblique, since it marks S differently from A and O, the latter two of which are marked alike. This pattern is inordinately rare (Comrie 1981:176–7), no doubt due to the fact that it lets A and O coincide morphologically, although these are in principle the only syntactic core arguments that would require non-identical marking for the unambiguous interpretation of a sentence. Examples of such patterning do, however, occur both in Indo-Iranian languages (e.g. Rošani in the Pamir Mountains; Payne 1979:443; 1980:155–6) and Indo-Aryan (Dameli, a language of the Kunar group; Liljegren 2014:149).[177]

(3.15) (a) *mu* *tā* *wunt*
1.sg.obl 2.sg.obl see.pst
'I saw you.' (Rošani; Payne 1979:443)

[175] Most Indo-Iranian languages have in the course of their history lost inflectional case distinction to a greater or lesser extent, often resulting in only binary distinction between direct and oblique case (Schmitt 1989:98–9).

[176] The Classical Armenian object marker *z-* is, however, not obligatory; the question has been raised whether it may form part of a differential object marking system within the language, only marking definite objects. For a discussion of this cf. Scala (2011).

[177] The lack of distinctiveness in argument marking, and similarly the non-parsimonious differentiation of S and A are likely one of the reasons why such patterns are far less common than nominative-accusative or ergative-absolutive alignment (cf. Greenberg 1966). The fact that this pattern seems to be more widespread in Iranian and Indo-Aryan languages of northern Afghanistan, Pakistan, and India (in all of which it has retained some degree of stability) raises the question to what extent other constraints may interfere with supposed linguistic universals (cf. Haig 2008:178, 195).

(b) *tā* *mu* *wunt*
2.SG.OBL 1.SG.OBL see.PST
'You saw me.'

In Rošani, the double-oblique system only applies in the past tense; further, word order indicates the role of the different arguments, wherefore the lack of distinct case morphology in A and O is mitigated to some extent.

3.1.2.6 Other alignment patterns

The present study is concerned mainly with three of the alignment types mentioned and briefly presented above: nominative-accusative, ergative-absolutive, and tripartite. For completeness' sake, however, reference must be made here, in even greater brevity, to other types of alignment.

As has been mentioned before, the consideration of only monotransitive statements exhibiting S, A, and O is reductionist; if ditransitive, that is trivalent, verbs (such as English *to give*) are taken into account, more complicated systems may arise since another syntactic core argument is introduced. For a brief summary of alignment patterns including such verbs, cf. Bickel and Nichols (2008).

The last alignment pattern to be mentioned here exhibits split alignment of S with A or O, depending on the control or volition of S over the verbal action.[178] This pattern has been variably named active-stative (e.g. Uhlenbeck 1901; Klimov 1974), split-intransitive (van Valin 1987) or split-S alignment (Dixon 1994),[179] and is not uncommonly found in the native languages of the Americas, but to some extent also in modern European languages.

(3.16) (a) *a-xá.* *a-gwerú* *aĩna.*
1.SG$_A$-go 1.SG$_A$-bring them
'I go. I am bringing them now.' (Guaraní; Mithun 1991:511)

(b) *šé-rasĩ.* *še-rerahá.*
1.SG$_{\text{patient}}$-be-sick 1.SG$_{\text{patient}}$-carry-off.3.SG.FUT

[178] Languages may vary considerably between one another as to which feature controls the choice of alignment; this may in fact be determined on a lexical basis (cf. van Valin 1990:251–2).

[179] Dixon further differentiates split-S and fluid-S alignment; in the former, the lexical semantics of each verb determine which alignment pattern is followed, whilst in the latter, the alignment decision is made by the speaker to denote the degree of control or volition exacted by the actant: non-volitional/controlled *I fell* vs volitional/controlled *I let myself fall* (1994:71).

'I am sick. It will carry me off.'

(3.17) (a) *ɻ i -kapa -ni*
3.SG.NFUT.A/S$_A$ -see -3.SG.NFUT.O/S$_O$
'He sees him.' (Baniwa; AIKHENVALD 1995:165)

(b) *ɻ i -emhani*
3.SG.NFUT.A/S$_A$ -walk
'He walks.'

(c) *hape -ka -ni*
cold -DECL -3.SG.NFUT.O/S$_O$
'He/it is cold.'

3.1.3 Typology of alignment

The exposition of the various alignment patterns in existence has served to elucidate the difference between those patterns, and has already hinted at some of the issues to be considered further. The following select observations on the typology of alignment patterns will focus on the ergative-absolutive type, which has arisen in late Old Iranian or early Middle Iranian. These notes are meant to constitute a more theoretical foundation grounded in cross-linguistic data to supplement the later consideration of Armenian and West Middle Iranian, both by highlighting common features and developments in languages that have once had, or are presently developing ergative alignment, and by raising questions to which the data analysis in chapter 4 will have to provide answers. A few such observations and questions have already been mentioned in passing, and are here taken up again.

Although ergative alignment is by no means uncommon in Iranian languages, none of them has developed an exclusively ergative case (HAIG 2008:13); instead, the oblique case is employed in this function, at times aided by verbal agreement with the direct-case O; this behaviour is widely attested and thus typologically unproblematic (cf. DIXON 1994:57). Next to the Middle Iranian oblique/ergative case, which diachronically derives from the Old Iranian genitive-dative (SIMS-WILLIAMS 1981:169 n. 20; KORN 2009*b*:161), Eskimo, the North-East Caucasian language Lak, and Ladakhi (Tibeto-Burman) also show genitive-ergative polysemy. Other cases used to con-

vey ergative syntactic relations include, amongst others, instrumental (Dyirbal, Avar, Modern Tibetan) and locative (Carribean Kuikúro, a number of Australian languages). In turn, however, some languages have morphemes denoting ergative function exclusively (Basque, Yidin^{y}).[180]

Constituent order in some of the examples cited above has proven to be an effective way of differentiating between arguments which receive no further marking otherwise; similarly, some languages utilise prefixation for the marking of certain constituents. Constituent order therefore plays an important role in the organisation and processing of language. The question arises whether there is an inherent connection between alignment pattern and constituent order, as suggested by Dixon (1994:49-50), and indeed whether the occurrence of any particular order is a helpful tool in confirming a language's alignment.[181] The data analysis in 4.3.4.2 below will determine whether the constituent order in Armenian gives any indication as to its morphosyntactic alignment.

A further worthwhile test relates to the control of canonical reflexives, which seems to be dependent on a semantic notion of subjecthood even in highly ergative languages, irrespective of their morphosyntactic marking (Dixon 1994:138-9). This is only logical since *per definitionem* canonical reflexives indicate co-referentiality of A and O; while it is not a test that will yield information concerning the alignment pattern a language follows, it does indicate which (kind of) constituent can function as subject and how it is marked, which in turn may be indicative of alignment patterns. For Armenian, Kölligan (2013:76–7) provides proof that genitive agents can act as the pivot of reflexives.

As has been alluded to in some of the examples given above, languages frequently

[180] Given the polysemy of accusatives in nominative-accusative languages, where it can often denote concepts related to direction or time (Latin, Greek), and the fact that both nominative and absolutive cases are exclusively found to denote the syntactic S function, it seems plausible to assume that whichever case marks S in a given languages will likely be restricted to that usage.

[181] Dixon argues that if S and A are aligned morphosyntactically, it is plausible to assume that within a sentence they should each take the same place; accordingly, accusative languages should show SV / AVO or VS / OVA, while ergative languages should pattern as SV / OVA or VS / AVO; verb-initial or verb-final languages are more problematic, since either constituent, viz. A or O, could be said to take the position of S. These observations are further limited to nominative-accusative and ergative-absoultive languages since there are no attestations of triparite languages which show the appropriate patterns.

adhere to more than one alignment pattern; the division between alignment patterns is not coincidental, but rather follows clear hierarchical tendencies. The following sections will discuss the nature of such split alignment patterns, considering first those that are divided along a tense-aspect line, and then other hierarchical divisions. Section 3.1.3.3 discusses the genesis of such split patterns in more detail, since this question will have an impact on the expectations of the Armenian data presented below. Finally, the question of reconstructible alignment in (Pre-)Proto-Indo-European will be addressed.

3.1.3.1 Tense-sensitive alignment (TSA)

It is by no means unusual for a language to exhibit more than one alignment pattern; the factors which determine the choice of alignment for a particular environment, viz. its pivot, can be very variable (Dixon 1994:24) and range from semantic pivots (volition, control, etc.; see fn. 179) to extralinguistic factors (animacy hierarchies, see 3.1.3.2 below), and include alignment split according to tense as well.

Such tense-sensitive alignment (TSA) splits are found in most Iranian and Indo-Aryan languages, Georgian, the Mayan language Chol, in Polynesian languages and in languages of the Carib family in South America (Comrie 1978). The reason the split alignment patterns of these languages are arguably related lies in their aetiology: in all instances, ergative alignment in these languages arose from the development of the passive.[182] While such a development is unsurprising in the Iranian languages, in which the past participle of Old Persian pedigree gave rise to the ergative in Middle Iranian (cf. 3.3.2 below),[183] the development of TSA need not be restricted to such specific circumstances. The reinterpretation of passives as ergatives, and the concomittant restriction of the ergative to the perfective aspect may arise owing to the

[182] Historically, languages exhibiting ergative patterns were said to be 'passive' languages (Schuchardt 1896). While ergative and passive share in marking the patient as nominative/absolutive, ergative patterns are *per definitionem* unmarked patterns, whereas passives are more marked (Comrie 1988:19-20).

[183] The majority of Iranian languages, past and present, in which ergative features are attested, exhibit TSA; some of them, however, such as the Awroman dialect of Gorani and Talyši, have developed past tenses that construe along nominative-accusative lines. Haig (2008:10) therefore emphasises that 'it is not past-time reference in itself which acts as the trigger for non-accusative alignments. It is ultimately a matter of the origins of particular verb forms, their links to the historical reflex of what was in fact once a participle'.

inherent semantics of the passive, which focuses on the state of the referent denoted by the O argument as a result of the verbal action (Dixon 1994:190). As such, then, 'passive constructions are semantically close to perfects in that they generally present a state resulting from a completed action' (Anderson 1977:336; also cf. Comrie 1976: 85–6; Hopper and Thompson 1980:271), and may thus, but need not necessarily, result in split-ergative systems; as will be discussed below, 3.3.1, other suggestions for the rise of split-ergative alignment in Indo-Iranian languages have been proposed.

The development of such a tense-sensitive split with a distribution of accusative and ergative patterns along the imperfective-perfective pivot seems unproblematic and is cogent with both the semantics of the diachronically underlying forms and cross-linguistic data. Yet, the evaluation and classification of such systems can be complicated by certain factors. One such factor is constituted by the survival of the passive at the side of the thence-developed ergative construction in, e.g., Middle Persian (Haig 2008:117ff.), not helped by the poverity of the language's morphology; the decision between passive and ergative is thus entirely context-dependent in that only the presence or absence of an oblique case argument can, but need not, render it ergative.[184]

(3.18) (a) *dyn* *'yg* *mn* *wcyd*
religion REL 1.SG.OBL choose.PTCP
'The religion which I chose …' (M_5794_I; Middle Persian)

(b) *prhyd* *wcydg-'n* *'wd* *nyss̆'g-'n* *wcyd*
much elect-PL and hearer-PL choose.PTCP
'Many elects and hearers were chosen.' (M_2_I; Middle Persian)

This double function can be observed even in modern Iranian languages, e.g. the Badīn dialect of Kurdish, and further existed in Early New Persian (pre-1000CE; cf. Heston 1976:167). This goes to show that languages are rarely the neat, abstract systems they are construed to be, allowing for certain developments to remain unfinished and constructions that might appear incompatible to exist alongside one another; further, this particular pattern provides important parallel evidence for the development of Classical Armenian syntax argued for below, 3.2.1.

[184] Ambiguity may still arise in thise case as the oblique case can be used, with or without a preposition, to mark the recipient role as found in ditransitive verbs.

A second point of interest manifests itself in the guise of verbal agreement features. Returning once more to the West Middle Iranian languages, the copula accompanying the historical participle in Middle Persian and Parthian is expected to agree with O in the past transitive as it would with S in the intransitive (Durkin-Meisterernst 2014:393–5); at the same time, however, there are numerous examples which illustrate that this must be a generalisation. Textual evidence shows that next to O, instances of Ø-agreement and even agreement with A occur.

(3.19) *xyndg* *bwd* *hym* *'w=t'n* *dryst* *(q)yrd* *hym*
ill become.PTCP be.1.SG.PRS and=2.PL healthy do.PTCP be.1.SG.PRS
'I was ill and you have cured me.' (Middle Persian, O-Agreement; MacKenzie 1979:506)

(3.20) *ME=m* *gndlp'* *BRA* *'wct'* *Ø*
and=1.SG Gandarw PTC slay.PTCP Ø
'And I slew Gandarw.' (Middle Persian, Ø-Agreement; Heston 1976:177)

(3.21) *LA* *ME* *L* *krt'* *HWEwm*
NEG because 1.SG.OBL do.PTCP be.1.SG.PRS
'No, because I did [it].' (Middle Persian, A-Agreement; Heston 1976:178)

This variability in verb agreement persists in the Modern Iranian languages as well, as has been mentioned above, 3.1.1, and cf. Pirejko (1979:486–7)). Iranian languages such as Talyši, and Indic languages like Hindi have even grammaticalised an invariant 3.SG form of the copula in the transitive past (Payne 1979:442; Pirejko 1966).[185] The occurrence of such invariant copulas, or the lack of agreement overall has been interpreted as one indicator of alignment change in progress, in this instance from ergative to accusative alignment (Comrie 1978:342).

Like the co-existence of ergative and passive in the periphrastic perfect, the variability of verbal agreement in West Middle Iranian will be relevant in determining the origin of similar patterns in Classical Armenian.

[185] The situation in Hindi is very complex, and an invariant 3.SG copula is only one of numerous possible agreement patterns.

3.1.3.2 Hierarchy-split alignment

Next to languages which develop tense-sensitive ergative alignment for the past tense, the re-interpretation of the passive as an ergative construction may result in a number of other splits along different lines (Comrie 1978:357), most notably according to NP type. The kinds of possible pivots are not restricted *per se*, but largely depend on the original function and usage of the passive in the language in question. English and German may illustrate one of the more typical distributions from which originate other hierarchical splits that tend to develop in such languages on the basis of passive usage.

(3.22) (a) *James was hit by a car.*
James be.3.SG.PST hit.PTCP by DET car
'James was hit by a car.' (English)

(b) *?James was hit by Mary.*
James be.3.SG.PST hit.PTCP by Mary

(3.23) (a) *Jakob wurde von einem Stein getroffen.*
James become.3.SG.PST by DET.DAT stone.DAT hit.PTCP
'James was hit by a stone.' (German)

(b) *?Jakob wurde von Maria getroffen.*
James become.3.SG.PTCP by Maria.DAT hit.PTCP
'James was hit by Mary.'

In both English and German, the passive sentences in which the agent in the prepositional phrase is not a person seem perfectly plausible and natural (3.22, 3.23); the opposite is true, however, for those involving agentive prepositional phrases containing persons. These are not distinctly ungrammatical, but would surely be restricted to very specific circumstances and discourse situations. Even replacing personal names by NPs that could stand in for them (*James was hit by a man*; *Jakob wurde von einem Mann getroffen*) are unusual, if less so than personal names, and NPs of a different type, e.g. animals, are fully acceptable (*James was bitten by a boar*; *Jakob wurde von einem Eber gebissen*).

What is observable here is the tendency of agents in the passive to be non-human, and not infrequently inanimate; this tendency is borne out by cross-linguistic data

(cf. Silverstein 1976). Indeed it is this very tendency to prefer passive agents that are, in feature analysis, [-human] and [-animate] which is reflected in many of those languages in which ergativity is controlled by an animacy-pivot, precisely since they derive from passives of a comparable nature (Estival and Myhill 1988:458–9; Haig 2008:51); a further feature that often plays a role in such determinations is [±person]. Based on cross-linguistic evidence, a relatively clear, universal hierarchy can be gleaned from the ways in which various languages split their alignment systems:

> While it is true that the exact place along the sequence of noun phrase types generated by the feature hierarchy, at which any given language splits its accusative-agentive-ergative subsystems, is not fixed [...], the *form* of the split(s) is determined. The more highly marked noun phrases (in the sense of feature specification) will always show an accusative case-marking if less highly-marked ones do, as defined by one or more features jointly [...] (Silverstein 1976:159)

and *vice versa* for ergative alignment. That is to say that, if nominative-accusative alignment is found in a language for NPs specified as [-person, +human, +animate], all forms higher on a hierarchy, viz. [+person] are extremely likely to show the same alignment; conversely, if a [-person, -human, +animate] NP is ergatively aligned, all those below will likely share in this pattern. Such hierarchy-split systems can become rather complicated and involve more than two alignment patterns, as the example of Warrgamay, a Pama-Nyungan language related to Dyirbal, demonstrates. There, accusative alignment is found for 1/2.non-Sg. pronouns, tripartite alignment for 1/2.sg and 3.non-sg pronouns, and ergative alignment for nouns, adjectives and 3.sg pronouns (Dixon 1981:96–7).

Although hierarchy-split languages have very little impact on this study, they do illustrate that alignment patterns follow a certain set of rules and directions, and rarely occur in isolation. The fact that there is a universal hierarchy underlying the stratification of such systems is rather suggestive, raising the question whether this is a reflection of diachronic developments, with all languages eventually striving for one alignment in particular, or whether diachronic patterns are in fact more diverse.

3.1.3.3 Change in alignment patterns

An early claim (Klimov 1973:232ff.) suggested that there is a clear developmental hierarchy of alignment patterns: languages start out with active, i.e. semantically determined fluid-S alignment, whence they develop ergative, then accusative alignment; the latter is taken as the goal and end of syntactic developments in this matter. This suggestion has since been rejected (Dixon 1994:185ff.): the theory is undermined by the fact that one of its prime arguments, the existence of fluid-S, or labile, verbs in ergative languages, was overturned by the evidence from many Australian ergative languages in which such verbs do not occur. Similarly, the development of the Iranian languages in particular shows that undulation between, and coexistence of, alignment patterns is well attested, since the Middle Iranian split-ergative alignment sprang from nominative–accusative aligned Old Persian, and eventually resulted in nominative–accusative aligned Modern Persian.[186] Nonetheless, a recent empirical study of neurophysiological processing suggests that languages tend to overall prefer, develop, and maintain case-marking systems in which base-form and agent-form are identical (Bickel et al. 2015).[187]

The mere existence of split systems, as already suggested above, is a clear indication of the reality of 'partially implemented, gradual moves from one alignment to another, occurring in small increments' (Drinka 1999:480), and in a variety of directions. The processes underlying the changes from one system to another are not necessarily parallel or mirror images of each other; while ergative alignment may develop out of a passive, for example, and accusative alignment out of the antipassive, the factors determining such developments are quite different, largely owing to the different semantics of passive and antipassive (Dixon 1994:193ff.).[188]

[186] This is not meant to suggest that any of the languages named is direct ancestor to or descendent of the other, since phonological evidence alone would make such a claim difficult to maintain. Assuming a dialect continuum, however, allows for a generalisation as suggested here.

[187] Among other things, Bickel et al. (2015:18) conclude that languages generally avoid ergativity and are less likely to develop it, and if developed, are less likely to maintain than to lose it; one of the factors that contributes to the development of ergativity against this principle is language contact; see chapter 6 below.

[188] The category antipassive refers to single-argument predicates; as opposed to passives, in which the patient of the action is that single argument, antipassives only require an agent. A patient may optionally be added in an oblique case.

Similarly, as shown by the plethora of different developments within the Iranian language family alone, changes are not always predictable; certain morphological developments and syntactic environments are necessary and facilitate alignment change, but they are by no means sufficient to force a change. Whether, and in particular when such changes are going to occur is not predictable with any certainty (Langacker 1977:98).

At least, however, it is possible to determine under which circumstances languages are likely to change alignment patterns. While it cannot be excluded on principle that such motivations may arise from phonological changes alone,[189] most alignment changes are the result of 'what might be regarded as the morphological equiavalent of the lexicalization of opaque alternations in phonology' (Anderson 1977:325), whereby the morphological realisation of a syntactic operation (e.g. passivisation) is ascribed a new role owing to changes in said syntactic operation and the resulting obscure relation between the latter and its morphological form.

Recalling the morphophonological developments of Old to West Middle Iranian, for example, it is evident that the occurrence of word-final apocope resulted in the loss of most of the suffixal morphology in that language, essentially eradicating whole paradigmatic categories such as the original synthetic preterite. Like in a phonological pull-chain shift, the open slot was filled by the periphrastic perfect, presumably used only in specific environments previously (*pace* Haig 2008:85);[190] at this stage at the latest, the old passive construction must have been reanalysed as ergative.[191]

Next to morphological changes, syntactic changes, too, can be the cause of alignment change. The analysis of ergative features in Southern Kurdish dialects as proposed by Bynon (1980), for example, demonstrates how strict SOV word order (owing to restricted morphological differentiation mechanisms) and obligatory clitic subjects

[189] Cf. Sapir (1926) and Anderson (1977) on the development of ergative alignment in Chinook, which comes close to such a case.

[190] Haig also sees the rise of the Old Persian periphrastic perfect as a result of the loss of synthetic past tenses; contrary to the lexically and environmentally restricted Old Persian evidence, however, he takes this construction to be 'a viable alternative to the finite forms' already in Old Persian.

[191] The evidence for this construction in Old Persian is problematic, as will be discussed below, 3.3.1. This stage of late Old or early Middle Persian, in which the loss of word-final syllable occurred, must surely be taken as the *terminus post quem* for the development of the ergative proper.

(which cannot occur sentence-initially) have led to topicalisation of agent NPs in direct case, thus conforming to the word order ideal. While this is the *status quo* in Mukri, the Suleimaniye dialect has progressed further and eliminated verbal agreement marking, wherefore it now construes as nominative–accusative on the basis of clitic agreement alone.

(3.24) *estēre-k-ān=mān de-bižārt-in*
star-DEF-PL$_i$=1.PL IPFV-count.PST-3.PL$_i$
'We were counting the stars.' (Mukri; Haig 2017:483)

(3.25) (a) *šwāna-ka aspa-kān=i bīnī*
shepherd-DEF horses-DEF.PL=3.SG see.PST
'The shepherd saw the horses.' (Suleimaniye Kurdish; Bynon 1980:160)

(b) *min pyāwa-ka=m kušt*
1.SG man-DEF=1.SG kill.PST
'I killed the man.' (Suleimaniye Kurdish; Bynon 1980:156)

Changes in morphosyntactic alignment patterns are facilitated by such restrictions, be they syntactic or morphological, but the drive underlying linguistic change must be sought beyond the changes in any one language in particular. The ordering principle does indeed seem to be cross-system harmony (Haig 2008:193), that is the attempt at unifying complementary systems, e.g. ergative–absolutive and nominative–accusative alignment, in one pattern. The creation of simplicity, then, is the most basic motivation for alignment change; this certainly rings true for split-alignment systems, such as in some Kurdish varieties, where one subsystem is made to conform to the syntactic rules of other, more dominant systems (Langacker 1977:102ff.). It should not surprise that the direction of such changes is in favour of less marked, viz. simpler, more common-place forms or structures.

With the motivations, manifestations, and directions of change broadly outlined, the question remains how the conceptual change underlying some transformations progresses, that is to say, how does a subject arise from non-subjecthood? One indication of this mechanism is provided by the Suleimaniye examples above: there, an extraposed, grammatically unmarked NP has taken the normal subject position

through topicalisation, and over time has been reanalysed as (part of) the grammatical subject. The transfer of subject-properties to a non-subject, confirmable by means of e.g. Equi-NP deletion, begins with the syntax and only later (if at all) is reflected in the morphology of the new subject (cp. the Germanic dative experiencers, Cole et al. 1980; Haig 2008:33). Morphological changes reflecting the new subject status need not be on the subject itself, but can materialise as, e.g., lacking or changed verb agreement (cp. the Kurdish varieties cited above) or innovative object-marking of previously unmarked O; see 3.3.2.3 below and cf. Estival and Myhill 1988:463, 467).

Finally, it bears mentioning that in spite of the tendency of split-alignment languages to change, shift, or simplify their patterns over time, it need not always be in the direction of accusative alignment; especially those languages exhibiting syntactical or 'deep' ergativity are more likely to maintain their *status quo*, or expand the usage of the ergative (Anderson 1977:355).[192]

Before summarising the insights gained from the preceding sections and highlighting again the questions that need to be raised when analysing a language's alignment pattern, particularly with a view to West Middle Iranian and Classical Armenian, it seems apprpriate to include a brief discussion of alignment in Proto-Indo-European, if only to elucidate whether any of the features found in its daughter languages might have been inherited.

3.1.3.4 Alignment in Proto-Indo-European

The following brief discussion is not meant to explain in great detail the different arguments in favour of or against particular proposals regarding alignment in Proto-Indo-European, nor about the philosophical nature of that language, but rather to demonstrate that whatever pattern is assumed to govern verbal rection at this point in time, it bears little to no relevance on the present study or the development of ergative alignment in most other Indo-European languages.

[192] The development of syntactic ergativity, so Anderson argues, is indeed a result of alignment change; where other languages would have changed morphology to adopt an accusative pattern, languages like Dyirbal have altered their syntactic patterns.

The first case in favour of reconstructing Proto-Indo-European as an ergative language was made by Uhlenbeck (1901), who sought to explain the fact that reconstruction necessitated the formal identity of nominative and accusative in inanimate nouns (= abs), and the *-s marking of animate nominatives (= erg). Later extensions of this theory have attempted to thus explain, *inter alia*, the suppletive pattern of personal pronouns (cp. Lat. nom *ego* 'I' vs acc *me* 'me') and the existence of two sets of conjugations (thematic vs athematic *vel sim.*) in Sanskrit, Greek, Slavic, and Hittite (Vaillant 1936), as well as differences in diathesis (Kortlandt 1983). In an apt summary of the debate, Bavant (2008:438) reiterates that further indications of ergative alignment include the secondary application of the accusative (= abs) marker *-m, and the later spread of the supposedly 'ergative' *-s to intransitive subjects.[193]

An important indication that there is a divide between the alignment of at least animates and inanimates is found in Hittite, where neuter nouns can only function as A if suffixed with *-anza* and related forms, thus effectively rendering them animate (Laroche 1962). Given the status of Hittite as one of the earliest descendents of Proto-Indo-European, some scholars assume that it must reflect the pattern of its mother language more closely than later descendants;[194] recently it has been argued, however, that the animacy-split ergative alignment exhibited by Hittite is an internal development of an individuation marker Hitt. *-ant* into an ergative marker (Rumsey 1987*a*:311; Goedegebuure 2012).

Doubts concerning the ergative analysis of Proto-Indo-European have been raised on a largely typological basis. As mentioned above, 3.1.3.2, it is usual for the least prototypical agents (= prototypical patients), viz. those specified as [-animate], to

[193] For the original attempt at an explanation of the Proto-Indo-European ergative-to-accusative shift, cf. Pedersen (1907). A number of questions remain in this regard: how can a secondary rise of *-m or the spread of 'ergative' *-s marking to the intransitive be so readily asserted in a reconstructed language, most of whose daughter languages show little to no direct indication of ergative alignment? While theoretically not impossible, these points appear to be wholly unnecessary for the cogent reconstruction of Proto-Indo-European; cp., e.g., Kuryłowicz's change of heart regarding the nature of the *-s marker (1964:208–11), which need not be an indicator of non-accusative alignment.

[194] Other arguments in favour of Proto-Indo-European ergative alignment draw on the greater restrictiveness in accusative case usage in Hittite as compared to, e.g., Greek (Luraghi 1987). It is said to have taken on the function of the absolutive, marking S and O. With the S function being later taken up by the nominative, the accusative remained a strictly functional, i.e. syntactic, case in Hittite, as evidenced by a separate directive case, while in other Indo-European languages it took on other functions as well.

take ergative case in languages with NP-split alignment patterns; that Proto-Indo-European may have been split in alignment is plausibly deducible from the different treatment of neuters. These neuters, however, are not morphologically differentiated along ergative lines, since ergative marking is *prima facie* applied to [+animate] actants. According to the analysis of (Rumsey 1987*b*:34), a more cogent analysis of the neuter marking suggests that they adhered to a neutral pattern, where S=A=O (see 3.1.2.1; also cf. Villar (1983, 1984)); furthermore, ergative marking would be expected to occur only at the lower end of the animacy hierarchy (Silverstein 1976), and not throughout it, as would be the case here. This neutral/accusative interpretation would allow for the remainder of the system to follow a nominative-accusative pattern as attested in its daughter languages.

This line of argumentation does, however, presuppose an animacy-split proper, as opposed to a merely statistical preponderance for animate nouns to govern transitive verbs. In fact, it is entirely possible and plausible that the original ergative case should have furnished later nominative endings in those nouns or noun classes, in which it was used frequently (= animate), whilst not having this effect (or having it to a lesser extent) in less commonly ergative (= inanimate) nouns or noun classes.[195]

Other data, specifically the question of the semantics of the middle voice and the perfect, have led to other suggestions, for example that Proto-Indo-European showed elements of fluid-S alignment (Drinka 1999); for reasons of space and relevance, this will not be discussed here.

Given the intrinsic uncertainty of reconstructing syntactic patterns in languages whose morphological development is not fully secured, it seems as yet indeterminable precisely how Proto-Indo-European was aligned. While ergative alignment for Pre-Proto-Indo-European is a possible analysis, the data from its daughter languages cannot give but indirect evidence thereof.

For the purpose of this study, it is inconsequential precisely how (Pre-)Proto-Indo-European construed morphosyntactically, since tense-sensitive alignment as occurred in the Iranian languages, specifically in analytic perfect forms, is not a recognisable

[195] For proper discussions and refutations of Rumsey (1987*a*,*b*), cf. Cuzzolin (1998); Nikolaev (2000).

feature of Proto-Indo-European. Even the case of this reconstructed language goes to show, however, that alignment shift is not an uncommon occurrence at all.

3.1.4 Observations and questions

The above discussion of alignment patterns, their typology, and the manners and directions in which they change has, by necessity, been brief and, to a large extent, focussed on specific aspects that are of relevance to this study. Simplifications and reductivist expositions have been avoided where possible, but in some regards (esp. concerning the question of alignment in Proto-Indo-European) were unavoidable.

Even within this restrictive framework, however, it has become evident that the Iranian languages, which have been chosen as examples for self-evident reasons, are a veritable treasure trove as regards alignment change, since many patterns are represented in this family, including some typologically rather uncommon ones. This is particularly fortunate since the development of the Iranian language family is one of the best documented cases of alignment change in existence.

A number of features, both general as well as those gleaned from Iranian in particular, have been given express attention in the above discussion since it is believed that they will be of relevance for the analysis of the Armenian data below; the following are the most important:

- tripartite alignment, as occurring in the Pamir language Yazgulyami, has been argued to be one of numerous 'transitional' alignment patterns which obtain during the process of alignment shift from ergative to accusative;[196]
- rise of O-prefixation in split-ergative languages in the process of alignment change, partly resulting in tripartite alignment;
- loss of verbal agreement with O in ergative environments, change to S agreement, Ø agreement, or invariable, petrified forms;

[196] The term 'transitional' should be used with care; clearly this pattern is not transitional in the sense of temporary, but rather in the sense of one of (potentially many) stages in a progressive, long-term change. While tripartite alignment is uncommon for reasons stated above, it is nonetheless synchronically stable.

- changes in constituent order resulting in, or reflecting, alignment change.

All of these changes occur in isolation as well as in combination with one another in a variety of languages, as discussed above. It is of note, however, that all are found within the Iranian family, and in the case of some languages, combining three or more of the elements mentioned. Hence it may be reasoned that the morphosyntactic environment historically provided by Old and Middle Iranian is pluripotent, engendering a variety of changes to different degrees. At the same time, it ought to be kept in mind that the situation in Classical Armenian, as briefly outlined above, chapter 1, and discussed in greater detail immediately below, is not dissimilar, but does not profit from a comparable transmission history, and has as yet not been analysed more closely with reference to its alignment pattern.

In the next section, therefore, the morphosyntactic alignment of the Classical Armenian periphrastic perfect will be discussed. After a description of the current views on its synchronic use and patterns will follow an analysis of the various attempts at explaining its construction diachronically. It will be suggested that all attempts at such an explanation to date fall short of explaining all aspects of the perfect construction, wherefore a new perspective is necessary; this new approach needs to take into account possible influence from the Iranian contact languages, and must be based on a study of the use of perfect in original, non-translated texts.

3.2 Morphosyntactic alignment of the Classical Armenian periphrastic perfect

In view of the analysis of the past participle as being an intrinsically intransitive-passive verbal adjective, see chapter 2, the development of the transitive periphrastic perfect must be investigated, since the participle is its main constituent. This investigation will be guided by the information and overview provided in section 3.1.

First, the usage of the participle and the associated perfect tense will be illustrated briefly by means of examples drawn from classical texts. After a consideration of the variety of approaches which have been suggested as explanations of the transitive

perfect, and a critical analysis of their merits and faults, the case for considering the construction an instance of tripartite alignment, the result of alignment shift from an ergative pattern replicated from West Middle Iranian, will be made.

3.2.1 Alignment patterns in the periphrastic perfect

Classical Armenian shows nominative-accusative alignment in the vast majority of contexts; syntactic roles are marked on the NP by means of inflexion, consisting largely of fusional suffixes and ablaut patterns. S and A are (un-)marked as nominative, while O is reflected by accusative marking; in the nominal and pronominal paradigm, nominative and accusative are identical in the singular, but O is often marked further by the proclitic *z=* if it is definite (cf. Scala 2011).

(3.26) *ew* *yet* *aysorik* *elanēr* *na* *i* *teł-is*
and after DEM.EMPH.GEN.SG go.3.SG.PST 3.SG.NOM (in)to place.ACC.PL
mehenac‘n *...*
temple.GEN.PL
‘And after this he went to the sites of the temples ...’ (Ag. §814)

(3.27) *du* *es* *ayn,* *or* *kotorec‘er*
2.SG.NOM be.2.SG.PRS DEM.NOM.SG REL.NOM.SG destroy.3.SG.AOR
z=Aris *aysč‘ap‘* *ams* *...*
OBJ=Aryan.ACC.PL so-many year.ACC.PL
‘It is you, who has destroyed the Aryans for so many years ...’ (P‘B IV.54)

(3.28) *ew* *ban=n* *im* *z=or* *lsēk‘* *oč‘*
and word.NOM.SG 1.POSS.NOM.SG OBJ=REL.ACC.SG hear.2.PL.PRS NEG
ē *im,* *ayl* *hōrn* *or*
be.3.SG.PRS 1.POSS.NOM.SG CONJ father.GEN.SG REL.NOM.SG
aṙak‘eac‘=n *z=is*
send.3.SG.AOR=DET OBJ=1.SG.ACC
‘And my word, which you hear, is not mine, but my father’s, who sent me.’
(Jn. 14:24)

As the examples demonstrate, both in transitive and intransitive environments, the nominative marks S and A in present, past, aorist, as well as in the subjunctive mood of these tenses; the same is true for accusative O-marking. The periphrastic perfect, however, does not construe along the same lines. As discussed above, it is composed

of the past participle and frequently a form of the copula; the latter is optional in non-biblical texts. In addition, the participle may be used in apposition as a *participium coniunctum*, or as an attributive or predicative adjective. The usage of the participle can be roughly subcategorized into four sections according to standard grammatical descriptions: (α) intransitive; (β) passive; (γ) transitive; and (δ) impersonal.[197] The last group, first mentioned by Vogt (1937) and proposed in more detail by Weitenberg (1986:10-12), is attested only sporadically, and further investigation is necessary to establish whether postulating its existence is statistically justified, or if occurrences are rare outliers.

The historical provenance of the perfect construction is debated. A genitive agent, as occurs in types α* and γ, is not otherwise attested in Armenian with any regularity, nor are there any direct typological parallels for the transitive construction of type γ in any of the other Indo-European languages.

The following collection provides an example each of a standard perfect with copula, an appositional, i.e. non-copular, use of the participle, and, where necessary and available, an irregular pattern marked *; they will further illustrate the semantics of the perfect, which, as opposed to the punctual aorist, emphasises the result of an action.

3.2.1.1 Type α: intransitive

Type α consists of intransitive perfects with a nominative agent, and construes personally, i.e. agent and copula agree in number and person.

(3.29) *or* *ustekʻ ustekʻ* *ekeal* *haseal* *ēin* *i*
REL.NOM.SG from-all-over come.PTCP arrive.PTCP be.3.PL.PST in
tʻikuns
aid.ACC.PL
'… who had arrived from all over in aid …' (Ag. §21; copular)

(3.30) *ard* *hraman* *haseal* *aṙ* *is* *omn* *Agatʻangełos*
then order.NOM.SG arrive.PTCP to 1.SG.ACC INDF.ACC.SG Agatʻangełos
'Then, as the order arrived for me, a certain Agatʻangełos, …' (Ag. §12; non-copular)

[197] Ditransitive verbs will be treated as transitive verbs and their recipient *vel sim.* argument disregarded.

Type α*, on the other hand, exhibits genitive agents; owing to the paucity of evidence, it has not yet been clearly determined whether these construe personally or impersonally, given that participles and adjectives preceding their head noun need not agree with them.

(3.31) *yaynžam* *matucʻeal* *ašakertacʻn* *nora,* *asen*
at-that-time approach.PTCP disciple.GEN.PL 3.SG.GEN say.3.PL.PRS
cʻ=na
IOBJ=3.SG.ACC
'At that time the disciples approached, and said to him …' (Mt. 15:12)

3.2.1.2 Type β: passive

Type β consists of passives, both with an agent (*i* + Abl.) and without. Other types of agents do not occur, but instruments may be found in the instrumental. The subject is in the nominative, and the copula agrees with the subject in number and person.

(3.32) *erkir* *ew* *mardkan,* *or* *i* *nmanē* *en*
earth.NOM.SG and mankind.NOM.SG REL.NOM.SG by 3.SG.ABL be.3.PL.PRS
stełceal
create.PTCP
'… earth and mankind, which were created by him.' (Ag. §52; copular)

(3.33) *ahawasik* *es* *kapeal* *hogwov* *ertʻam* *y=Erusałem*
behold 1.SG.NOM bind.PTCP spirit.INS.SG go.1.SG.PRS into=Jerusalem
'Behold, bound by the spirit I go into Jerusalem.' (Act. 20:22; non-copular)

3.2.1.3 Type γ: transitive

Type γ consists of transitive verbs, which as expected take an accusative object (often but not unfailingly marked with the object-marking proclitic *z=*); the agent of these formations is in the genitive, and there is generally no agreement between agent and copula in number or person, since the 3.SG form *ē*, its imperfect *ēr*, or analogous forms of other copulative verbs are found almost exclusively.

(3.34) *ʔočʻ* *z=gir=n* *z=ayn* *icʻē* *əntʻerċʻeal*
NEG OBJ=writing.ACC.SG=DEF OBJ=DEM.ACC.SG be.3.SG.SBJV read.PTCP
jer
2.PL.GEN
'Have you perhaps not read this writing?' (Mk. 12:10; copular)

(3.35) *z=or* *aṙeal* *t‘agawori=n,* *z=amenesean*
OBJ=REL.ACC.SG accept.PTCP king.GEN.SG=DET OBJ=all.ACC.PL
astuacakard *lcoyn* *hnazandec‘uc‘anēr*
ordained-by-god yoke.DAT.SG subjugate.3.SG.PST
‘The king, having accepted this, made them all subject to the yoke ordained by god.’ (Ag. §14; non-copular)

In a limited number of instances, type γ* continues the same construction but with nominative agents.

(3.36) *nok‘a* *aṙeal* *tanein* *z=na*
3.PL.NOM seize.PTCP lead.3.PL.PST OBJ=3.SG.ACC
‘Having seized [him], they led him away.’ (Jn. 19:17)

3.2.1.4 Type δ: impersonal

As mentioned above, it is as yet unclear whether the postulation of a type δ consisting of impersonal constructions is necessary, or whether they can fall under one of the above types. Like α* and γ*, this type is fairly rare.

(3.37) *orum* *xawsec‘eal* *z=Mariam*
REL.DAT.SG promise.PTCP OBJ=Mary.ACC.SG
‘…to whom [one had] betrothed Mary.’ (Mt. 1:16)

This type is called impersonal since neither text nor context provide a plausible overt or covert agent while the logical object remains in the accusative or is marked with the object proclitic *z=*.

3.2.2 Previous explanations

In what follows, the main theories adduced to explain the transitive perfect will be presented critically, with a view to elucidating their individual explanatory strengths and weaknesses. They consider the perfect, in order of treatment, (1) as a construction of *nomen actionis* and *genitivus auctoris*, (2) as a ‘have’-perfect and *genitivus possessivus*, (3) the result of the prototypical agent function of the genitive, (4) intrinsically linked to genitive usage with verbal adjectives in Tokharian, (5) a language contact

phenomenon derived from ergative Caucasian languages, (6) the result of analogical shifts, or (7) a construction involving denominal adjectives and a verbal abstract, respectively.

3.2.2.8 will summarise the issues with the above theories and will, in turn, propose that a different avenue, namely language contact with the West Middle Iranian languages, may be a better explanation of the nature of the transitive perfect construction in Armenian.

3.2.2.1 *nomen actionis* and *genitivus auctoris*

The original attempt at explaining the genitive in the perfect construction goes back to Meillet (1903); in a later edition of this work, he expands on his initial thoughts, suggesting that the syntagma be construed as a *genitivus auctoris* with a *nomen actionis*:

> [L]'emploi au premier abord étrange, du genitive dans les tours [participaux] provident sans doute de ce que les participes en -eal représentent d'anciens substantifs: nora bereal ē 'il a porté' a dû signifier originairement 'il y a porter de lui', c'est-à-dire que l'infinitif et le participe seraient des formations également nominales, mais de structure distincte. (Meillet 1936:128-9)

The issues with this explanation have been pointed out first by Deeters, who underlines the difficulties in explaining the difference between the intransitively employed participle with a nominative, and the transitive participle with a genitive agent:

> Nicht erklärt wird durch diese Deutung die Tatsache, daß diese Wendung fast ausschließlich bei transitiver Geltung des Partizips vorkommt. Warum sagt man 'Es gibt mein ihn-Tragen', aber nicht 'Es gibt mein Kommen'? (Deeters 1927:80)

Benveniste (1952:58) has further elaborated on Deeters's objection and adds that Meillet's analysis would require a different morphological history for the intransitive and transitive participle, respectively: 'Il faudrait admettre que *-eal* est participle dans le parfait intransitive, mais nom d'action dans le parfait transitif et là seulement, sans qu'on discerne non plus de raison à cette répartition'.

3.2.2.2 'Have'-perfects and *genitivus possessivus*

The concept that the Armenian perfect, like that of Old Persian, should be construed as a 'have'-perfect with its agent in the *genitivus possessivus* originates with Benveniste (1952) and finds acceptance even in more recent works (cp., e.g., Schmitt 2007:152). Suggesting that the structures found in the so-called *taya manā kr̥tam* construction[198] (genitive-dative agent, nominative object) cannot be sensibly analysed as a synchronic passive, Benveniste proposes that 'le sens du parfait perse … est possessif. Car de même que **manā puss̲a astiy* "mihi filius est" équivaut à "habeo filium", de même *manā krtam astiy* est à entendre "mihi factum est", équivalent à "habeo factum"' (1952:56). Benveniste goes on to argue in favour of applying the same model to the Armenian question, rejecting Meillet's explanation. Pointing out the possessive function the Armenian genitive-dative fulfils,[199] Benveniste suggests that the Armenian perfect is like the Old Persian 'une expression possessive bâtie en arménien même sur un modèle idiomatique pour rendre ce qui était apparemment le sens propre du parfait transitif' (1952:60). The fact that Armenian, as opposed to Old Persian, takes an accusative object, is explained as a cogent development of its transitive nature.

In a later paper, Benveniste rightly points out that the syntax of the perfect and that of the participle are related (1959:58).[200] In addition, he underlines that the occurrence of the accusative object entails that the construction at work here must be active.[201] The occasional occurrence of genitive agents with intransitive verbs is explained here as 'préférée parce qu'elle faisait mieux ressortir le rapport d'antériorité'

[198] This phrase, originally thought to be an unusual passive (Geiger 1893:1) has since been the subject of much debate: analysed by Benveniste (1952) as a possessive construction, other interpretations have suggested an ergative (Haig 2008:86-8; Jügel (2015)) or benefactive (Karimi 2012:29, 37) interpretation, instead. For a more detailed discussion, see section 3.3.1.

[199] Apart from pronominal paradigms, genitive and dative are morphologically indistinguishable in Armenian. It is, however, noteworthy that the perfect construction never construes with the pronominal dative, wherefore it seems plausible to assume that the genitive is indeed the agent case. Pronominal datives can function as the agents of infinitives; this phenomenon is less well attested, however, and need not be related to participial usage (cf. Mkrtč'yan 1967).

[200] He states, in fact, that 'ces deux problèmes n'en font qu'un, qu'il s'agit ici et là de la même relation syntaxique'. For a discussion of the accuracy of this statement, see chapter 4 below.

[201] This, in turn, of course bears some relevance on the question, whether the perfect in Old Persian is active, too. According to Cardona (1970:10), it is more plausible to maintain that the Old Persian construction is a passive; cf. Skjærvø (1985) for a synchronic overview, and see section 3.3.1 for a more detailed discussion.

(1959:63); this explanation, like other *ad hoc* explanations of individual passages, lacks any formal reasoning and cannot convince. In contrast, his judgement that the appositively used, viz. non-copular, participle acts just like the perfect tense, stripped of its copula since the person is marked in the main verb, deserves some attention (1959:65); this analysis aptly avoids the problem of having to explain how secondarily developed verbal rection is imposed on the primarily nominal participle.

Schmidt (1962:231-2) accepts Benveniste's main points and concludes that owing to its intransitive function, the fact that it can be used as a passive participle, whence derives the transitive perfect, and that it further functions as an active transitive participle in apposition, the Armenian *-eal* participle according to Benveniste must have been 'primär unempfindlich gegen eine Diathesenunterscheidung. Hierin stimmt sie mit anderen armenischen [...] Verbalnomina überein'. He suggests that only this indifference to diathesis allows for the construction to have all its various functions, since it has 'seine Flexion zugunsten einer finiten Verbalauffassung (Objekt im Akkusativ) weitgehend aufgegeben'.

This argument is not cogent, however; the Armenian participle has not given up its flexional character and, when used attributively, can still be fully declined. While Schmidt himself adds that supposing an originally passive participle is more sensible, he suggests that the transitive-active rection of the periphrastic perfect may be explained as follows: 'Der Anstoß für die aktive Umdeutung der primär passivischen Formation des periphrastischen Perfekts transitiver Verbalstämme wäre demnach durch das appositiv gebrauchte Partizip erfolgt' (1962:233). This argument, based on Benveniste's observation that participle and perfect construe identically, seems circular: since it must be assumed that the active function of the participle can only plausibly be derived from its usage as part of the supposed 'have'-perfect, how can it have been used actively in apposition before, thus causing the active interpretation of the perfect, and so forth.

Furthermore, the same objection may be applied to both Benveniste's and Schmidt's understanding of the situation: Benveniste mentions the 'statut double' of the participle, partaking both of verbal and nominal rection, viz. taking an ac-

cusative object whilst being governed by a possessive genitive. This pattern, while not unheard of in other languages,[202] does not seem to have any close parallel in any other Indo-European language.[203] A further problem must be seen in Benveniste's assumption that the accusative object is simply a logical consequence of the 'transitive nature' of the construction; if indeed the perfect were based on the possessive construcion, would the latter not be expected to show similar developments in the direction of an accusative? Such occurrences, however, are not attested.[204]

3.2.2.3 Genitive as a prototypical agentive case

In view of the various approaches presented above, it is worthwhile considering also the question, whether the genitive may have been a prototypically agentive case. Schmidt (1963:3-4) points out that, although rare in the earliest attested Indo-European languages, the genitive seems to frequently take on an agentive role, even in languages such as Latvian, in which according to Endzelīns (1923:§774) agentive passive constructions occur but are avoided in favour of active phrasings. Next to Latvian, Schmidt (1963:8-9) mentions other Indo-European languages in which genitive agents are known to occur with verbal adjectives in *-to-, viz. Lithuanian, Old Persian, Vedic, or with participial formations in *-u̯es-/-us- or *-lo-, namely Tokharian and Armenian.[205] He rightly emphasises that the genitive as agent with finite verbal forms must be secondary to its use with nominal, non-finite forms in Latvian, and

[202] Turkic languages frequently have an ill-defined boundary between nominal and verbal rection: TTurk. *Ayşe'nin bu oteli seçmesi bizim için iyi oldu*, 'Ayşe's choosing this hotel has been good for us'; here, *seçmesi* is a verbal noun with a direct object *bu oteli* and a genitive agent/possesor *Ayşe'nin*. The English translation reflects that the same is possible in this language, but this doesn't hold true for all other Germanic languages: NHG **Ayşes (das) Hotel Auswählen war gut für uns*.

[203] It is, of course, not impossible to arrive at such a pattern through successive stages of development; it is conceivable that the object should have been in the nominative initially, and then, after the periphrastic perfect had been analysed as 'une forme simple à l'égard de son objet' (Benveniste 1959:60), analogical levelling with all other tenses should have occurred, resulting in the use of an accusative object. This development, however, does not provide any explanation for, e.g., contaminations such as genitive agents with intransitive verbs, or the fact that the appositive, that is non-copular, participle, too, follows the perfect rection.

[204] A discussion of Sakhokija (1984, 1985) is not attempted here, since her possessive approach adds little new information and draws too heavily on (infelicitous) comparisons to Georgian; also cf. Schmalstieg (1988).

[205] While the connection may be historically relevant, Schmidt here fails to mention in any detail or account for the fact that in Armenian, the genitive cannot be synchronically analysed as a passive agent, since it takes an accusative object. The role of the passive agent is taken up by the prepositional periphrasis with *i* + ablative.

thus by extension also in other languages (Schmidt 1963:11).

This is further corroborated by Hettrich (1990:94, 97), who points out that the genitive in agent function 'war ursprünglich auf die Verwendung neben passivischen Verbaladjektiven beschränkt', as shown by its statistically more frequent occurrence with these in Vedic, Greek and Old Persian; he furthermore points out that this function pertains to the basic genitival meaning of appurtenance, and does not represent a separate function of the case, but developed in agentive uses *einzelsprachlich* in later forms of the respective languages. Whether the usage of genitives with verbal adjectives in Armenian, Tokharian and Vedic are structurally comparable will be explored immediately below.

Further evidence against a prototypically agentive genitive is provided by Jamison (1979:133-7), whose research suggests that 'the gen. agent so often attributed to Vedic in the standard literature is marginal, even non-existent, in early Vedic, except in certain semantic categories' (1979:137).[206] A similar verdict applies to the rare genitive agents found in Greek; the example of διόϲδοτοϲ 'Zeus-given', which has been cited as a clear indication of an old genitive agent already by Brugmann and Delbrück (1897–1916:II.2.601) and Schwyzer (1946), and was compared with Ved. *patyúḥ krītā́* 'husband-bought',[207] is rejected by Jamison (1979:142), who points out that in its formation it is quasi-unique,[208] and that similar compounds with inflected forms as their *Vorderglied* occur in Homer, but exclusively with the dative, e.g. Gk. ἀρηΐφατοϲ 'Ares-killed', αἰγίβοτοϲ 'goat-grazed'. Whether the *Vorderglied* represents a genitive, or as per Jamison's suggestion an old ablative, it is unlikely that it reflects an old state of the language.

A different approach relating directly to the function of the genitive is offered by Trost (1968:104-5). He attempts to explain the agentive genitive on a purely semantic basis: he distinguishes *Subjektsperfekt*, which details a state of the subject and

[206] The semantic groups mentioned include verbs of perception, consumption and distribution, and enjoyment, which also show variation in case assignment of their other core arguments.

[207] It ought to be noted, however, that philological doubts concerning this formation, occurring in Pindar and Aeschylus, have been mentioned already in Rödiger (1867:320), stating that if the first part is to be considered a genitive, 'so sieht man in der welt nicht ein, wie derselbe zur Bedeutung des compositums passen soll'.

[208] The only comparandum is Gk. θεόϲδοτοϲ, which may be an analogical formation.

are most commonly intransitive, e.g. 'to die', 'to be born'; and active, transitive verbs, which form *Objektsperfekt*, an action directed towards an object that cannot influence said action. The argument continues that the subject of the *Subjektsperfekt* is comparable in its affectedness to the object of the *Objektsperfekt*, but not to the subject of the latter.

> Der gedanklichen Konzeption des Objektsperfekts ist es eigen, daß das Subjekt als Zustandsverursacher fungiert, weil es die den perfektischen Zustand auslösende Handlung beherrschte. Warum sollte nun dieser Wandel in der rolle des Subjekts nicht auch grammatikalisch zum Ausdruck kommen? (Trost 1968:105)

asks Trost; his semantic analysis, which appears to be closely aligned to the concept of ergativity, fails to acknowledge, however, that such a shift in role and or emphasis is cogently expressed, both semantically and syntactically, by the passive; further, he pays no attention to the fact that similar patterns are lacking entirely in any other tense, even those which may themselves express states.

It appears unlikely, therefore, that the genitive should have a prototypically agentive role in Proto-Indo-European, from which its daughter languages might have inherited such a use; that such a role might have developed *einzelsprachlich*, however, cannot be excluded.

3.2.2.4 Evidence from Tokharian and Vedic verbal adjectives

The occurrence of *-lo- verbal adjectives in Tokharian, the agent of which is expressed by means of a genitive, appears to provide the closest link to the Armenian situation. Tokharian A and B both have two distinct verbal adjectves based on the *-lo- suffix, rendered as TA *-l*, TB *-lle/-lye*.[209] One is based on the present stem and expresses a

[209] As noted by Thomas (1977), the derivation of TB *-lle/-lye* is debated. van Windekens (1976: 95) argues that these forms are likely the outcome of a palatalized protoform *-l̥i̯o-. A different suggestion by Couvreur (1947) proposes a secondary formation on the basis of the feminine singular form. Thomas calls to caution, however, since it is unlikely that functionally and formally closely related forms should have different origins. He proposes (1977:258-9) that TB *-lle* be a 'redoublement secondaire' as postulated by van Windekens (1976:123-5), comparing the situation to, e.g., privatives like TB *anākätte* 'faultless, immaculate', *ayāmätte* 'not to be done', where *-tte* < *-te < *-to-s. The TB *-lye* form, on the other hand, is analysed as an original oblique case, based on the evidence of other adjectives like TB *allek*, obl. *alyek* 'other', *emalle*, obl. *emalye* 'hot' (cf. also Thomas 1967). Winter (1992:152) objects, arguing that both Tokharian A and B forms are derived from *-l̥i̯o-. Most recently, Fellner (fthc.:157) suggested that the Tokharian gerundive is a 'conflation of the neuter abstract/adjective *-lo- and animate *-l̥i̯o- since *-lo- n. and *-l̥i̯o- m. became equivalent in the pre-history of Tocharian'.

deontic modality, the second one is formed on the basis of the subjunctive stem and generally expresses a potential modality. Only the deontic form is of interest in the present context.

As the following examples show, the verbal adjective is primarily passive, and agrees with its patient, whereas the agent is found in the genitive (Thomas 1952: 19):[210]

(3.38) *śaul* *nemce* *tärkänālle* *kreñcepi* *ste*
life.NOM.SG certainly give-up.VBADJ.NOM.SG good.GEN.SG be.3.SG.PRS
ś[au]m(o)nts[e]
man.GEN.SG
'Certainly life must be given up by a good man.' (MQR 35a6)

(3.39) *penäs* *kraś* *mänt* *yal* *ñi*
say.2.PL.IMP good.VOC.PL how go.VBADJ.NOM.SG 1.SG.GEN
'Say, good ones, how shall I do [it]? (lit. … how is it to be done by me?)' (No. 71a1)

At the same time, however, Thomas points out that on occasion, verbal adjectives with an instrumental agent can be found as well; such occurrences are attributed to influence from Sanskrit.

(3.40) *yessāk* *yāmṣälle*
2.PL.INS do.VBADJ.NOM.SG
'You must be acting. (lit. There must be acting by you.)' (Udānāl. 27b3)

Thomas further mentions that these verbal adjectives also occur with direct objects in the oblique case, as opposed to the predominant passive formation; he differentiates between an impersonal and a personal construction.

(3.41) *kurkal* *tune* *viciträ* *pyāpyai* *maṇḍālne*
kurkal.NOM.SG *tuna*.NOM.SG *vicitra*.NOM.SG flower.OBL.SG magic-circle.DIR
taṣale
place.VBADJ
'*Kurkal*, *tuna* [and] *vicitra*-flower ought to be placed in the magic circle.' (Filliozat. Frgm. M 3a5)

[210] For bibliographical data on the quoted examples, see Thomas (1952).

(3.42) *sessatatte* *rine* *meskeṣṣe[ṃ]* *cāneṃ* *aiṣlyi*
Śeṣadatta.NOM.SG town.LOC joint.OBL coin.OBL.PL give.VBADJ
tākaṃ
be.3.SG.SBJV
'In town, Śeṣadatta needs to hand over the money transfers related to the bands.' (MQ 23.4)

In these constructions, an agent either remains unexpressed (impersonal), or is in agreement with the verbal adjective, thus essentially rendering it active. Concerning the historicity of both syntagmata, however, Thomas (1952:23) speculates 'ob nicht teilweise die sich ergebende Obl.-Konstruktion beim I. Vba. necess. auf bloße Unkorrektheit der Schreiber zurückzuführen ist', and wonders whether in other cases the scribe may not have simply misconstrued the sentence (1952:25).

There are a number of important differences between the Tokharian and Armenian situation, however. A first misfit is represented by the largely passive nature of the verbal adjective, as demonstrated by the examples above, whereas the Armenian construction with a genitive agent is almost always active.[211]

The verbal adjectives in Tokharian express deontic modality, which in itself is unproblematic. Yet, as Luraghi (1995:262) summarises, '[m]any Indo-European languages have dative agents with forms of the verb that express obligation'; a very helpful overview concerning the spread of this type of construction can be found in Hettrich (1990:64-6), who demonstrates that in Hittite, Vedic, Avestan, Greek, Latin, Lithuanian, Slavic, Germanic, Tokharian and Old Irish, deontic modal expressions 'stimmen in ihrer Struktur überein: Ihr Prädikat besteht aus der Kopula (die fehlen kann) und einem participium necessitatis … , ein Agens kann im Dativ hinzutreten'. In fact, the genitive in Tokharian has through case syncretism adopted a number of the functions of the prototypical dative otherwise lost in Tokharian (Zimmer 1985:568-9; Pinault 2008:463; 2011:383), e.g. the *dativus (in-)commodi*, wherefore the occurrence of the genitive with the *-lo- based verbal adjectives is of no immediate relevance for the question of the Armenian perfect.

[211] The Armenian situation, as suggested by Stempel (1983:87) below, 3.2.2.6, may be a secondary development, however.

3.2.2.5 Caucasian influence and ergativity

The possibility that the Armenian periphrastic perfect should be influenced by the neighbouring Kartvelian languages was first mentioned by Meillet (1899-1900:385) who suggested that 'cette construction inexplicable au point de vue indoeuropéen, rapelle au contraire le 'character passif du transitif dans les langues du Caucasus'', reiterated also later in a later work (Meillet 1936:95).

This notion was rejected already by Deeters (1927) on multiple grounds; on the one hand, he points out that 'Konstruktionen, wo weder Agens noch Patiens im Nominativ stehen, sind hier [viz. in the Caucasian languages] ebensolche Ausnahmen wie im Indogermanischen' (1927:80). Secondly, Deeters underlines that in Kartvelian languages, a morphological passive is well-developed, wherefore its lack in Armenian and the presumed retention of a genitive agent cannot be historically grounded. Despite denying a Caucasian connection, Deeters like Pedersen (1907:151-3) and Brugmann and Delbrück (1897–1916:II.3.502) adopts Meillet's interpretation of the participle as a *nomen agentis*, cautioning, however, that Meillet does not explain why this connection occurs mainly with transitive verbs, and that this were to mean that the appositive or non-copular usage of the participle was secondary to its predicative use.

A different perspective is offered by Lohmann (1937), who insists that the construction in question must 'irgendwie 'kaukasischen' Sprachgeist reflectieren' (1937:51). While admitting that the surface form of the respective constructions in Armenian and Kartvelian are not compatible, Lohmann suggests that the participle was originally a *nomen actionis*, thus *nora teseal ē zmard* 'he has seen the man = there was his seeing the man', the object of which action is set in the accusative. This accusative corresponds to the nominative of Kartvelian transitive perfect constructions, viz. what in modern terminology would be referred to as an ergative construction. Lohmann thus relates the Armenian accusative and Kartvelian nominative on the basis of their object function in the perfective (1937:53), not taking into account any other syntactic circumstances. He further equates the Armenian genitive agent with the Kartvelian dative-accusative, since a differentiation of dative and genitive in Ar-

menian is morphologically expressed almost exclusively in the pronouns, and thus sees his theory of a Caucasian substrate confirmed. Solta, in turn, emphasises that Armenian 'bildet offenbar eine kaukasische Konstruktion mit seinen Sprachmitteln nach' (1963:123) to justify the apparent incongruity.

Lohmann's approach cannot convince. For a Caucasian substrate in Armenian to have such a profound effect on the syntax of the verbal system, a number of other borrowings or calques would have to be in evidence (Thomason and Kaufman 1988:60); compared to the influence of Iranian languages, however, the Caucasian substrate is negligible since almost inexistent.[212] Even if a sufficiently strong substrate were supposed, Lohmann's equation is unbalanced. For it is readily noted that in the present, Kartvelian like Armenian knows a nominative subject and a dative-accusative object; were the two perfective constructions related, one would assume that Armenian would have inverted the subject-object relationship in the same way that Kartvelian has, rather than choosing an evidently unrelated case (cp. Schmidt 1962:227-8).

A similar comparison with the Kartvelian languages is advocated by Tumanyan (1974), who believes the Armenian perfect to be construed in ergative alignment (also cf. Anderson 1977:330; Comrie 1981:181); yet, like Lohmann before, Tumanyan does not give any indication as to how this supposed Armeno-Kartvelian syntactic parallel might have arisen. This proposal is sensibly rejected by Schmidt who points out that in Armenian intransitive subject and transitive object do not align as would be expected in an ergative construction (cf. Tumanyan 1974:960). Schmidt also makes the interesting observation that, were the Armenian construction interpreted from an ergative perspective,

> [d]as armen. Syntagma—mit Ziel im Akk.—erklärt sich am besten als Transformationsergebnis einer zu Grunde liegenden Partizipialkonstruktion: *'von ihm (genitiv) ist die Arbeit verrichtet worden' [...] das altarmen. Perfekt stell[t] augenscheinlich [eine] hybride, im Übergang zu

[212] As Djahukian (2003) points out, no systematic studies facilitating the detection of Kartvelian loans in Armenian or *vice versa* have been conducted yet; his findings, as well as those presented in Deeters (1927:111-4) and Vogt (1938) suggest that the prehistoric contact between the two languages was insignificant at least for the development of morphology and syntax, as opposed to the influence from, e.g., Greek or Middle Iranian. Vogt's findings concerning Georgian elements borrowed into Armenian are not numerous, and have been largely rejected by more recent scholars (cf. Gippert 2005*b*:153-5).

> NK [nominative construction] begriffene, EK [ergative construction] dar. (Schmidt 1980:166)

He further points out that 'in dem armen. Beispiel z-gorc gorceal ē nora 'er hat die Arbeit verrichtet' ist vorhistorisch von der Konkordanz zwischen Verbum [...] und Ziel [...] auszugehen' (1972:454). This transitional status allows for, or rather explains, both the coexistence of a potentially ergative agent-marking genitive with an active-aligned accusative object, and the general state of flux of the construction as indicated by incursion of intransitive, viz. nominative, agents in perfect transitive constructions and *vice versa* (see 3.2.1 above; cf. Schmidt 1992:299-300; Vogt 1937: 59). Schmidt (1972:453; 1980:165) also points out that de-ergativisation processes in the transitive system were already on-going in the 'Südkaukasische Grundsprache';[213] at the same time, Schmalstieg (1984:141) presents evidence of the application of ergative marking in intransitive contexts in both Georgian and Lithuanian. Some Caucasian languages, in turn, have generalised ergative alignment: in Megrelian, the aorist construes in the ergative irrespective of (in-)transitivity, whilst in Laz, the ergative is used only for transitive verbs, but in all tenses (cf. also Boeder 1979:439-40; Kortlandt 1983:320).[214]

Since in Armenian, we find sporadic signs of transitive-marked intransitives and intransitive-marked transitives in the perfect, as well as an active-marked object in a potentially ergative construction, this transitional approach is worth pursuing and will be discussed in more detail in 3.2.3 below. Assuming Caucasian influence on the Armenian perfect construction is, however, neither necessary nor sensible.

3.2.2.6 Analogical shift

Stempel (1983:69ff.) rejects all previous attempts at explaining transitive perfects. Meillet's interpretation of the perfect as an original phrase consisting of *nomen actionis* and copula (*nora bereal ē* ∼ 'il y a porter de lui'), already called into question by Deeters (1927), raises the question why the same mode of expression is not also

[213] Similarly Schmidt (1982) where an undefined relationship with South Caucasian languages is still advocated, although its details and reality have not been elucidated in any way.

[214] Schmalstieg considers all IE languages to have been originally ergative. As regards the Armenian perfect, he argues in favour of an originally intransitive formation, later interpreted as a passive. Neither of these perspectives find sufficient corroboration in the data.

employed for intransitives. In addition to Benveniste's criticism that this construction is not perfective but rather suggests a progressive or even futuric aspect, Stempel takes issue with the rection of the phrase, which is both verbal (accusative object) and nominal (genitive agent). Finally, commonly nominalised participles such as *meṙeal* 'dead person, Toter' and *aṙak'eal* 'emissary, apostle' are passive in meaning and do not reflect the verbal abstracts envisaged by Meillet.

Considering the approaches of Benveniste and Lohmann mentioned above, Stempel argues that both explanations are unsatisfactory. In view of Benveniste (1952: 60), who compares the perfect phrase *nora gorceal ē* 'he has done' with *nora ē handerj* 'he has a garment', Stempel argues that the comparandum to *handerj*, the object possessed, ought to be not the participle as above, but the object of the perfect, usually found in the accusative (1983:73). Citing examples from Italian, where there is a congruence between the perfect participle and its object if the latter precedes,[215] he sees in the lack of congruence between the Armenian participle and its object a flaw in Benveniste's line of argument.

A second objection against a possessive interpretation may be raised on the basis of diathetical implications; like in the Romance languages, such an approach requires the participle to be inherently intransitive-passive, as indeed seems to be the case in the majority of instances (Vogt 1937:51, index locorum); yet, the Armenian participle is in a number of cases used as apposition with active meaning, e.g.

(3.43) *ew* *teseal* *z=žołovurds=n* *el* *i* *leaṙn*
and see.PTCP OBJ=crowd.ACC.PL=DET go.3.AOR.SG into mountain.ACC.SG
'He, having seen the crowd, went into the mountains.' (Mt. 5:1)

According to Stempel (1983:74), a possessive interpretation would therefore necessitate a secondary origin of the appositive, non-copular usage of the participle, which he believes to be unlikely.

Lohmann's interpretation only receives very limited attention, and is dismissed mainly on the basis of a methodological issue. Explaining the Armenian construction

[215] Compare It. *ho visto la casa* 'I have seen the house' and *le case che ho viste* 'the houses which I have seen'.

as not reflecting the 'passiven Charakter des Transitivs' (1937:51), he still suggests that the accusative is used in Armenian as a result of this characteristic.

Stempel himself offers an explanation of his own. In agreement with Benveniste and Schmidt, he presumes a prehistoric passive construction of the form **nora gorceal ē gorc*, where *gorc* is the clausal subject; this assumption, so Stempel, aligns best with the intransitive-passive and adjectival nature of the *-eal* participle (1983:83). At the same time, he attempts to find a solution that avoids the problematic possessive nature of Benveniste's attempt and further provides an 'innerarmenisches Motiv' for a transition from passive to active.

Based on his assumptions concerning the diathetic nature of the participle, he argues that the perfect was initially only able to form a passive, whereas other tenses offer a distinction between active and passive (1983:84).[216] The genitive agent in this construction is inherited from the proto-language, and as such found in similar formations in Tokharian, Lithuanian and in remnants of Greek; but see 3.2.2.3 above.[217] With the integration of the passive perfect into the general tense and aspect system, the genitive agent did not align with the regular passive marking by *i* + ablative, wherefore the latter syntagma was introduced, leading to the coexistence of **nora gorceal ē gorc* and *gorc gorceal ē i nmanē*, the latter of which constructions is productive in attested classical Armenian.

After the analogical creation of the new perfect passive, Stempel suggests a further analogical processes in which the original **nora gorceal ē gorc*, whose function was now performed by the *i* + ablative formation, was reinterpreted as an active, thus:

Aor.Act. *na gorceac (z=)gorc* : Aor.Pass. *gorc gorcecʻaw i nmanē* ::

Perf.Act. **nora gorceal ē gorc* : Perf.Pass. *gorc ē gorceal i nmanē.*

[216] This argument is problematic. Only aorist-based forms stringently differentiate active and passive, whilst in the present only the *e/i*-conjugation allows for such a distinction; no separate passive occurs in the imperfect.

[217] Cp. Schwyzer (1946). While this is the case for Tokharian (Thomas 1952:19-20), there the genitive is applied both in transitives and intransitives. As mentioned by Hettrich (1990:93, 95) and Mathiassen (1996:143, 185-6), the genitive is an agent case for the passive in Lithuanian; both state, however, that passives are usually agentless, and this practice avoided. The notion of a prototypical genitive agent has been discussed above; it is further worth taking into account that genitive agents in passive constructions are cross-linguistically rare and their usage normally correlated with a nominal (≠ adjectival) origin of the passive verbal morphology (Kazenin 2001: 904).

Filling the perfect active slot, the participle itself had not yet adopted an active meaning; given the large-scale isomorphy between nominative and accusative,[218] it was first necessary to reinterpret the grammatical subject as the logical object of the transitive perfect clause. Any potential congruence in case or number marking was likely eliminated; adjectives preceding their head nouns are not usually marked accordingly in Armenian, and in analogy this pattern may have been adopted for postposed predicative adjectives (Stempel 1983:85). In a further analogical step, and owing to the reinterpretation of grammatical subject as logical object, the latter was marked by the nota accusativi *z=*, as is frequently the case in all other tenses.

This last step allowed for an active interpretation of the participle even in attributive contexts, which in turn required the maintenance of a morphologically marked difference between active and passive participle, thus pass. *na teseal ē* vs act. *nora teseal ē* (1983:86).[219]

As has been discussed above already, Stempel's theory cannot stand owing to the assumption of an inherited agentive genitive from the proto-language, and the extent to which analogical remodelling is required. The supposed reanalysis of the construction as active and the subsequent adoption of the accusative *z=* raises the question whether that genitive agent would not have been eliminated first as not conforming to agent marking in Armenian.

3.2.2.7 Attributive adjectives

Weitenberg (1986) adds considerably to Stempel's categorisation of perfective expressions: in addition to the intransitive, passive and transitive, he notes occurrences of juxtapositions which show unusual syntax, e.g. intransitives with a genitive subject, and a whole new group of impersonal expressions such as *orum xawsecʻeal z=Mariam* (Mt. 1:16) 'to who one had betrothed Mary' (1986:11-2); see (3.37) above.

Stempel's explanation for developing a differentiation in subject marking between

[218] For detailed discussion of this merger, cf. Meillet (1936:56), Godel (1975:99-102), Kortlandt (1985).

[219] Stempel pays no further attention to the differentiation between transitive and intransitive here; since Armenian does not commonly differentiate these two categories by morphological means, it is curious that the agent marking in the perfect should show such a differentiation.

intransitive and transitive so as to tell apart otherwise identical syntagmata is refuted by Weitenberg; since 'in practice an active predicate without an object … does not frequently occur' (1986:12), the presence of such an object is distinctive enough as a feature. In turn, he suggests that the actual differentiation context is that between impersonal and transitive forms.[220]

Weitenberg further subdivides the group of transitives, stating that perfect tenses without an overt subject, and those with an overt subject in the nominative (as opposed to the genitive), occur in the earliest texts already (1986:14). The development of the former is incompatible with the occurrence of impersonal constructions of the perfect, since they have the same syntactic pattern. These two developments are a sign of the loss of the classical genitive subject in favour of alignment with the nominative-accusative system that generally occurs in Armenian, and the personalisation of the copula as shown in the 8th century in Łewond (1986:15).

Agreeing with Stempel concerning the originally adjectival status of the *-eal* participle and the primacy of the appositional usage, he goes on to question how the impersonal character of the construction should have arisen in view of potential early plurals of the type *eius sunt visi illi (1986:16).[221] The concept of a relation to the ergative in Georgian is refuted by Weitenberg (1986:17) following Stempel; yet, he cautions that a general rejection of ergative influence is not cogent; his own views, however, do not require such a connection.

Stempel's own view is rejected on the grounds that no explanation is provided as to why the active construction is impersonal in nature; Weitenberg (1986:18), citing Meillet (1962), further doubts the parallel between active and passive upon which rests the analogical shift in Stempel's argument, since the Armenian passive is demonstrably more impersonal than canonically passive.[222]

[220] It is unclear why such a differentiation should be of importance, since it does not occur in any other inflected paradigm in Armenian. Further, to repeat the point made by Weitenberg himself *mutatis mutandis*, is not the occurrence or non-occurrence of a subject distinctive enough to tell apart transitive and impersonal use?

[221] Given that sentences of this type are attested already in Armenian texts, Weitenberg's objection seems unwarranted; the re-interpretation of the possessive construction with a participle in apposition to the possessed as a transitive in analogy to the present tense seems in itself more debatable.

[222] This, however, does not preclude the possibility that Stempel's analysis may be right; even if Armenian passive forms are usually used without an indication of agent, the normal expression

Weitenberg's own theory combines a number of previous attempts and suggests a different approach to the genitive agent problem. Assuming that the *-eal* participle was an original adjective, but indifferent to diathesis, he proposes that the starting-point for the development of the construction lies in both transitive and intransitive verbs taking a genitive subject. The syntax of the perfect is explained as resulting from an original nominal sentence with the participle as a predicative adjective.

He rejects Stempel's argument that nouns such as *meṙeal* 'dead man' and *aṙakʻeal* 'apostle' prove the originally passive diathesis of the participle since the

> participle of a transitive verb, if used without an argument (as is mostly the case with substantivation) could only mean 'having reached a state after external action' (passive: aṙakʻeal), or 'having reached a state by one's own action'. (Weitenberg 1986:19).

A transitive meaning is triggered only by a further argument. He thus agrees with Schmidt (1962) in that the appositional usage of the transitive participle, e.g. *teseal z=ayr=n asē* 'having seen the man he said', is not secondary, but simply shows the diathetically indifferent character of the participle. As further proof thereof is adduced the occurrence of impersonal forms, as suggested by Pedersen (1907:157-9): like in Slavonic, the participle is used as a 'subjektlose transitive "man"-form' in the neuter.

He further suggests that, on the basis of the intransitive participles occasionally occurring with genitive rather than with nominative subjects in negative sentences, this type is likely to be original; the spread of the nominative in this environment was supposedly slower since 'negative sentences with an intransitive participle were more resistant to innovation than positive ones' (1986:21).[223]

The impersonal construction therefore forms the basis of all other formations; a neuter participle is substantivized and in a non-copular sentence takes an adjectival predicate. If a noun is to be added, a derived adjective is formed, thus yielding,

of such an agent would include an ablative phrase which may serve as the basis for Stempel's analogy.

[223] The number of genitive subjects with intransitive participles quoted by Weitenberg (1986:20) are only noteworthy in Eznik (cp. Vogt 1937:54), in whose work the nominative occurs in a vast majority with all other intransitive participial clauses. This in itself is not strong enough an indication to presume an original usage of this sort, nor is the assertion that negative sentences are generally more archaic (cf. Meillet 1977:139). Whether there is any correlation between alignment and negation will be discussed in 4.3.4.1 below.

e.g., PArm. *ekealom mardoskom, lit. 'having-come (is) man-ly' (1986:21). This assumption explains the ubiquitous 3.SG copula, since the subject, viz. the nominalised verb, is always singular; by extension of the above, all other forms are explained, including the transitive type *tesealom mardom merom, lit. 'having-seen the man (is) ours'. With the integration into the Armenian verbal system, the structure of this syntagma was reinterpreted: the subject was turned into a predicate, the adjectival predicate became the subject. The derived adjectives in *-skom were reinterpreted as genitives owing to their phonological similarity with the latter. From the 5th century onwards, so WEITENBERG, the genitive agent was slowly eliminated, initially retained only where necessary, viz. in the transitives to set them apart from the impersonal construction.[224]

The single most implausible aspect of WEITENBERG's approach lies in his reliance on explaining the genitive as a denominal adjective formation, presumably even beyond the genitive plural (where this explanation is acceptable); not only does it seem unlikely that such a formation should be used not only for nouns proper but also for pronouns, as suggested; it is *a priori* unlikely that a derivational process like the formation of a denominal adjective should take part not only in the syntax of a language, but indeed its inflection, especially if the outcome was synchronically as ill-fitting as the genitive agent.

Another impass is the rarity of the impersonal construction, wherefore it seems an unlikely basis upon which to build a new, frequent construction such as the perfect.

3.2.2.8 Summary

While in the search for an Indo-European prototype of the Armenian perfect construction a great variety of solutions has been proposed, the above discussion has demonstrated that to a greater or lesser extent, each approach misses the mark by failing to explain either genitive agent, accusative object or the commixture of expressions of agentivity in transitive and intransitive expressions. These attempts at recon-

[224] This suggestions presumes a very late rise of this syntagma; given the phonological developments required to facilitate a reinterpretation of the derived adjectives as genitives, and the presumed age of the participial formation, any such development should have happened long before the 5th century – a fact that WEITENBERG acknowledges later.

structing direct equivalents in other Indo-European languages, or indeed harkening back to Proto-Indo-European itself, have fallen for what Jamison (1979:129) has aptly termed 'a "mirage" of comparative linguistics'; her arguments in favour of considering the development of agentive expressions 'not [as] an archaism but a parallel and independent development in each language' (1979:133), supported by Hettrich (1990),[225] account for the great variety of different cases found in agent roles.

It has been suggested that, from a historical morphological point of view, the Armenian participle is likely to be a verbal adjective, explicitly marked as passive-intransitive. As such, a development from attributive usage **nora gorceal ē gorc* '[this] is his done work' to a predicative, viz. copular, interpretation 'his work is done' is plausible, as is the subsequent grammaticalisation of such a syntagma as a periphrastic construction. As already mentioned in the critique of Stempel's argument, however, any further analogical shifts, viz. the re-interpretation of the above as active and the transposition of the semantic patient into the accusative, is synchronically unmotivated in that it rather complicates than simplifies the agreement system.

To no small extent, the reason for the lacking success of previous explanatory models is to be sought in their unsatisfactory analysis of the synchronic state of affairs, some examples of which have been provided above, 3.2.1. Grammatical descriptions thus far have relied largely (but not exclusively) on the New Testament translations and convenience samples of the original texts only; owing to the translated nature of these texts, however, this strategy cannot do justice to the Armenian data and must be abandoned (cf. Cowe 1994-5; Lafontaine and Coulie 1983; Meyer fthc.*c*). A thorough analysis of the original text, as conducted in chapter 4 is therefore necessary.

Before that, however, the synchronic pattern of the Armenian perfect will be discussed from a different perspective, namely that of morphosyntactic alignment, and then scrutinised as to its potential diachronic origins.

[225] Both Jamison as well as Hettrich do, however, point out the strong evidence suggesting the PIE instrumental as the predecessor of a number of later agent cases.

3.2.3 The periphrastic perfect: a tripartite analysis

It has been shown above that in the non-perfect tenses, viz. present, imperfect, aorist and the subjunctives, Classical Armenian construes along nominative-accusative lines in the plural and in the pronominal system; S and A are (un-)marked as nominative, O receives accusative marking, and frequently a proclitic *z=*. In the perfect, however, morphosyntactic alignment differs significantly. S is still marked as nominative (type α above), but no longer is coextensive with A, which receives genitive marking, while O continues to be marked accusative (type ɣ above), which is often only indicated by *z=*.

The pattern, therefore, corresponds most neatly to the tripartite alignment treated above, 3.1.2.4. Synchronically, Classical Armenian is therefore best described as a language with a tense-sensitive split between nominative-accusative non-perfect and tripartite perfect. This pattern is reminiscent of Yazgulyami, an Iranian language spoken in the Pamir Mountains mentioned above, in which the very same pattern obtains *mutatis mutandis* (Payne 1980:174). There, too, direct objects are marked with a proclitic *(-na)-š/ž-* on both sides of the alignment divide.[226] O-marking of this type is, however, not restricted to languages with tripartite marking, as evidenced by other Iranian languages such as Rošani, Bartangi, Orošari, and Sarykoli (Payne 1980:161–72), all of which have created an obligatory object-marking clitic cognate with MP *ʾc / ʾz* /az/ and Pth. *ʾc / ʾž* /až/ 'from, on, out of, for' (Durkin-Meisterernst 2004: 18–24).[227] It is equally noteworthy that across these languages, O-marking is most common in the case of definite NPs.

If this split-tripartite analysis for Classical Armenian is accepted, corroborated by comparable constructions in Pamir languages, three questions remain open still:

- how can the existence of a passive be accounted for (type β above)?,
- how do types α* and ɣ* (intransitives with genitive subjects, and transitives

[226] As opposed to Classical Armenian, however, this O-marker is obligatory in Yazgulyami; its form is dependant on the nature of O (*na-* is optional for pronominal O).

[227] Many of the above languages, particularly Bartangi, show relics of double-oblique marking; the rise of the direct object marking clitic in these languages is therefore direclty related to the ousting of this pattern.

with nominative subjects, respectively) arise?, and

- how did tripartite alignment come to appear in Classical Armenian?

The first question, as has been argued before, can be answered readily: the Armenian participle, on which the periphrastic perfect is based, was originally passive-intransitive and has thus retained its historic function throughout the historical development of Armenian; this retention is paralleled by West Middle Iranian. Accordingly, nominative marking for the one-place argument of the passive is both historically expected as well as syntactically plausible in a language in which all other one-place arguments occur in the nominative.

Given this original intransitive-passive meaning of the participle, and by extension the perfect, the active meaning must have arisen secondarily, within the history of Proto-Armenian, especially since no other Indo-European language of comparable age exhibits similar patterns.

3.2.3.1 Hypothesised historical origins

As was discussed in 3.1.2.4 above, tripartite alignment patterns commonly occur as more or less stable transitional stages in languages undergoing alignment change. While its directionality is not *a priori* determinable, in the case of Classical Armenian the outcome is unambiguous: nominative-accusative alignment is the dominant pattern in the non-perfect tenses, and by the advent of Middle Armenian is stable in the perfect as well. Comparative typological evidence, e.g. from the Pamir languages mentioned above, further indicates that tripartite alignment is the result of alignment change from ergative to nominative-accusative; since all the languages in question exhibit tense-sensitive splits, system harmonisation may have played a significant role.

Under this analysis, therefore, Classical Armenian is very likely to have had ergative alignment in its periphrastic perfect at some stage in its pre-history, and then underwent de-ergativisation under the pressure of the nominative-accusative pattern of the non-perfect tenses. This very process has occurred (and in some languages is still

in progress) in the Pamir languages discussed by Payne (1980:183), and is also reminiscent of the argument advanced by Schmidt (1972:453; 1980:165) for a Kartvelian origin of the Armenian periphrastic perfect. In Proto-Armenian, therefore, S would have been marked nominative and A genitive, as is the case in the earliest attested forms of the language; O, however, would have been marked as nominative, like S.[228] Aided by the formal identity of nominative and accusative in singular nominals, the re-interpretation of this nominative into an accusative is relatively unproblematic. In his discussion of alignment change in Iranian, Haig (2008:194–5) suggests that identical marking of arguments across alignment-splits is a significant force in alignment change processes. More generally, language change is said to be, at least in part, motivated by the creation of biunique form–meaning pairs, with each surface form representing one function and ideally *vice versa* (Langacker 1977:110). The differentiating change from nominative O in the proto-Armenian ergative perfect to accusative O, thus yielding tripartite alignment, is therefore well paralleled and motivated.[229]

The existence of mis-aligned occurrences (types α* and ɣ* above) can be explained in a similar vein, namely as the result of incipient language change, either by complete de-ergativisation of the perfect (ɣ*) or spread of genitive marking from A to S (α*), thus creating a competing genitive-accusative alignment system in the perfect.[230] As is, an evaluation of the situation is only feasible on the basis of more data, and will have to rely on a discussion of individual occurrences; see 4.3.2.1 below.

The most important, and equally problematic question, however, remains how Proto-Armenian developed tense-sensitive alignment features in the perfect at all. Schmidt's suggestion of Kartvelian influence has been rejected on grounds of missing indications that any such influence existed on a meaningful level in the relevant timeframe. As discussed in some detail in chapter 1 above, however, Parthian and

[228] Instances of this marking pattern are in fact still discernible in those occurrences, where O is singular and not marked by the object-proclitic *z=*; cp. Arm. *ew gteal Yisusi ēš mi* 'And Jesus found a donkey' (Jn. 12:14), where *Yisusi* is A and marked genitive, while *ēš* is O and unmarked, which could indicated nominative or accusative.

[229] The motivation for marking A genitive will be discussed in 3.3.3 below. Here, suffice it to say that it is cross-linguistically not uncommon for a case to fulfil more than one function, and indeed for the genitive to take on the function of the ergative (Dixon 1994:57).

[230] This is not a unique trend of Classical Armenian; Wakhi, another Pamir language, also shows a spread of the oblique from A into S function (Payne 1979:445; 1980:180).

Middle Persian are two languages which exhibit tense-sensitive alignment splits of a distinctly comparable manner (involving a historical participle and an optional copula), and which have been in extensive and well-documented contact with Armenian. What factors may have conditioned pattern replication, i.e. syntactical borrowings, of this kind, and what constraints, environments, and other parameters need to be accounted for will be discussed in detail in chapter 6. From cross-linguistic parallels it is clear, however, that the adoption of another language's alignment system is feasible; Balti, a Tibetan language spoken in Pakistan and India, is thought to have played a role in the establishment, maintenance and/or spread of ergative alignment in the Indo-Aryan language Šīnā (Anderson 1977:344; Verbeke 2013:257). The case is even more definite for North-eastern Neo-Aramaic, which developed ergative patterns as the result of contact with Kurmanci (Khan 2007:202–3).

Assuming that language-internal motivations for the development of tripartite alignment in Classical Armenian can be excluded on the basis of the arguments laid out in 3.2.2, and given the incontrovertible facts that extensive language contact with the West Middle Iranian languages has influenced the Armenian language at least at the lexical, morphological, and phraseological level, the hypothesis that tripartite alignment in Armenian should have arisen from an original ergative pattern that Armenian adopted on the model of Parthian and Middle Persian cannot be dismissed *a priori*. Only a close study of the history and synchronic patterns of morphosyntactic alignment in these languages, as well as a detailed study of the Armenian data will allow for a proper answer to this question.

The next section therefore endeavours to provide the former, viz. insight into Old and Middle Iranian alignment, and a comparison with the basic concepts illustrated here.

3.3 Morphosyntactic alignment in Old and Middle Iranian

The oldest written witnesses of the Iranian languages which are of any use for the study of its grammar are the Old Persian cuneiform inscriptions going back to the end of the 6th century BCE. The evidence for the Avestan languages and West Middle Iranian predates the attestation of Classical Armenian by only two or three centuries;[231] the attestation of each language spans multiple centuries, and in part show considerable diachronic variation within the same language, to such an extent that Skjærvø (2009:44, 46) treats Old and Young Avestan as independent languages.

For the purpose of discussing alignment change, Old Persian, Parthian, and Middle Persian will be the main focus of the following section; the other Old Iranian languages do either not exhibit the features in question in a sufficiently systematic manner (Avestan) and will thus be consulted only for illustrative purposes, or are not attested to any degree that would allow for speculations about their grammar (Median, Scythian). Within the Middle Iranian languages, only Parthian and Middle Persian are going to be relevant; whilst Armenian shows a very limited amount of East Iranian loan words (see 1.3.5.1 above), it is practically beyond doubt that these were mediated by Parthian (Sundermann 1989*b*:115), and that Armenian and the East Middle Iranian languages were never in close enough contact to allow for linguistic interference on a level beyond the lexicon.

This section will first discuss the Old Persian evidence, since alignment change is likely to have taken place there to some extent already; the basic data will be presented and different explanatory models contrasted. Next, the Parthian and Middle Persian evidence is going to be considered systematically; in this context, both the decay of the verbal and nominal systems of these languages and the rise of prepositional argument marking will be discussed briefly. The West Middle Iranian align-

[231] Old Avestan sources are likely to have been composed at the end of the second millennium BCE, but were transmitted orally until the Sasanian period (Kellens 1998; Skjærvø 1995); the earliest written records of West Middle Iranian do, in fact, date to the second and first century BCE, but are limited to inscriptions and coin legends, most of which consist either of personal names alone, or were composed exclusively in Aramaic heterograms (Sundermann 1989*b*:116; 1989*a*:140).

ment patterns are then tentatively subdivided into the same types α, β, and γ as was the Armenian data above, and the outcome of this comparison contrasted with their Armenian equivalents.

3.3.1 Old Iranian and the *taya manā kr̥tam* construction

Both Old Persian and the Avestan languages construe along nominative-accusative lines in all synthetic tenses, as is to be expected. Both S and A are marked with the nominative, while O receives accusative marking.[232] The following examples will illustrate the standard alignment pattern:

(3.44) (a) *yōi* *vaŋhāuš* *ā* *manaŋhō* *šiieⁱṇtī*
REL.NOM.PL good.ABL.SG with thought.ABL.SG dwell.3.PL.PRS
'The male [deities] who dwell with good thought …' (Y. 39.3; Old Avestan)

(b) *sāŋghaⁱtī* *ārmaitiš* … *xratāuš*
explain.3.SG.PRS humility.NOM.SG model.ACC.PL
'… Humility explains the models …' (Y. 43.6; Old Avestan)

(3.45) (a) *jamiiāṯ* *vō* *vaŋhaoṯ* *vaŋ́hō*
come.3.SG.AOR.OPT 2.PL.DAT good.ABL.SG good.NOM.SG
lit. 'May something better than good come upon you!' (Y. 59.31; Young Avestan)

(b) *mā* *ząm* *vaēnōiṯ* *ašibiia*
NEG earth.ACC.SG see.3.SG.OPT evil-eye.INS.DU
'Let him not see the earth with these evil eyes.' (Y. 9.29; Young Avestan)

(3.46) (a) *utā=taiy* *taumā* *vasiy* *biyā* *utā* *dargam*
and=2.SG.DAT family.NOM.SG great become.3.SG.OPT and long
jīvā
live.2.SG.IMP
'… and may you have a large family, and live long!' (DB IV.56; Old Persian)

(b) *vašnā* *Aurmazdāha* *ima* *xšaçam*
by-grace-of Auramazda.GEN.SG DEM.ACC.SG kingdom.ACC.SG
dārayāmiy
hold.1.SG.PRS

[232] There are some indications that other cases, esp. the instrumental, can take on either of these functions; cf. Oettinger (1986). The occurrence of such variants is non-systematic, however, and does not seem to provide any contrastive features when compared with the standard construction; for the present purpose, it can therefore be disregarded.

> 'By the grace of Auramazda I have/rule this kingdom.' (DB I.26; Old Persian)

The verbal morphology of Avestan is similarly rich and well developed as that of, for instance, Vedic, while Old Persian has more limited morphological means; still, both languages maintain an imperfect and aorist tense, and show at least remnants of the perfect.[233] Next to the indicative, subjunctive and optative are well attested, as are a number of non-finite forms.

Next to these synthetic forms, however, Old Persian has developed an analytical construction consisting of the past participle in *-ta- and an optional form of the copula. It is unsurprising that this periphrastic construction is used in intransitive and passive contexts, as has been argued above, chapter 2. As with other verb forms, the intransitive construction as well as the passive govern S in the nominative.

(3.47) *yaθā* *Arminam* *parārasa* *pasāva* *hamiçiyā*
CONJ Armenia.ACC.SG arrive.3.SG.PST then enemy.NOM.PL
hagmatā *paraitā*
assemble.PTCP.NOM.PL go-forth.PTCP.NOM.PL
'When he arrived in Armenia, then the enemies assembled [and] went forth …' (DB II.32–3; Old Persian)

(3.48) *yaθā* *Kabūjiya* *Bardiyam* *avāja* *kārahyā* *naiy*
CONJ Cambyses.NOM.SG Smerdis.ACC.SG slay.3.SG.PST people.DAT.SG NEG
azdā *abava* *taya* *Bardiya* *avajata*
known become.3.SG.PST COMP Smerdis.NOM.SG slay.PTCP.NOM.SG
'When Cambyses slew Smerdis, it did not become know to the people that Smerdis had been slain.' (DB I.31–2; Old Persian)

The latter example in particular demonstrates clearly the expected transformational process of promotion of O in an active setting to S in a passive environment (*Bardiyam* > *Bardiya*). The Old Persian *-ta-* participle is therefore not only cognate with but also used like the Latin past participle. Like in Latin, too, the optional agent in a passive environment is rendered by a prepositional phrase consisting of *hacā* and the ablative of the agent.

[233] The only attested perfect form in Old Persian is *caxriyā* (DB 1.50), an optative form of *°kar-* 'to do, make'.

Next to the prepositional agent phrase, however, there is a further construction, the precise nature of which is contended; here, the agent is expressed by the genitive of full or enclitic pronouns.

(3.49) *θātiy* *Dārayavauš* *xšāyaθiya* *ima* *taya*
say.3.SG.PRS Darius.NOM.SG king.NOM.SG DEM.NOM.SG REL.NOM.SG
manā *kr̥tam* *pasāva* *yaθā* *xšāyaθiya* *abavam*
1.SG.GEN do.PTCP.NOM.SG after CONJ king.NOM.SG become.1.SG.PST
'King Darius says: This is what I have done [= what was done by me] after I became king.' (DB I.26–8; Old Persian)

(3.50) *θātiy* *Xšayāršā* *xšāyaθiya* *vazr̥ka* *taya*
say.3.SG.PRS Xerxes.NOM.SG king.NOM.SG great.NOM.SG REL.NOM.SG
manā *kr̥tam* *idā* *utā* *taya=maiy* *apataram*
1.SG.GEN do.PTCP.NOM.SG here and REL.NOM.SG=1.SG.GEN afar
kr̥tam *ava* *visam* *vašnā* *Auramazdāha*
do.PTCP.NOM.SG DEM.ACC.SG all.ACC.SG by-grace-of Auramazda.GEN.SG
akunavam
do.1.SG.PST
'The Great King Xerxes says: What I have done here and what I have done afar, all that I have done by the grace of Auramazda.' (XPb 21–7; Old Persian)

(3.51) *avaišam* *avā* *naiy* *astiy* *kr̥tam* *yaθā* *manā* *…*
DEM.GEN.PL as NEG be.3.SG.PRS do.PTCP.NOM.SG as 1.SG.GEN
hamahyāyā *θarda* *kr̥tam*
one.GEN.SG year.GEN.SG do.PTCP.NOM.SG
'They have not done as much as I … have done in one year.' (DB IV.51–2; Old Persian)

This construction is used only in one particular phrasing, as the above examples suggest already: the genitive agent is only found in combination with the participle of *kar-* 'to do, make'.[234] The question arises, therefore, whether these two ways of agent marking are in free variation, and the attestation is misleading in only showing examples of genitive agent plus *kr̥tam*; whether there are any other underlying constraints governing the usage of these phrases; or whether the two are completely unrelated.

3.3.1.1 Passive vs possessive analysis

Upon its discovery, the *manā kr̥tam* construction was first interpreted as a passive (Geiger 1893:1), whence derived similar, viz. ergative, constructions in the modern

[234] Benveniste (1952:54) suggests that a further participle used in this construction may be found in DNb 53 (*xšnūtam*); this is a restored form, however, and thus cannot count as sufficient evidence.

Iranian languages. This perspective was challenged by Benveniste (1952), in whose view the genitive agent was in fact a possessor (see above, 3.2.2.2) since passive agents were denoted by *hacā* alone. As genitives otherwise express possessors in Old Persian, this must be the nature of the *manā kr̥tam* construction, too; his argument is further aided by the hybrid nominal-verbal, viz. deverbative, nature of the *-ta- participle.

While this position was accepted by some (Debrunner 1954:582; Henning 1958: 90; Allen 1964:337), it did not remain unchallenged. Straightforward points of criticism levelled against Benveniste are his negligence of the non-agential passives formed with the participle which are clearly verbal in nature and thus cannot have a possessor, and the fact that similarity with a possessive construction does not entail identity with the same (Skjærvø 1985:217–18). Furthermore, it is to be noted that passive constructions need not be restricted to a single expression of agency.[235] Most simply, it is not clear in how far the term 'possessive' is helpful in any sense, since the structure does not synchronically, and likely did not diachronically denote possession (Haig 2008:29).

A different and more contentious point of criticism refers to at least two instances (DB V.15–16, DB V.31–2) in which the genitive occurs as the agent of a finite, non-participial passive (cf. Cardona 1970:2):

(3.52) *avaiy* *ūvijiyā* *arikā* *āha*^{n} *utā=šām*
DEM.NOM.PL Elamite.NOM.PL faithless.NOM.PL be.3.PL.PST and=3.PL.GEN
Auramazdā *naiy* *ayadiya*
Auramazda NEG revere.3.SG.PST.PASS
'These Elamites were faithless and did not revere Auramazda.' (DB V.15–16; Old Persian)

It is conceivable that the use of the genitive could have spread from its participial context to the environment of finite verbs; such a conclusion may, however, be premature in view of the very limited number of examples and the size of the corpus as a whole, as well as the fact that it seems to occur in one set phrase pattern only.

[235] Ancient Greek knows both dative agents as well as agential prepositional phrases with ὑπό; modern German can express agency in prepositional phrases with either *von* or *durch*. The choice of a particular phrasing depends on a variety of factors, e.g. animacy.

Comparative evidence from the closely related Indo-Iranian languages is of little help in this regard: in Vedic, supposed genitive agents are outnumbered more than ten to one by instrumental agents, and Jamison notes that they are

> almost entirely confined to special syntactic or semantic situations. Real or apparent gen. agents occur 1) when the past participle has virtually become substantivised, 2) when the genitive is actually to be construed with the noun modified by the participle, 3) when the verb is of a special semantic type. (Jamison 1979:133)

Genitive agents further seem to be a relatively late, mostly Middle Indic phenomenon, and are thus unlikely to have been inherited from Proto-Indo-European.[236] The Avestan occurences of this phenomenon are few and either recent or patterned just as the Vedic examples.[237]. Cardona's hypothesis therefore remains unconfirmable, albeit a likely candidate; if genitive agents in finite verb phrases did develop in Old Persian, this was an innovation, possibly paralleled by a similar but quite possibly unrelated development in Indo-Aryan.[238]

It is beyond doubt that the *manā kr̥tam* construction had its origin in a passive syntagma, as evidenced by the usage of the participle without an agent.[239] This is borne out by comparative data from Avestan, albeit with a greater variety of optional agentive complements (cf. Jügel 2010).[240]

[236] Hettrich (1990:94) disagrees with Jamison's semantic grouping, but concurs in the evaluation of these constructions as primarily nominal; the limited usage as an agent at least in finite verbs must therefore be secondary. Genitives with participles fall under the general category of 'Genitiv der Zugehörigkeit im weitesten Sinne' (Hettrich 1990:96; cp. Schwyzer et al. 1934–1971:117ff.).

[237] The only example with a genitive agent and finite verb seems to be Young Avestan (Yt. 13.50; cf. Hettrich 1990:92, 94 n. 100).

[238] A methodological problem with Cardona's approach lies in the fact that he argues from the occurrence of agent phrases alone; since such phrases are optional in passive constructions, they are neither necessary nor sufficient condition for the existence of a passive (Statha-Halikas 1979:353–4).

[239] Synchronically, the question arises whether the term 'passive' is appropriate given that an active for this tense is not attested (Lazard 1984:242); yet, since an active–passive distinction exists in present and imperfect, the distinction of voices was clearly a part of Old Persian grammar, and an interpretation of the past participle as passive unproblematic; a similar state obtains in Latin, where the periphrastic perfect has no analogously formed transitive counterpart. At the same time, evidence from the Elamite and Akkadian versions often accompanying Old Persian inscriptions translate the syntagma as unequivocally active (Skalmowski 1976).

[240] Jügel further argues that the Old Persian construction is in fact ergative, since A is marked differently from S, and O occurs in the nominative. Such a development from a passive is, of course, possible and attested in the Middle Iranian languages; given the restriction to one verbal environment (*kr̥tam*), the existence of non-agentive passive constructions, and the occurrence of genitive agents with the imperfect, his analysis may be somewhat premature, however. Tests which might allow to determine the veracity of this analysis, e.g. reflexive control or equi-NP deletion, are not possible owing to the limited number and formulaic nature of the occurrences (Dixon cf. 1994:

3.3.1.2 The external possessor analysis

Yet a different model is advocated by Haig (2008). Along with Skjærvø (1985), he argues that the Old Persian perfect did not distinguish diatheses (but see fn. 240 above), and that a purely possessive analysis of the construction is implausible. Delineating the requirements for an analysis of the construction as passive (single core argument is patient / theme; marked verb form; optional agent phrase with low-level integration into syntax; semantic markedness of construction), he underlines in particular the fact that genitive agents can occur in a cliticised form (cp. example 3.50 above); cliticisation, according to him, otherwise occurs only with structural cases (accusative for the direct object, genitive/dative for the indirect object):

(3.53) *Auramazdā=maiy* *upastām* *abara*
Auramazda=1.SG.GEN aid.ACC.SG bear.3.SG.PST
'Auramazda bore me aid.' (DB I.87–8; Old Persian)

(3.54) *pasāva=dim* *manā* *frābara*
thereafter=3.SG.ACC 1.SG.GEN bestow.3.SG.PST
'Thereafter he bestowed it on me.' (DB I.60–1; Old Persian)

Since the agent phrase underlies such a strict syntactic rule (Haig 2008:45–9), it is likely to reflect a syntactic rather than a semantic case, and thus is not a prototypical passive agent phrase. A further anomaly is constituted by the fact that, unusually for passive agents, the agent phrase in Old Persian is very high on the animacy hierarchy, and usually the topic of the clause as well (Haig 2008:51). Returning to 'the spirit, if not the letter' of Benveniste's analysis, Haig (2008:55) interprets the *manā kṛtam* construction as an 'External Possessor Construction' (EPC) involving a possessive modifier that does not form part of the possessed NP, but is syntactically independent from it; the semantic roles fulfilled by an EPC include, but are not limited to, the recipient, experiencer, adressee, benefactive and other notions of indirect participa-

138–9; but cf. Haig 2008:52–3 for one instance of plausible deletion, and his reservations). Similarly, his assumption that the passive participle is diathetically indifferent is flawed, as has been shown by, e.g., Bavant (2014:340–1), who insists explicitly on the passive-intransitve nature of the OP -ta participle. While it is likely true that ergative alignment frequently develops as the result of verbalising deverbal forms (Estival and Myhill 1988:441), this process of 'verbalisation', viz. the occurrence of a finite form of the copula with the participle, is attested only in a minority of cases.

tion in an action (cf. Payne and Barshi 1999).[241] The main reasoning behind such an anlaysis is the explanation of the above cliticisation rule, which applies to agents and other genitives as well, since for cliticisation, they cannot be part of a noun phrase, but must be an independent phrase within the clause.

While Haig provides more details, parallels, and reasoning, this brief outline shall suffice here, especially since it is enough to demonstrate some essential weaknesses in his argument. Firstly, the appellation of 'structural case' is questionable; while it is true that direct and indirect object can be expressed by clitics, this position is not limited to such syntactic roles. On the contrary, frequently notions of possession or benefaction, viz. clearly semantic usages of the genitive and non-core arguments as well, are expressed in clitics:

(3.55) *Auramazdā=taiy* *jatā* *biyā*
Auramazda.nom.sg=2.sg.gen smiter.nom.sg be.3.sg.Opt
'May Auramazda be a smiter for you' (DB IV.78–9; Old Persian, benefactive)

(3.56) *martiyā* *taya=šaiy* *fratamā* *anušiyā*
man.acc.pl rel.nom.pl=3.sg.gen foremost.nom.pl follower.nom.pl
āhata *agarbāya*
be.3.pl.pst capture.3.pl.pst
'And the men, who were his foremost followers, they captured.' (DB III.49; Old Persian, possessive)

These may well be deemed EPCs, and fit both Haig's and Payne and Barshi's definition of the term. This feature alone should, however, not suffice as a reason to disqualify the genitive agent from its potentially prototypical status. It is to be noted that in the above examples possessor and possessed appear in sequence in the clause; this is not always the case for genitive agents (cp. 3.50 above). Yet, even distance from its head need not mean that the possessive adjunct cannot be cliticised:

(3.57) *avaθā=šam* *hamaranam* *kr̥tam*
conj=3.pl.gen battle.nom.sg do.ptcp.nom.sg
'Then they joined battle.' (DB III.47; Old Persian)

[241] Indirect participation is normally applied to instances like German *Er hat mir die Augen geöffnet*, lit. 'He opened my eyes for me', or *Mir fielen die Augen zu*, lit. 'The eyes fell shut for me', but to be understood as 'He helped me to see/understand something clearly' and 'My eyes closed [without my volition]', respectively. The dative *mir* is indirect participant in so far as no action is required by it, but rather performed on or to the (dis-)advantage of it.

The question is, then, whether the assumption of an EPC is required to explain this phenomenon. Given the fact that the agent phrase in Old Persian seems to be maximally topical, it may be simpler to assume that such a constituent in a given clause may undergo topical fronting and then cliticisation,[242] unless it is a newly introduced subject or the sole non-verbal constituent in its clause.

A further kink in the EPC argument consists of extending its domain to include not only indirect participants (e.g. German *Er öffnete mir den Mund*, 'He opened my (lit. to me) mouth') but also the agents of debitive constructions, such as the dative of Latin gerundives (Haig 2008:70–3), and other direct agents; these structures, like their Vedic and Avestan counterparts and including the *manā kr̥tam* construction, are semantically quite different from canonical EPC constructions, and thus do not make for valid *comparanda*.[243]

As such, then, the assumption of an EPC does not add any explicatory power to the 'possessive' analysis of the Old Persian genitive agent; in how far a synchronic analysis of this construction as 'possessive' in any respect is sensible remains doubtful, especially since genitive agents seem fully licensed as optional adjuncts to the verbal phrase.

3.3.1.3 Summary

The precise functional nature of the Old Persian *manā kr̥tam* construction has little impact on its development in the Middle Iranian languages. Morphologically and based on comparative evidence from Avestan and Vedic, it is clear that the construction is passive in origin;[244] this is a plausible starting point for the development of

[242] For a similar, if not identical topicalisation of possessive adjuncts, consider the Lord's Prayer: *For thine is the kingdom, and the power, and the glory*, where *thine* has been topicalised and fronted, or NHG *Meiner ist er nicht, der Esel*, 'It isn't mine, the donkey'. These examples are, of course, semantically or pragmatically marked rather than derived from a syntactic rule.

[243] According to the criteria outline by Haspelmath (1999), direct, mental affectedness is a key criterion for an external possessor; he further suggests that external possessors are not otherwise attested in non-European Indo-European languages.

[244] While this is undeniable on the surface, Bavant (2014:335, 348–9) points out that almost all objects of the *manā kr̥tam* construction are neuter and would therefore not exhibit a separate accusative case; in a late inscription (A^3Pa 22), the logical, feminine object occurs in the accusative (OP *ustašanām*) as part of this construction. Whether this is a feature of the late, possibly ungrammatical nature of the inscription, or an actual reflection of proper Old Persian grammar cannot be determined securely.

ergative alignment in later states of the language, and helped by the non-exsistence of an active construction. Whether it should be counted as an ergative construction in Old Persian already, as suggested by Jügel (2010) and Lazard (2008), is a matter of perspective; while formally it fulfils all prerequisites of ergative constructions (S=O≠A for short), the occurrence of more frequent straight passives based on the participle, the restricted occurence of the agentive pattern with the genitive, and the (spurious) use of the genitive as a passive agent even in passive clauses with a synthetic verb need to be taken into account.

Further, as is clear from its usage, the *manā kr̥tam* construction to some extent parallels an active clause, *ima tayā akunavam*. It has further been noted that the construction is used like a true perfect, setting 'Grenzsignale für größere Sinnabschnitte' (Widmer 2012:129).

Given the limited attestation of this construction, and the resulting impossibility of determining its synchronic function and analysis any further, this summary suggested by Lazard seems most appropriate, except for its insistence on calling the agent possessive:

> 'On a discuté la question de savoir si cette construction est possessive ou passive. Vaine querelle. C'est, en iranien, une périphrase fonctionellement active, formée d'un participe passif et d'un complément possessif représentant l'agent' (Lazard 2005:81).

3.3.2 Alignment in West Middle Iranian

Irrespective of whether the Old Persian genitive agent represents a prototypical genitive agent or a possessive relationship of some sort with the participle, it is evident from the Middle Iranian material that an ergative construction developed on the basis of the Old Persian *manā kr̥tam* construction. Owing to the lack of evidence within Old Persian and early Middle Iranian, it remains indeterminable how a minority construction such as this came to form the basis of the regular past tense in later languages; quite clear, on the other hand, is the influence that phonological change and the subsequent morphological deterioration of the language had on its grammar.

The most significant development in this regard is the word-final apocope thought to be the result of a static stress on the penultimate syllable (Sundermann 1989*b*: 125; 1989*a*:148 n. 76 with bibliography); as in Armenian, where the same change applied (Kortlandt 1980:103), this led to obliteration of most grammatical distinctions marked by synthetic inflectional morphology and thus to loss of many minimally distinct forms such as the imperfect.[245] The resulting verbal system differentiates between two main tense stems, a synthetic present system forming indicative, subjunctive, optative, imperative and, in very few forms, the imperfect; and a perfect system with analytical tenses built on the perfect participle and frequently a form of the copula.[246] Haig (2008:85) succinctly describes the rise of the periphrastic perfect as the main past tense in Middle Iranian as a 'pull-chain development, with the initial catalyst coming from changes in the verb morphology'. The resulting construction is further impacted by significant changes in the (pro-)nominal system described below, ameliorated somewhat by disambiguating prepositional argument marking and finally alignment change, both of which develop gradually within the West Middle Iranian languages.

To demonstrate regular alignment in the West Middle Iranian languages and some of its issues, however, its working needs to be exemplified systematically. To avoid confusion, the following examples are restricted to the present tense system; the periphrastic perfect and its ergative alignment are dealt with separately below.

(3.58) Intransitive

(a) *'wd 'w kw šw-yẖ*
and to where go-2.sg.prs

[245] An imperfect inherited from Old Persian is not found in Parthian at all; early inscriptional Middle Persian shows a handful of potential remnants of this category (Skjærvø 1992, 1997), but does not maintain it throughout time; since three of the five attested forms are written as heterograms, however, their interpretation as imperfects is not secured (Durkin-Meisterernst 2014:245). Other secondary imperfects which developed within Middle Iranian are designated thus owing to their meaning, but do not otherwise have imperfective markers, viz. augment and varying stem (Durkin-Meisterernst 2014:374–5).

[246] Durkin-Meisterernst (2014:246–7) further specifies that next to the copula other auxiliary verbs such as WMIr. *bw-* /baw-/ 'become' and Pth. *'št-* /ēšt-/, MP *'yst-* /ēst-/ 'stand' can combine with the participle to form pluperfects and, in the case of *bwd*, present passives. It is further of note that next to participial stems inherited from Old Iranian, which show a different, often ablauted stem, innovative participles based on the present stem are found in both Parthian and Middle Persian (Durkin-Meisterernst 2014:258–9).

'And whither are you going?' (GW §12; Parthian)

(b) *c'wn r'z qrwg ky pd dysm'n 'yst-yd*
like architect REL by building stand-3.SG.PRS
'Like an architect who stands by a building (= is currently building a structure) …' (KPT 708–10; Middle Persian)

(3.59) Transitive passive

(a) *sdf-'n prmws-ynd ky wdyfs-ynd pd dyn-'n*
creature-PL be-terrified-3.PL REL deceive-3.PL.PASS by religion-PL
'The creatures are terrified, who are deceived by religions.' (M77/R/4–5; Parthian)

(b) *h'n rwšn … p'c-yh-yd*
DEM light purify-PASS-3.SG
'That light … is purified.' (KPT 1520-22; Middle Persian)

(3.60) Transitive active

(a) *'w 'm'ẖ hrw'yn bwxtqyft wynd-'m*
and 1.PL all salvation seek-1.PL.SBJV
'And we all shall seek salvation.' (BBB 302–3; Parthian)

(b) *h'n w'xš gwp kw=t 'n ny pdyr-ym*
DEM ghost say.PTCP COMP=2.SG.OBL 1.SG.DIR NEG receive-1.SG.PRS
'That ghost said (that): I do not receive you.' (Šbrg 57–8; Middle Persian)

These examples illustrate in all brevity a number of things concerning Middle Iranian syntax: there is no reliable morphological case differentiation, resulting in the formal identity of S, A and O in most cases (but see 3.3.2.1 below); in the present system, the morphological marking of the verb shows S or A agreement; direct objects can be expressed as pronominal enclitics.

In what follows will be laid out what morphological marking possibilities remain in the West Middle Iranian nominal system, and in which ways this restrictive repertoire was used while maintaining comprehensibility.

3.3.2.1 Decay of the West Middle Iranian nominal system

To a very limited degree, both Parthian and Middle Persian in their earliest attestations show remnants of a direct–oblique case system (Skjærvø 1983), in which the

direct case marks the non-ergative subject, and the oblique case direct and indirect object, possessor, and functions as the prepositional case (Durkin-Meisterernst 2014:273; Sundermann cf. 1989*b*:130).

(3.61) *w* *'g* *'by'dg'ryft* *d'r-yd* *pd* *w'wryft* *'bdrynj-yd* *'w*
and in memory hold-3.sg.prs on belief be-secure-3.sg.prs and
dybhr *nyr'm-yd* *'wd* *dwšmn-yn* *'stwb-yd*
anger suppress-3.sg.prs and enemy-obl±pl defeat-3.sg.prs
'And if he keeps (this) in mind, he is firm in (his) belief and suppresses (his) anger and defeats (his) enemie(s).' (LN §21; Parthian)

The above example shows a noun *dwšmn* /dušmen/ in its oblique form in *-yn* /-in/, which marks the plural as well. A consequent execution of the direct–oblique and the singular–plural distinction is found only in inscriptional Parthian and Middle Persian, and in the psalter fragments (Skjærvø 1983:49, 176), and even there only in kinship terms, the personal pronouns of the first and second person in the singular; and in the plural for nouns, pronouns and adjectives.[247] In the later Manichaean texts, and thus in the main corpus of the two languages, the only reliable distinction exists in the first person singular of the pronoun, since even plural forms in spite of their historical derivation do not mark the oblique any longer;[248] a genitive singular in *-y* /-ē/ < OIr. *-ahya is only attested indirectly in *puhrēpuhr* 'grandson, lit. son of the son' (Durkin-Meisterernst 2014:199 n. 93), although an orthographic remnant thereof may putatively be found in word-final, unetymological *-y*.[249] A reconstruction of the marking system which accounts for these developments may thus look as follows (cf.

[247] These differences are expressed either by the use of different heterograms (pronouns) or by the addition of phonetic complements to heterographically written forms (nouns). Skjærvø points out that there are few attestations of direct objects in these texts, and that both direct and oblique case are used at least once in each role; unhelpfully, within the nominal system oblique singular and direct plural are identical with the exception of one kinship term for which three distinct forms are attested. The distinct forms for kinship terms further only apply to Middle Persian (also cf. Sims-Williams 1981; Sundermann 1989*a*). Cantera (2009) proposes that the solution of this unusual pattern lies in the different morphological development of isosyllabic and imparisyllabic stems: the former immediately develop a two-case (dir vs obl) system, whilst the latter preserve a separate genitive for a period of time.

[248] The plural marker *-ān* is by far the most common, and derives from OIr. *-ānām; analogically developed forms in *-īn* and *-ūn* exist as well. As Durkin-Meisterernst (2014:202) shows, comprehension is further complicated in that plural marking is not obligatory, so that *-ān* and its allomorphs may only occur in the oblique plural, whilst everything else is marked Ø.

[249] Since it is not attested in that function anywhere, however, the productive existence of this morpheme must be placed into the time before the first attestation of the West Middle Iranian languages; also cf. Sundermann (1989*b*).

		SG	PL
Stage 1	DIR	Ø	Ø
	OBL	*-ē	-ān
Stage 2	DIR	Ø	Ø
	OBL	Ø	-ān
Stage 3	DIR	Ø	-ān
	OBL	Ø	-ān

Table 3.1 – *Reconstruction of WMIr. nominal endings*

Haig 2008:100):[250]

It is therefore difficult to ascribe any of the alignment patterns discussed above to Parthian and Middle Persian as a whole, since (pro-)nominal case marking varied over time. For stage 3 of the Table 3.1, it seems most sensible to speak of neutral alignment with no case-marking distinction for syntactic roles (except for the first person singular pronoun). Greater confusion is only mitigated by relatively stringent SOV word order, and the licensing of clitics only in oblique-case functions.[251] Further role specificity was at times also added by the application of prepositions for certain syntactic functions, as will be shown below 3.3.2.3.

Before, however, it is worth considering the timeframe in which the above changes must have occurred. The lack of evidence for a productive Gen.Sg. *-ē and the attestation of the direct-oblique distinction in inscriptional Parthian and Middle Persian (leading up to stage 2 in the above table) sets the *terminus post quem* for further developments in the fourth century CE, if it is assumed that the psalter fragments are of approximately equal age; a younger estimation of the latter would expand this timeframe up to the sixth century. Both Skjærvø (1983:177–9) and Durkin-Meisterernst (2014:198) further agree in considering it possible that these archaic forms may have continued in local dialects of the respective languages.

[250] Other plural formations in *-yn* /-īn/ and *-wn* /-ūn/ exist, but form a minority pattern; they do not diverge in usage from *-'n* /-ān/; cp. Durkin-Meisterernst (2014:201).

[251] This is true by and large; Durkin-Meisterernst (2014:292–3) remarks that in later texts, enclitics do on rare occasions show up in non-ergative subject functions as well.

3.3.2.2 The West Middle Iranian past tense

As has been mentioned before, the past tense of Parthian and Middle Persian construes along ergative lines; given the paucity of case marking in these languages, this alignment finds expression largely in the following ways: different forms of the first person singular pronoun; usage of object clitics as ergative agents of a clause; person and number agreement of the copula with the direct object. The exception to the latter statement is the third person singular, in which the copula never occurs (Durkin-Meisterernst 2014:374). Accordingly, it is at times difficult to determine which role a constituent will fulfil if neither verbal agreement nor pronominal clitics occur in the sentence; word order will give a clue, but meaning is still largely reliant on context.

In the following are collected examples of the various past tense constructions as in 3.2.1 above.

3.3.2.2.1 Type α: intransitive

(3.62) *'wd 'z 'gd hym kw 'c bzkr*
and 1.SG.DIR come.PTCP be.1.SG.PRS CONJ from evil-doer
bwj-'n
rescue-1.SG.SBJV
'And I have come so that I may rescue (you) from the evil-doer.' (AR/VI/64a; Parthian)

(3.63) *'z dwr gy'g 'md hym*
from distant place come.PTCP be.1.SG.PRS
'I have come from a distant place.' (M2/I/V/i/4–5; Middle Persian)

As both examples show, verbal agreement in the past intransitive is clearly with S; both languages are able to mark S in verbal agreement only, thus dropping the personal pronoun. Thus far, the pattern is exactly the same as in the present.

3.3.2.2.2 Type β: passive

(3.64) *'wd pd tw bst dydym 'w hrwyn dwšmn-yn*
and by 2.SG bind.PTCP diadem for all enemy-PL
'And a diadem was bound by you for all enemies.' (AR/VI/56a; Parthian)

(3.65) *’wd h’n rwšnyy ’wd xwwšn ‘yg yzd-’n ‘y ’c nwx pd*
and DEM lightness and beauty EZ god-K REL in beginning by
’’z ’wd ’hrmyn ’wd dyw-’n ’wd pryg-’n zd
Greed and Ahremen and demon-PL and Parīg-PL smite.PTCP
bwd
become.PTCP
‘And the lightness and beauty of the Gods, which in the beginning was smitten by Greed and Ahremen and the demons and the Parīgs, …’ (M7984/II/V/i/19–24; Middle Persian)

The examples illustrate the passive usage of the participle, here with agential phrases marked by *pd* /pad/. Durkin-Meisterernst (2014:349) notes that in (3.65), the passive notion is provided not by the participle, which is supposedly neutral as to voice, but by the auxiliary *būd*. Such an interpretation is clearly not necessary in (3.64).[252] He notes elsewhere that accordingly, the ergative construction must not be taken as a version of the passive. Although the usage of the past participle is not restricted to forming the periphrastic perfect, and while it can function as an attributive adjective, this use is relatively uncommon and largely passive-intransitive (cf. Durkin-Meisterernst 2014:252; Jügel 2015:271–6 with examples); the claim concerning its neutrality is, accordingly, difficult to verify.[253]

3.3.2.2.3 Type γ: transitive

(3.66) *byc ’w’s cy=m dyd ’yy ’w=m tw sxwn*
CONJ now COMP=1.SG see.PTCP be.2.SG.PRS and=1.SG 2.SG speech
‘šnwd
hear.PTCP
‘But now that I have seen you and heard your speech …’ (MKG 1398–1400; Parthian)

(3.67) *cy=m’n dyd hy tw xwd’y*
CONJ=1.PL see.PTCP be.2.SG.PRS 2.SG Lord
‘…, for we saw you, Lord.’ (M31/I/V/18; Middle Persian)

[252] Other examples of the passive construction occurring without any copula are provided by Haig (2008:118–9).

[253] If ‘indifference’ is understood as referring to the ability of the participle to act as an active or passive depending on the argument structure of the current sentence (A and O vs S only), the term ‘conditioned’ may be more appropriate. To qualify for true ‘indifference’, the participle would have to be documented in a *participium coniunctum* construction, showing both diatheses in different passages.

As is evident from the examples, the auxiliary agrees in person and number with O, while A is expressed by the oblique case, here in the form of enclitics.[254] That this type cannot be a passive synchronically has been demonstrated in detail by Noda (1983) on typological grounds; further differences consist in the valency (divalency of the ergative transitive vs monovalency of the passive), only optional omission of the copula in passives (whereas the ergative omits the 3.Sg consistently), and optional expression of agency in the passive. The second clause of (3.66) further demonstrates the lack of a copula in the 3.sg.

It is worth noting that enclitics do not only fulfil the role of agent markers in the split-ergative past tense, but can also function as objects and, notably, as possessive markers (Durkin-Meisterernst 2014:292). These two functions are illustrated briefly by (3.68, 3.69).

(3.68) *'w=š'n 'c ''z w: 'hrmyn bwz-ym*
and=3.pl from pn and pn save-1.pl
'And we save them from Āz and from Ahremen.' (M49/II/R/10–11; Middle Persian)

(3.69) *(gy)'n=wm j'm 'w whyšt 'nwšg*
soul=1.sg lead.imv to paradise immortal
'Lead my soul to immortal Paradise!' (MMiii 887; Parthian)

The possessive function of the enclitics will be of particular importance in the discussion of the origin of the Armenian genitive marking of agents.

3.3.2.2.4 Ergativity in West Middle Iranian

Coming back to the question of the diathetical orientation of the participle, it is beyond doubt that its Old Iranian and Proto-Indo-European origins are passive.[255] The notion that *-to- should have been diathetically indifferent, as alluded to by Durkin-

[254] These examples have been chosen to demonstrate the most transparent form of this construction. The lack of enclitics, and thus the distinction between direct and oblique, yields less transparent and independently ambiguous sentences. Further, it needs to be kept in mind that at one stage of the West Middle Iranian languages, plural marking was facultative; verbal agreement in number need thus not always occur.

[255] To be precise, intransitive-passive may be a more accurate term (see chapter 2 above), since the participles of motion verbs and other intransitives can form participles, too.

Meisterernst (2014:252), is to be rejected owing to paucity of evidence.[256] Synchronically, the periphrastic perfects of other languages may be adduced as comparison: the statements Fr. *il a composé une sonate*, NHG *er hat eine Sonate komponiert*, and NE *he has composed a sonata* are unambiguously active, while the participles *composé*, *komponiert* and *composed* are unequivocally passive. Similarly, this passive notion can be expressed in periphrastic past tenses in those languages by means of a different auxiliary: Fr. *la sonate a été composée*, NHG *die Sonate ist komponiert worden* and NE *the sonata has been composed*. There is hence no good reason to assume any diathetical ambiguity in the participle itself, but only to note that in sentences containing two core arguments, the periphrastic perfect, whose core is the participle, construes unlike a passive.

From type γ it is clear that in its past tense, Parthian and Middle Persian construe as ergative; alignment is therefore split and tense-sensitive. Owing to the development of the nominal system, proper ergative marking is only visible on the surface in the forms of the auxiliary (except for the third person singular), which agree with O, and in the usage of oblique case pronouns (first person singular only) or oblique enclitics used as A. Word order may give further clues as to the syntactic role of each constituent.

These restrictions do apply to the attested corpus of the language; based on the reconstructions of and spurious evidence from earlier stages of Parthian and Middle Persian, however, it is possible that this alignment pattern was more clearly defined at a time when direct and oblique case were still overtly marked on nouns and pronouns. As was suggested above already, disambiguation was provided, where needed, by prepositional argument marking as detailed below.

[256] The occurrence of passive participles with active meanings in some of the Indo-European daughter-languages is insufficient evidence for projecting such a state back to the proto-language. Lat. *pōtus* ‘drunk; intoxicated’ shows both voices, but the active voice may simply be a secondary, semantically motivated development; cp. Gk. μεθύω ‘to be drunk’, which is clearly active, in contrast.

3.3.2.3 Prepositional argument marking

Prepositions play a significant role in syntactic argument marking in both Parthian and Middle Persian. A variety of them are used to mark indirect and direct object, especially when not following normal SOV constituent order (Durkin-Meisterernst 2014:298), amongst which *'w* /ō/ and *pd* /pad/ are most important for contributing to the disambiguation of syntactic roles.[257] While *'w* /ō/ normally designates 'das Ziel einer Bewegung bzw. Handlung[,] vor allem […] mit Verben, die eine Bewegung oder eine Übermittlung bezeichnen' (Durkin-Meisterernst 2014:330), *pd* /pad/ denotes the circumstances of an action, its location, temporal frame, or means by which it was achieved; it can further mark the agent in passive construction (cp. type β above). In their usage, *'w* /ō/ occurs in both Parthian and Middle Persian, whereas *pd* /pad/ seems to be restricted to the latter; prepositional argument marking in general seems to be more common in Middle Persian.

(3.70) *'w hm 'w jyryft cy p fyštg-'n wyfr'št bw-yd*
and also OBJ wisdom REL by apostle-PL announce.PTCP become-3.SG
'sxnd-ynd w: 'w 'rd'wyft 'škr-ynd
mock-3.PL and OBJ community-of-righteous persecute-3.PL
'And the wisdom, which is announced by the Apostles, they mock, and the community of the righeous they persecute.' (MKG 1682–6; Parthian)

(3.71) *'wd dwdy mry 'wzyy hmwc'g 'w xwd'wn rwšn pywhyd*
and again Mār Uzzī teacher OBJ lord light entreat.PTCP
'And again the teacher Mār Uzzī entreated the Lord of Light …' (MKG 2262–4; Middle Persian)

(3.72) *'L 'lthšdl dyt' W pt=š ny'c-'n' bwt'*
OBJ Ardaxšir see.PTCP and OBJ=3.SG desirous become.PTCP
'(She) saw Ardaxšir and desired him (lit. became desirous)' (KAP 3,2; Middle Persian)[258]

In his discussion of the preposition *'w* /ō/, Durkin-Meisterernst (2014:330–40) mentions that its occurrence seems to be dependent largely on word order given that its usage in verse in general, and in postverbal position in particular is more common;

[257] Brunner (1977:147) further mentions MP *'z* /az/ as an occasional direct object marker; this function is not attested in Parthian.

[258] *'L* is a heterographic writing of *'w* /ō/.

its usage is deemed non-obligatory as long as SOV constituent order is maintained. The notion that an object marked by *'w* /ō/ 'bestimmter ist als ein direktes Objekt ohne ō' is rejected owing to lack of evidence (2014:330). Yet, the high incidence of *'w* /ō/ in Parthian, esp. within the past tense, has led Brunner to take it as an indication of the

> effacing of the participle's passive character. The construction would then represent a preliminary step toward the reinterpretation of the past passive sentence [...] as transitive. (Brunner 1977:137)

In the terms used here, this means that Parthian was transitioning from an ergative (first person singular pronoun, enclitics) or neutral (other pronouns and nouns) to a tripartite or accusative pattern.[259] By the time of early Classical Persian, such changes would certainly have been completed; the specific developments are difficult to determine, however, as a result of sparse relevant evidence in this regard from the later part of the Middle Iranian period.

3.3.2.4 Later developments within the history of West Middle Iranian

Although Parthian and Middle Persian were both tendentially quite conservative in orthography and grammar, innovations still transpired in the written texts as well. To what extent the time of attestation correlates with the original development of an innovated construction *vel sim.* is, unfortunately, impossible to determine for certain.

Since the ergative construction is restricted to the past transitive, and there to the indicative, it is not surprising that 'geriet die Konstruktion unter Druck der aktivischen Konstruktion, und es treten entsprechende Ausgleichserscheinungen auf' (Durkin-Meisterernst 2014:397–8; cf. Brunner 1977:221–2). The dating of this change is impossible on the basis of current material, but since these *Ausgleichserscheinungen*, viz. de-ergativised constructions occur in some of the Turfan fragments, the eigth century CE may be assumed as a *terminus ante quem*.

The main change involves the agreement of the copula with A rather than O; since

[259] The usage of these terms here is to be taken as an idealisation: as has been remarked above, the usage of *'w* /ō/ was not compulsory. Further, different marking patterns are at play since the first person singular pronouns has suppletive case forms, while all others are marked by the preposition alone.

S, A and O were identical concerning their surface form already, this was a simple adaptation to the majority pattern.

(3.73) *'dy'n hbz' wrwc'n š'ẖ w'xt kw 'ym kd'm wy'w'r*
then Habazā Waručān-šāh say.PTCP COMP DEM what-kind speech
'st 'wd w'xt-ynd kw
be.3.SG.PRS and say.PTCP=be.3.PL.PRS COMP
'Then said Habazā, the *Waručān-šāh*: 'What kind of speech is this?' And they said: …' (MKG 145; Parthian)

(3.74) *'wd yzd-'n pnd grypt hym*
and god-PL path take.PTCP be.1.SG.PRS
'And I took the path of the Gods.' (M49/II/V/4; Middle Persian)[260]

The Parthian example reads *wāxtēnd* for original *wāxt hēnd* and thus already shows the kind of univerbation typical of Classical Persian; the line must read 'and they said' (another interpretation is not permissible in this context), and thus shows agreement of auxiliary and A. Similarly, no plausible passive interpretation can be proposed for the Middle Persian example, since *pand* 'path' is not a semantically viable agent.[261] One change, which is unfortunately not exemplified by Brunner or Durkin-Meisterernst, is the occurrence of the 3.SG copula in such de-ergativised forms, when its occurence is not attested in the older texts under ergative agreement.

While Classical Persian has abandoned split-ergative agreement for an accusative pattern with direct object marking in *ra*, other Iranian languages, which similarly developed ergative alignment either as a result of phonological and ensuing morphological changes or under influence of surrounding dialects with this feature, dealt differently with this pattern, as has been exemplified above 3.1. As the difference in the choice of preposition for direct object marking illustrates, and as corroborated by other divergent developments, Classical Persian is not a direct successor of Middle Persian *sensu stricto*, in as much as Middle Persian is not one of Old Persian; this may in part be due to the tendency of West Middle Iranian texts to archaise, thus not reflecting current idiom and grammar as regards prepositional usage, and to the fact

[260] Sundermann (2001:269–70) for linguistic reasons assumes this text to be older than other Turfan texts.

[261] But see the discussion in Durkin-Meisterernst (2014:399).

that instead of a single language it may be more sensible to speak of a dialect continuum in view of the size of the Sasanian Empire and the diversity of Iranian languages spoken therein and thereabouts.

3.3.3 Comparison of West Middle Iranian and Classical Armenian alignment

Now that both the Armenian and the Old and Middle Iranian data have been laid out in their essence, it is possible to compare the alignment properties of both language groups effectively. The following features need to be taken into account: (1) tense-sensitivity; (2) case marking; (3) prepositional object marking; (4) occurrence of the copula; (5) occurrence of non-standard patterns; (6) chronological coincidence.

(1) It has been shown in both instances that non-accusative[262] alignment is tense-sensitive in that it only occurs in periphrastic tenses, specifically composed of the originally passive past participle and an optional form of the copula. Both languages further agree in maintaining a passive pattern next to the non-accusative one, which differs from the latter in either the absence of an agent or its marking by means of a preposition, and agreement of the copula with the grammatical subject.

(2) The commonalities and differences in case marking are less readily compared, since Armenian has maintained a fuller case-system than West Middle Iranian. It is of note, however, that neither Armenian nor West Middle Iranian distinguishes nominative/direct and accusative/oblique in the singular, but does so in the plural. Since Iranian marks O as direct in the past tense, accusative O marking in Armenian must be an innovation, most likely on the basis of nominative-accusative identity in the singular. A more significant difference exists in the marking of A; Parthian and Middle Persian use the same oblique case, which only in plural nouns, the 1.SG pronoun, and the enclitics differs from the direct

[262] This term is used here to refer to both the ergative/neutral alignment in West Middle Iranian and the tripartite alignment of Classical Armenian; it is not meant as a claim for a further pattern, but as an umbrella term to simplify discussion.

case, while Armenian exhibits genitive marking for the most part. This is best explained as relating to the other function of the West Middle Iranian oblique case, namely marking possession (see 3.3.2.2.3 above), which aligns with the function of the Armenian genitive.

(3) A different situation obtains as regards direct object marking, since both language groups can but need not mark the direct object by means of a preposition; this is valid not only in the periphrastic perfect, but also in other tenses, and reflects the insufficiency of nominal morphology in unambiguously specifying syntactic roles.

(4) The usage of the copula is without doubt the most divergent feature between the two language groups: while Parthian and Middle Persian show copula agreement with O except for the 3.SG, where Ø agreement occurs, Armenian generally shows an invariant 3.SG copula, or no finite verb at all.

(5) In both language groups, there was some indication of non-standard patterns, where accusative constructions occurred in normally ergative environments, and (in Armenian only), *vice versa*.

(6) As concerns the timeframe in which these patterns were dominant, sources allow for the assertion that in the 5th century CE, during which Armenian was first attested in written form, all of these patterns were in active use at least in written material, and that during the developments in early West Middle Iranian detailed above, the two languages would have been in close contact.

Armenian and West Middle Iranian therefore show non-trivial commonalities not paralleled in other Indo-European languages of the same or earlier periods, whilst also diverging not insignificantly in some aspects. Keeping in mind their close geographical, political, and linguistic relationship as evidenced by Armenian lexicon, derivational morphology, phraseology, and literature, the question posed in 3.2.3.1 above, namely whether the Armenian perfect might have an Iranian origin, bears closer investigation.

3.4 Hypotheses and questions

The groundwork for an investigation into potential pattern replication in Armenian of the West Middle Iranian, and more specifically Parthian, ergative periphrastic perfect has been laid above. There are sufficient non-trivial commonalities to make a relationship between the unusual morphosyntactic alignment in both languages plausible. As has been suggested in 3.2.3.1 above, the Armenian alignment pattern is a consequence of previous ergative alignment modelled on West Middle Iranian patterns; later stages of the languages in question, that is Middle Armenian and Classical Persian (in lieu of a successor to Parthian), show a clear abandonment of ergative alignment in favour of accusative patterns, as already predicted by some non-standard occurrences of such patterns in the earlier languages.

It is evident that, if the Armenian pattern is of Iranian origin, it has developed along different lines than its model, and that only a non-initial state of this development is attested. One of the tasks of this investigation must therefore be the reconstruction of said developmental path, and the explanation of the changes that Armenian must have undergone in order to arrive at the attested state; other modern Iranian languages show quite clearly that there is no 'one' single path away from ergativity, since even closely related and structurally similar languages have taken different routes (Haig 2008; Matras 1992–3; Payne 1979, 1980). The *prima facie* differences, viz. the optional but invariant copula and the usage of the genitive for A in the transitive past, need to be the initial focus of this analysis. A corpus study of the earliest original Armenian texts will show whether there are any conditioning factors underlying the choice [±copula], [±object marking] and the occurence of the past participle in a *participium coniunctum*, or non-copular, construction, and whether the incidence of these features is constant or varies over time.

The following shall serve as a set of working hypotheses which will guide the corpus study aiming to clearly prove or disprove them:

- the Classical Armenian periphrastic perfect shows tripartite alignment as a result of pattern replication of a Parthian model, viz. the ergative periphrastic

perfect;

- the choice of the genitive as the case marking A is motivated by functional similarities with the West Middle Iranian oblique case and the use of enclitic pronouns in marking possession;
- the development of the invariant copula is an Armenian innovation and largely independent of the Parthian model;
- instances of atypical alignment are indications of continuing alignment shift within Armenian (ergative model > tripartite transition > accusative).

The linguistic analysis of the corpus therefore needs to consider the occurrence of the past participle both as part of the perfect construction and on its own, and make enquiries concerning the relative frequency of its occurence with and without the copula, with and without an explicit agent, in *participium coniunctum* constructions, the word order of its arguments, the occurrence of the direct-object marker, and its co-ordination with other non-periphrastic, nominative-accusative aligned verbs. It is hoped that on the basis of these data, the state and development of the construction will become clearer and allow for an evaluation of its diachronic trajectory and historic origin by means of quantitative analysis. It will further provide the first account of this pattern based entirely on non-translated, that is originally Armenian texts, thus avoiding any potential translation effects as might have influenced previous studies based on the New Testament translation.

A different question that cannot be answered by linguistic data alone materialises in the following working hypothesis:

- the socio-linguistic and socio-political situation in Armenia leading up to the 5th century was such that it allowed for pattern replication from Parthian to Armenian.

This hypothesis will be dealt with separately and in detail in chapter 6 in an enquiry into historical, epigraphic, and literary sources from within the Partho-Armenian realm and around it.

4 Corpus Analysis

In order to corroborate or falsify the hypotheses set out at the end of the previous chapter, it is necessary to study the Classical Armenian periphrastic perfect in some detail. This is best done by means of a quantitative and qualitative analysis of a corpus of pertinent Armenian texts.

As set out in 3.4 above, if the hypotheses proposed are to obtain, the data needs to meet certain expectations. Firstly, if the perfect construction is indeed due to Iranian influence and therefore is based on an ergative-absolutive alignment pattern, the tripartite alignment as attested in the earliest texts is likely the result of an adaptation of the ergative pattern to the otherwise nominative-accusative aligned verbal system of Armenian. It may be expected that such adaptation processes, leading to the eventual loss of tripartite alignment in the perfect, should be evident in Classical Armenian, specifically in non-standard subject or agent marking (genitive instead of nominative subject, nominative instead of genitive agent). If this trend is diachronically persistent, more variation in this regard may be expected from later texts.

Secondly, if the copula—at least in its invariable 3.SG form in the transitive perfect—is an Armenian-internal development, rather than based on an Iranian model, its incidence may be expected to increase. As with case marking above, if the perfect is indeed in the process of de-ergativisation, it may further show signs of agreement change or variation in that the copula may begin exhibiting agent or object rather than Ø agreement. Again, this kind of development would likely be more pronounced in later texts.

A third point concerns the use of the participle as an adjective. If the analysis suggested in chapter 2 is correct, adjectival uses of the participle should be restricted to passive-intransitive ones owing to the forms' historical morphology, at least in the

earlier texts. If transitive uses occur, they would likely be analogically derived from the use of the participle in the perfect construction; under this analysis, they are likely to be late and minor occurrences.

Finally, the non-copular use of the perfect needs to be considered. If the copula is an Armenian-internal development, and the construction does indeed rely on an Iranian model, this non-copular use should be the most frequent in the earlier texts, and should be able to appear on its own, as the sole verb of a main clause.

These expectations form the underlying framework for the enquiries to follow, and will determine whether the hypotheses set out before have any merit or whether they are to be rejected.

Before going into data analysis, two sections discuss the selection, creation, and analysis criteria of the corpus. The section concerning the corpus itself will briefly describe the texts used for this study, their content, and relative chronology. It will further outline why certain texts have not been included in this analysis.

The next section describes the issues with current digital corpora of Classical Armenian texts, and how the corpus used here was compiled. It further outlines the categories according to which each token was analysed, and discusses the principles to which this analysis has adhered.

Following on this, the data gleaned from the corpus study is discussed. After an outline of the adjectival use of the participle, the distribution and development of the periphrastic perfect is considered in some detail, followed by a shorter look at the category of converbs (or appositional participles). In each case, the data are considered from a qualitative point of view first, and common features and problems are outlined; this is followed by an analysis of the quantitative data.

After a brief consideration of the role polarity and constituent order play in the perfect, an error analysis of the study is conducted prior to offering conclusions.

4.1 The corpus

The two main principles that underly the selection of the texts used for this corpus are homogeneity and contemporaneity. In order to avoid interference from different

genres or the influence of other languages, only historiographical texts (in the broad sense) have been used; equally, only texts assumed to have been written in or just after the 5th century CE have been used, both to compile a corpus of a manageable size and in order to permit a detailed, relatively fine-grained study of the perfect and its nascent development into a nominative-accusative aligned tense. The latter is of particular interest since the outcome of this development, viz. the loss of tripartite alignment by the 8th century, has already been established, but the process of its development is as yet unclear.

For these reasons, the following five texts were chose for analysis:

- *The Epic Histories (Buzandaran Patmut'iwnk')* attributed to P'awstos Buzand;
- *The Life of Maštoc' (Vark' Maštoc'i)* by Koriwn;
- *The History of Armenia (Patmut'iwn Hayoc')* by the unknown author called Agat'angełos;
- *The History of Armenia (Patmut'iwn Hayoc')* by Łazar P'arpec'i;
- *Concerning Vardan and the Armenian War (Vasn Vardanay ew Hayoc' paterazmi)* by Ełišē.

As at least some of these titles suggest, all five works deal with the history of Armenia and some of its most prominent leaders or historical figures such as St. Grigor Lusaworič', who was instrumental in the Christianisation of Armenia in the early 4th century (Agat'angełos); Mesrop Maštoc', the monk and scholar who invented the Armenian alphabet (Koriwn); and Vardan Mamikonean, who lead the Armenian army in the Battle of Avarayr in 451 CE and secured the position of Christianity in Armenia (Ełišē).

Agat'angełos' *History of Armenia* details the developments in Armenia between the onset of the demise of Arsacid rule over Persia after 224 CE and the death of St. Grigor Lusaworič' in *c.* 325 CE. For the better part, it is concerned with the life and deeds of St. Grigor, most importantly his conversion to Christianity of King Trdat III, the Great (*r.* 287 – *c.* 330), and the rest of Armenia (cf. Thomson 2010).

	Kor.	Ag.	P‘B	ŁP‘	Eł.	total
words	6,349	31,746	62,673	61,655	40,817	203,240
tokens	358	1,106	1,747	2,713	1,074	6,998

Table 4.1 – *Individual and total word count of corpus texts*

The *Epic Histories* are an account of the later years of the Arsacid dynasty in Greater Armenia, covering the period between the reign of Xosrov III Kotak (*r.* 330 – 338/9 CE) and the partition of Armenia between the Byzantine and Sasanian empires (387 CE), and describes in some detail the precarious position of Armenia between these two great powers (cf. Garsoïan 1989).

Łazar's *History of Armenia* begins where the *Epic Histories* ended, with the division of Armenia in 387 CE, and ends after 484 CE with Vahan Mamikonean entering into negotiations with the Sasanian king Vałarš. The bulk of the history treats of the 5th-century conflicts between Christian Armenians and Zoroastrian Sasanians, including the battle of Avarayr (cf. Thomson 1991).

The latter battle and its circumstances and consequences are also narrated, in somewhat greater detail, by Ełišē (cp. Thomson 1982).

Koriwn's *Life of Maštoc‘* stands out amongst these texts to a certain extent owing to its subject, namely the life and works of Mesrop Maštoc‘ (*c.* 362 – 440 CE; cf. Mahé 2005–7; Winkler 1994).

The latter text is also the shortest of those considered, while the works of Łazar and P‘awstos are the longest. Table 4.1 provides specific details concerning the approximate word count of each text.

Inevitably, this corpus is smaller than many modern language corpora. Although it is a synchronic full-text corpus, its genre-based, specialised nature (in the terms of Kennedy 1998:19–23) accounts for its size, which is also determined by the availability of texts from this time period. Not all texts dating to the 5th century have been used for reasons that are further explained in 4.1.2 below. While this limits the representativeness of this corpus for Classical Armenian according to the criteria laid out by, e.g., Biber (1993), it must be kept in mind that late-antique written accounts of

any genre are unlikely to be very varied in terms of the addressee's or addressor's appurtenance to specific social strata. As has been pointed out already in 1.1 above, any study of this time, linguistic and otherwise, is largely restricted to investigating the upper strata of society, and its literary language.

4.1.1 Relative chronology of texts

As a result of the age and limited manuscript history of these works, as well as the potential of scribal interference and interpolations, it is difficult or impossible to arrive at a certain, absolute date for any of these texts.[263] Even establishing a relative chronology is not always straightforward.

Especially in the case of Łazar and Ełišē, who cover similar timespans and topics, the question of who influenced whom and who copied from whom are difficult to answer (Thomson 1982:26–9; 1991:5). Thomson, for reasons that are too complex to reiterate here and have little bearing on this study, is of the opinion that the work of Łazar ought to be attributed to the end of the 5th century, while Ełišē's history may have been written in the early 6th century, but at any rate after that of Łazar.

Garsoïan (1989:10–11) discusses the date of the *Epic Histories*, which the narrator claims are eyewitness accounts of 4th century history. Given a number of confusions and inaccuracies, as well as quotations from later texts like Koriwn and prominent foreshadowing of later historical events such as the Battle of Avarayr in 451 CE, Garsoïan suggests a date in the 470s CE for this text.

Text-internal evidence suggests that the date of composition of Koriwn's *Life of Maštocʻ* must have been before the battle, but necessarily postdates the death of its central character, Mesrop Maštocʻ. Winkler (1994:21) suggests a period of time between 442/3 and 449 CE.

Finally, Thomson (2010:87–108) considers in great detail the potential date of the *History* attributed to Agatʻangełos. In brief, it appears that the work makes use of material not known prior to the composition of Koriwn's biography of Maštocʻ, and

[263] By necessity of space, what follows below is not a discussion of the issue of dating and chronology, but rather a statement of the *communis opinio*; for discussions and bibliographical material, cf. the referenced works.

in turn was itself known to Łazar and Pʻawstos; this puts it right in the middle of the century, likely in the 460s CE.[264]

Inevitably, these dates are very vague, but at the very least can provide a likely internal chronology which may be of use for the identification of linguistic trends in the corpus. For the purpose of the corpus analysis, the following chronological order is therefore assumed (textual abbreviations in brackets):

(Kor.) Koriwn – 440s

(Ag.) Agatʻangełos – 460s

(PʻB) Pʻawstos Buzand – 470s

(ŁPʻ) Łazar Pʻarpecʻi – late 5th century

(Eł.) Ełišē – later 5th / early 6th century

Based on the expectations set out above, Koriwn should accordingly exhibit the most conservative patterns, while more variation or innovation may be seen in Ełišē.[265]

4.1.2 Exclusions

A small number of texts have been excluded from this corpus. The reasons for this exclusion are twofold: one set of texts are likely to be too heavily influenced by another language, viz. Greek; other texts pertain to a different genre and may, for this reason, exhibit different linguistic properties.

The most notable exclusions are the New Testament translation and Eznik Kołbacʻi's *Against the Sects*.[266] The former has been excluded primarily because it is a translated

[264] Thomson (2010:8–24) also gives clear indication of the complicated history of the various recensions of the work attributed to Agatʻangełos. The date suggested here is the latest permissible for the version as compiled in modern editions.

[265] In-text references to the three of the corpus texts follow those outlined in Appendix B. For Koriwn and Agatʻangełos, in-text references are on the basis of Winkler (1994) and Thomson (2010), respectively, both of which provide better commentaries, but use an idiosyncratic numbering system.

[266] These two texts were among those considered by Vogt (1937). Based on the *index locorum* and numbers cited, however, Vogt cannot have considered each text in full. The current study will remedy this, and avoid a skewing of the data by not mixing translated and original texts. For a study of the perfect in Eznik, cf. Lyonnet (1933), Ouzounian (2003).

text, and owing to translation effects may not correctly reflect the state of the Armenian language at the time in question.[267] This point has been made repeatedly by, *inter alia*, Cowe (1994-5); Lafontaine and Coulie (1983); Meyer (fthc.*c*). Eznik, as one of the translators of the New Testament, in his writing on occasion also exhibits signs of interference from Greek; the exclusion of his philosophical and theological tractate, however, is owed mainly to its genre, which does not fit in with the other texts of the corpus, and without other contemporaneous *comparanda* of the same genre would not have provided statistically meaningful data.

For these same reasons, all texts pertaining to or ascribed to the so-called Hellenising School (*Yunaban dproc'*) have been excluded.[268]

Another text that has been ascribed to the 5th century is the *History of Armenia* by Movsēs Xorenac'i. As has been argued by Thomson (1978:1–61, esp. 58–9), however, textual evidence in the form of quotations taken from texts posterior to the claimed date of composition points toward a later time of composition, likely the 8th century.

4.2 Methodology

There are already a number of fully or partially parsed corpora of Armenian available online. The largest is the *Eastern Armenian National Corpus* (EANC) with *c.* 110 million tokens; since it covers only text from the mid-19th century onwards, however, it is of no use for this study.

A number of texts (Kor., Ag., EK) further exist in parsed form as part of the *Thesaurus Indogermanischer Text- und Sprachmaterialien* (TITUS); similarly, the commercial *Leiden Armenian Lexical Textbase* (LALT) has a number of parsed works (Kor., Ag., Eł.). No available repository does, however, have a version of either ŁP' or P'B.[269]

Unfortunately, the online interfaces of these repositories do not allow for easy corpus-based queries based on grammatical form or function, nor indeed for the export of data for use in other applications; since both corpora are based on now depre-

[267] For a refutation of the alleged translated nature of the *Epic Histories*, cf. Garsoïan (1989:6–8).

[268] For an overview, cf. Muradyan 2012.

[269] The text of Kor. is further available in a parsed and tagged format from the *Pragmatic Resources in Old Indo-European Languages* (proiel) project.

ciated data structures and front-ends, an online-exclusive use was ruled out. Attempts at contacting the developers and contributors to gain access to the back-end data were unsuccessful.

This highlights a distinct need for innovation in the study of Classical Armenian and its linguistic structures. A digital corpus of Classical Armenian texts, beginning with the New Testament translations and the works used here, morphologically and lexically parsed and ideally tagged for syntactic structures would be a tool that would put Armenian on par with other classical languages such Latin and Greek.[270]

4.2.1 Data retrieval

Lacking a readily usable source of linguistic data, a different approach was taken. Digitised plain text versions of Kor., Ag., P‘B, ŁP‘, and Eł. based on reliable print editions are available from the *Digital Library of Armenian Literature* (DIGILIB). These texts have been retrieved, ‘cleaned’ (stripped of undesirable characters and annotations), and minimally parsed by means of a set of programmes written in the programming language Python.[271]

Since the texts retrieved were going to be used for this study only, the programme produces a spreadsheet which centres on the use of the *-eal* participle in each text. In it are listed the place of occurrence of the participle, a copy of the sentence[272] in which it occurs, and the form of the participle itself. Full parsing and tagging of each text would have been too time-intensive, and owing to the syncretic nature of the Armenian case system only of very limited use. Instead, each token (participle) was evaluated individually according to the categories laid out in 4.2.2 below.

To avoid a great number of false positives, only forms of the participle which contain the sequence *-eal(-)* have been considered.[273] This includes all nominative and

[270] An XML-based data structure like that of the dependency treebanks of the PROIEL project, which already includes the text of Kor., would make for a good starting point in such an endeavour; cf. ECKHOFF ET AL. (2017).

[271] Appendix A contains an annotated version of these programmes, describing step by step how a text is retrieved from the online repository, cleaned of unnecessary material, and then subdivided and parsed.

[272] ‘Sentence’ has here been interpreted as the sequence of words delimited by Armenian interpunction like ‘.’ and ‘:’.

[273] Both the infinitive and the *-eal* participle inflect like *o*-stem nouns (JENSEN 1959:§§264, 271), and

accusative forms in both singular and plural, as well as forms with the determiners *=s, =d* and *=n*. As it stands, only two types of false positives did occur: the infinitive of the verb *keam*, *keal* 'to live' (*passim)*, and two place names (*Arpʿaneal* and *Gŕeal*, both in Eł. p. 69). Overall, this yielded 6,998 tokens.

4.2.2 Data categorisation and principles of analysis

Each token was then analysed according to the following categories (possible values noted in brackets):

- use (adjective; main verb; converb;[274] adverb[275]);
- valency (intransitive; transitive);[276]
- voice (active, passive, impersonal);[277]
- subject/agent case (nominative; genitive; Ø);
- explicit object (yes; no);
- copula present (yes; no);
- copula agreement (subject; agent; object; Ø-agreement);
- form of copula (be.PRS; be.PST; be.PRS.SBJV; become.PRS; become.PST; become.AOR.SBJV);
- constituent order (V; SV; VS; AV; VA; OV; VO; AVO; AOV; VAO; VOA; OVA; OAV)
- polarity (positive; negative).

would thus both occur in a broader search for oblique-case forms. This would have complicated the data analysis considerably, and would not have yielded data pertinent to the focus on the periphrastic perfect.

274 For a definition, see 4.3.3.1 below.

275 The category 'adverb' has been used exclusively for Arm. *darjeal* 'again; lit. having turned'; this participial form has grammaticalised as an adverb, and in many but not all instances is used thus rather than as a participle proper; it will not be further discussed here.

276 As suggested by the discussion in 3.1.1 above, ditransitive verbs have not been categorised separately, but rather as transitive verbs; their third participant has been ignored.

277 Since Armenian makes not formal morphological or syntactic distinction between the middle voice and the passive, no such differentiation has been attempted here.

Some further notes are in order to explain these categories further. In the case of adjectival use, only two other categories (valency, voice) were considered. In general, the term 'adjective' has been used conservatively here, and strictly refers to either nominalised, attributive, or clearly predicatively used participles after verbs like *erewim* 'to appear', *gtanim* 'to appear; lit. to be found'. In attributive use, participles most frequently refer to oblique-case NPs, or are used as epithets, e.g. *urac'eal* 'having apostasised; apostate' as the epithet of Vasak Siwnec'i. Other indications that a participle was used adjectivally or nominally are coordination with other adjectives or nouns and the use of the determiners *=s, =d*, and *=n*, e.g. *aṙak'ealn* 'the apostle; lit. sent'. Further examples are provided in 4.3.1 below.

In contrast, participles have been categorised as main verbs if they are accompanied by a copula, are coordinated with other main verbs by means of conjunctions, or are the only verb in a clause.

The category 'converb' comprises all other instances of participles, referred to historically as appositional or *participium coniunctum*. They are adjuncts to the main verb, and can, but need not, share its subject, agent, and/or object; in most instances they express actions prior to or contemporaneous with that of the main verb, which are however less important than the main verb action. They differ from the adjectival use of the participle in not describing a NP, but rather the main verb more closely. The converbial use of the participle will be discussed in detail in 4.3.3 below.

In the 'voice' category, the value 'passive' has been used only when a context demanded a passive reading. In the case of *zarhurem* 'to frighten', for instance, the common participle *zarhureal* has mostly been interpreted as intransitive active ('having been in a state of fright') rather than intransitive passive ('having been frightened') unless there was a clear indication of external agency or causation.[278]

Only overt subjects and objects, viz. those occurring within the same clause as the participle in question, have been counted as such and registered accordingly as part of the constituent order.[279]

[278] External agents are normally expressed by *i* + ABL, or with pure INS.

[279] As will become apparent in the discussion of converbs below, it is at times difficult to establish whether a subject or agent more closely belongs to the converbial participle or the main verb.

As regards the copula, the following verbs have been counted as copular: *em* ‘to be’, *linim* ‘to become’, and *ełanim* ‘to become’.[280]

4.3 Data analysis

After this outline of the structure of the corpus and the principles of analysis, the following section will present the outcome of this analysis. Each discussion will begin with a few standard examples of the feature or category in focus, and will present a statistical analysis, potential diachronic trends where appropriate, and a discussion of potential problems.

The analysis commences with participles categorised as adjectival, and will then move on to those used as main verbs in the periphrastic perfect, and those used as converbs. Finally, observations are made concerning constituent order and polarity.

4.3.1 Adjectival and nominal participles

In its most basic form, the participle is used as an adjective, either as an attribute to a NP, used predicatively with certain verbs like *erewim*, *gtanim* ‘to appear’, or in a nominalised form. If the participle is, historically speaking, a passive-intransitive formation as argued in chapter 2 above and reiterated at the beginning of this chapter, its adjectival forms should reflect this heritage in being largely passive-intransitive as well.

Examples (4.1, 4.2) are instances of participles being used attributively.

(4.1) *ard dimeac‘ gal surb=n Grigorios zi*
PTC rush.3.SG.AOR go.INF holy=DET PN COMP
k‘andesc‘ē ew z=ayn ews zi takawin isk
destroy.3.SG.AOR.SBJV also OBJ=DEM further COMP more PTC
tgēt mardik xaṙnakut‘ean zohēin y=ays
ignorant mankind confusion.GEN.SG sacrifice.3.pl.pst to=DEM
bagins mnac‘eals
altar.ACC.PL remain.PTCP.ACC.PL

[280] Although the verb *kam* ‘to remain’ also occasionally occurs with participles, it has not been counted as a copula owing to its relative rarity, and since participles occurring with *kam* can be counted as converbs; see 4.3.3 below.

'Then St. Grigor set out so that he might destroy this one, too, since ignorant men to/of chaos (?) still sacrificed at these remaining altars.' (Ag. §809)

(4.2) *sałmosk'* *ēin* *noc'a* *mrmnǰunk'* *ergoc'* *ew*
psalm.NOM.PL be.3.PL.PST 3.PL.GEN whisper.NOM.PL song.GEN.PL and
ənt'erc'uack' *surb* *groc'* *katareal* *uraxut'iwnk'*
lesson.NOM.PL holy scripture.GEN.PL complete.PTCP happiness.NOM.PL
'Their whispers of songs were psalms, and the lessons in holy scripture their supreme happiness.' (Eł. p. 125)

In (4.1), the active intransitive participle *mnac'eals* must refer to *bagins*, both being in the accusative, and thus can only be an adjective. Similarly, (4.2) shows the passive intransitive participle *katareal* in the nominative describing *uraxut'iwnk'*; here, the attributive patriciple is part of a predicative NP.[281] As these and the following examples show, adjectival participles, attributive and otherwise, can occur together with NPs in all cases.[282]

As already mentioned, participles also occur in predicative position. (4.3, 4.4) illustrate this use after the verbs *t'uim* 'to seem' and *erewim* 'to appear'.

(4.3) *ayl* *t'ē* *hnar* *ēr* *jez* *ayžm* *gitel* *margarēut'eamb*
but if possible be.3.SG.PST 2.PL.DAT now know.INF prophecy.INS.SG
t'ē *orpēs* *vasn* *patgami=d* *aydorik* *[...]*
COMP how because-of message.GEN.SG=DET DEM.GEN.SG
t'uik' *mez* *angitk'* *ew* *korusealk'*
seem.2.PL.PRS 1.PL.DAT ignorant.NOM.PL and ruin.PTCP.NON.PL
'But if it were possible for you to know by foresight how ignorant and lost/ruinous you seem to us because of that message.'(ŁP' §55)

(4.4) *[...]* *čaŕagayt'ic'* *imanali* *aregakan,* *or* *y=amenayn* *žam* *ew*
ray.GEN.PL spiritual sun.GEN.SG rel in=all time and
y=amenayn *awr* *ger* *i* *veroy* *cageal* *erewi* *amenec'un*
in=all day very in above shine.PTCP appear.3.SG.PRS all.DAT.PL
'... of the rays of the spiritual sun, which every hour and every day appears shining more [brilliantly] above [us] all.' (Eł. p. 110)

In (4.3), *korusealk'* refers to an unexpressed 2.PL which is only patent in *t'uik'*; the adjectival reading of this participle is further corroborated by the coordinated

[281] Note, however, that a converbial interpretation is only excluded by context. In principle, there is little that would speak against a reading '... their happiness, once it was achieved, was lessons in holy scripture'. This example highlights that data analysis can be difficult and, at times, subjective, since it is context dependent.

[282] It must be kept in mind that adjectives preceding their NP are not commonly inflected even if the NP is.

adjective *angitk‘*. The interpretation of the participle's voice is not entirely clear here, since both a passive reading 'lost' and an active intransitive reading 'ruinous, doing an act of destruction' seem plausible; for evaluation purposes, an active intransitive reading has been preferred. This illustrates some of the interpretative challenges of data analysis.

(4.4), in turn, clearly shows an active intransitive participle *cageal*, here dependent on *erewi* with the relative pronoun as its subject. In this case, again, a converbial reading is not impossible, but seems contraindicated by context, as '… which having shone appears … ' or '… which shines and appears …' seem less plausible interpretations.

The final category of adjectivally used participles are those in nominal use. Like their attributive and predicative counterparts, they too appear as either intransitive active or intransitive passive, as (4.5–4.6) demonstrate.

(4.5) *aṙeal* *aynuhetew* *eranelwoy=n* *z=hawatac‘eals* *iwr*
take.CVB thereafter blessed.GEN.SG=DET OBJ=believe.PTCP.ACC.PL 3.POSS
'Thereafter, the Blessed took his believers …' (Kor. §25)

(4.6) *ew* *c‘uc‘anim* *anzgam* *orpēs* *ew* *surb* *aṙak‘eal=n*
and seem.1.SG.PRS unfeeling like also holy send.NOM.SG=DET
Astucoy *Pawłos*
God.GEN.SG PN.NOM.SG
'And I may seem unfeeling like the holy apostle Paul' (ŁP‘ §16)

(4.7) *ert‘ayk‘* *y=inēn* *anicealk‘* *i* *hur=n*
go.2.PL.IMV from=1.SG.ABL curse.PTCP.NOM.PL into fire.ACC.SG=DET
yawitenic‘
eternity.GEN.PL
'Go forth from me, accursed ones, into the fire of eternity …' (ŁP‘ (2)§22)

In (4.5), the intransitive active participle *hawatac‘eals*, best rendered as 'believers (lit. who believe, do an act of believing)', occurs in the accusative. While adjectives are often nominalised by means of enclitic determiners, the latter only occur with definite NPs, wherefore this participle does not receive such marking. Here, the absence of other NPs which the participle could refer to, and the fact that it has been marked as accusative plural sufficiently indicate its nominalised status.

	Kor.	Ag.	P‘B	ŁP‘	Eł.
ITR.ACT	12	53	113	118	96
ITR.PASS	32	134	188	202	89
TR.ACT	0	0	0	0	4
Total	44	188	301	320	189
% of all PTCPS	12.3	17.0	17.2	11.8	17.6

Table 4.2 – *Distribution of voice and valency in adjectival participles*

Both *hawatac‘eal* and the participle used in (4.6), passive intransitive *aṙakeal* ‘apostle (lit. sent)’, are used so frequently as nouns that they have likely grammaticalised as such; the Modern Eastern Armenian nominal cognates *aṙakyal* and *havatac‘yal* corroborate this. Owing to their formation, they have nonetheless been counted as participles in the corpus.

Finally, (4.7) illustrates the use of nominalised participles in appellations. In this instance, *anicealk‘* ‘cursed’, although part of an address, appears as nominative since Armenian lacks a vocative. Once more, a converbial reading (‘Having been cursed, leave…’ or ‘Be cursed and leave …’) is possible but not plausible in context since the act of cursing is not recent and thus unlikely to cohere with the main verb.

The occurrences of adjectivally used participles are summarised in Table 4.2. As shown there, the adjectival use makes up for, on average, *c.* 15.18 *per cent* of all participles with only minor variation between the texts.[283] Passive intransitive participles are more common in all texts but Eł., but it is unclear whether the passive predominance or its lack in Eł. are of any significance or simply results of authorial style or content.

It must be noted, however, that Eł. also stands out in its usage of transitive active participles, which do not occur elsewhere. (4.8) presents one of those instances.

(4.8) *zi* *ork‘* *kalc‘in* *sirov* *erewesc‘in*
COMP REL.NOM.PL accept.3.PL.AOR.SBJV love.INS.SG appear.3.PL.AOR.SBJV
katareal *z=hraman* *ark‘uni*
fulfil.PTCP OBJ=command.ACC.SG royal
‘… so that those who accept it may seem to have fulfilled the royal commands

[283] At a standard deviation of s=2.88, all values fall within 1.2s.

willingly' (Եղ. p. 62)

In this instance, *katareal* is clearly used predicatively after *erewesc'in*, and is the only verb which can govern the object *z=hraman ark'uni*. If participles in transitive use are part of Armenian syntax, they are very clearly a nascent category, as the small number of occurrences suggests. As a result, however, it is impossible to determine whether they have developed in analogy to the transitive use of the participle as part of the perfect or as a converb, or whether they have arisen differently.[284] In either case, their rarity and late occurrence does not change the overall picture presented above.

Based on the data presented here, it appears that one of the expectations voiced above stands corroborated. The use of the participle in its original, adjectival form is —on the whole—restricted to intransitive active and passive forms, as the historical morphology of the participle predicted. The few instances of adjectivally used transitive participles are later, secondary developments as indicated by their occurrence only in Եղ., the latest of the five corpus texts.

In turn, this distribution also suggests that the active use of the participle in the periphrastic perfect must have developed secondarily, too, since explanations can no longer reasonably rely on originally diathetically indifferent participles.

4.3.2 Participles in the 'true' periphrastic perfect

According to traditional grammars like Jensen (1959), and as outlined above, the periphrastic perfect, of which the participle is an integral part, construes as follows: in intransitive (active and passive) verbs, a nominative subject and copula in subject agreement; in transitive active verbs, a genitive agent and a copula in Ø agreement in the 3.sg. These standard alignments were referred to as types α (itr.act), β (itr.pass), and γ (tr.act) in 3.2.1 above.

Equally, it has been noted that variations on these patterns exist, specifically with unexpected cases for the subject (gen) or the agent (nom), and that copula agreement

[284] Thomson (1982:27) notes the 'the influence from translations of the "Hellenizing" period' on Ełišē. Both (4.8) and the other three examples are reminiscent of Greek uses of the participle; whether there is any relationship between the two cannot be determined, however.

shows similar variation, with unexpected agent agreement in transitive verbs and Ø agreement in intransitive verbs.

If the hypotheses stated at the end of chapter 3 are correct, the state of the periphrastic perfect in Classical Armenian as attested at the beginning of the 5th century CE was already one of transition, namely between the ergative-absolutive model of West Middle Iranian and the nominative-accusative alignment found from the 8th century onwards. Accordingly, it might be expected that the type of variation just noted should already exist in the chronologically earlier texts, but that the incidence of those variants more closely aligned with the known outcome of alignment change (NOM agents and subject/agent agreement) should increase over time.

These patterns constitute the 'true' periphrastic perfect, used as (one of) the main verbs in a sentence, which will be considered in this section; the converbial use of the participle is discussed separately in 4.3.3 below. In what follows, the statistical distribution of these features will be presented, illustrated by pertinent examples. The discussion begins with subject and agent marking, and then moves on to the use of the copula and its agreement. Two further issues, the potential influence of polarity noted by VOGT (1937) and the question of constituent order, will be discussed more briefly in the final part of this section.

4.3.2.1 Subject and agent marking

The following examples, taken from the corpus, illustrate once more the gamut of constellations in which the perfect occurs. This section focuses on subject and agent marking.

4.3.2.1.1 Standard patterns

Active intransitive verbs (type α), as outlined above, standardly exhibit nominative subjects and copulas in subject agreement; thus examples (4.9, 4.10):

(4.9) *ew* *orpēs* *etun* *zroyc'* *ork'* *ənd* *nma* *ekeal* *ēin*
and as give.3.PL.AOR news REL.NOM.PL with 3.SG.DAT come.PTCP be.3.PL.PST
'And as those, who came with him, reported …' (P'B IV.5)

(4.10) *ayl duk‘ or ayžm y=erec‘unc‘ ašxarhac‘*
but 2.PL.NOM REL.NOM now from=three.ABL country.ABL.PL
ekeal=d ēk‘ tanuteark‘ ew sepuhk‘
come.PTCP=DET be.2.PL.PRS magnate.NOM.PL noble.NOM.PL
‘But you magnates and nobles, who have now come from three countries, …’
(ŁP‘ (2)§27)

In both instances, the subject (represented by relative pronouns) is in the nominative, and the copula agrees with the subject.[285]

A similar situation obtains for passive perfects (type β), which also expect nominative subjects and copulas in subject agreement, as shown in examples (4.11, 4.12):

(4.11) *himunk‘ nora edeal en i veray hastatun*
foundation.NOM.PL 3.SG.GEN put.PTCP be.3.PL.PRS on-top solid
vimi
stone.GEN.SG
‘Its foundations were put on solid rock.’ (Eł. p. 47)

(4.12) *du or i mankut‘enē y=aydm*
2.SG.NOM REL.NOM.SG from childhood.ABL.SG in=DEM.LOC.SG
awrēns sneal ēir
religion.LOC.PL rear.PTCP be.2.SG.PST
‘You, who were brought up from childhood in this religion, …’ (Eł. p. 62)

In theses instances, too, the agreement pattern is obvious: *himunk‘* is NOM.PL, and thus taken up by the 3.PL copula *en*. The case for (4.12) is no different.

In contrast to these two intransitive patterns, the transitive perfect requires a genitive agent, and shows Ø agreement of the copula, which occurs in a invariable 3.SG form (type γ). This constellation is presented in (4.13, 4.14).

(4.13) *ew gitem t‘ē lueal ē z=xorhurds*
and know.1.SG.PRS COMP hear.PTCP be.3.SG.PRS OBJ=plan.ACC.PL
mer Parskac‘ kapen z=na ew vštac‘uc‘anen
1.PL.POSS Persian.GEN.PL bind.3.PL.PRS OBJ=3.SG.ACC and torment.3.PL.PRS
‘I know that [if] the Persian have heard our plans, they [will] imprison him and torment [him].’ (ŁP‘ (3)§66)

(4.14) *bayc‘ t‘agawor=n Pap i č‘k‘meł linelov*
but king.NOM.SG=DET PN into innocence.ACC.PL become.INF.INS
č‘=lueloyn aṙnēr ibrew t‘ē iwr č‘=ic‘ē
NEG=hear.INF.GEN take.3.SG.PST as if 3.SG.POSS NEG=be.3.SG.PRS.SBJV

[285] Concerning the lacking number agreement of pivot and REL in (4.10), cf. MINASSIAN (1989).

gorceal *z=ayn*
do.PTCP OBJ=DEM.ACC.SG
'But King Pap, [as though] being innocent, pretended not to have heard, as though he had not done this deed.' (P'B V.24)

Both examples contain pronominal agents, *mer* in (4.13) and *iwr* in (4.14). The former functions both as the genitive of the 2.SG personal pronoun and as its possessive adjective, while the latter is restricted to the use as the possessive adjective referring to the subject of the clause.[286]

Furthermore, (4.13) demonstrates well that Classical Armenian does not require explicit subjects even if the morphological expression in one clause does not meet the requirements of the next. Since *kapen* and *vaštac'uc'anen* are present forms, a nominative agent would be required; yet, the agent of the second clause is not explicit, and assumes that of the previous clause irrespective of its case marking.[287]

As the statistical analysis in 4.3.2.1.4 will make plain, these three patterns account for the overwhelming majority of all perfects.

4.3.2.1.2 Non-standard patterns

Each of the standard patterns discussed above shows some variation in subject or agent marking, specifically by adopting the marking pattern of the other category.

In (4.15), therefore, the intransitive verb *hasanem* 'to arrive' shows a genitive agent, specifically the genitive of the 1.PL, *mer* (type α*).

(4.15) *mer* *aydpēs* *haseal* *ē* *veray* *bnut'ean* *dora*
1.PL.GEN thus arrive.PTCP 3.SG.PRS on nature.GEN.SG 3.SG.GEN
'And thus we learned about his nature (lit. we arrive on …)' (Eł. p. 176)

Although the English translation suggests a transitive understanding of this sentence, it must be kept in mind that the Armenian does not allow for such an interpretation in any way.

The standard argument marking pattern of the passive shows variation, too, but only in one instance in P'B (4.16), where it occurs with a genitive subject.

[286] The fact that *iwr* can function as agent is likely a result of analogy with the genitive personal pronouns, which double as possessive adjectives.

[287] This equally suggests that, as was to be expected, Classical Armenian is not one of the languages discussed briefly in 3.1.2.3 above which are syntactically ergative.

(4.16) *omanc‘* *cneal,* *ew* *oč‘* *snuc‘eal,* *i* *č‘ap‘*
INDF.GEN.PL give-birth.PTCP and NEG rear.PTCP in manhood
hasuceal, *ew* *anargeal* *t‘šnamanōk‘.*
cause-to-arrive.PTCP and dishonour.PTCP insult.INS.PL
‘Some are born but were not nurtured, reached maturity, and were dishonoured by insults.’ (P‘B IV.5)

Since this particular constellation occurs only once, it is difficult to determine whether it is *echtsprachlich*, or a scribal mistake. For statistical purposes, it can be ignored as a *hapax*.

The third non-standard pattern is that of transitive perfects with nominative agents (type γ*), here represented by (4.17):

(4.17) *ew* *andēn* *vałvałaki* *dahičk‘=n* *hraman* *arėal*
and then suddenly executioner.NOM.PL=DET command receive.PTCP
y=eric‘ *naxararac‘=n* *srov* *hatanel*
from=three.ABL noble.ABL.PL=DET sword.INS.SG cut-off.INF
z=paranoc‘ *eranelwoy=n*
OBJ=neck.ACC.SG blessed.GEN.SG=DET
‘And then, the executioners immediately received a command from the three nobles to cut off the head of the Blessed.’ (Eł. p. 169)

As is evident, the transitive verb *arṙnum* ‘to take, receive’ here construes with a nominative agent in the perfect; as so often, a form of the copula is absent (on which, see 4.3.2.1.4 below). The object, *hraman* ‘command’ is not marked here. Neither context nor grammar allow for a different reading of this sentence, however.

The final non-standard pattern is the impersonal construction (type δ) as discussed by Weitenberg (1986). Here, an accusative object occurs accompanied by a participle and a copula in the 3.SG, but without an agent in a core case, either explicit or inferable from context. (4.18, 4.19) illustrates this pattern.

(4.18) *vasn* *č‘aragorcac‘* *isk* *ēr* *šineal* *z=ayn* *teli*
for evil-doer.GEN.PL PTC be.3.SG.PST build.PTCP OBJ=DEM.ACC.SG place
ew *i* *spanumn* *mahapartac‘=n* *amenayn*
and for execution condemned-to-death.GEN.PL=DET all
Hayoc‘
Armenia.GEN.PL
‘They built this place for evil-doers, and for the execution of those condemned to death in all Armenia.’ (Ag. §124)

(4.19) *ew* *duk‘* *kamik‘* *[…]* *meržel* *z=bnak*
and 2.PL.NOM want.2.PL.PRS forsake.INF OBJ=natural
tears=n *z=ors* *tueal* *ē* *jez*
lord.ACC.PL=DET OBJ=REL.ACC.PL give.PTCP be.3.SG.PRS 2.PL.DAT
y=Astucoy
by=God.ABL.SG
‘And you wish to […] forsake your natural lords, who were given to you by God’ (P‘B IV.51)

(4.18) shows the pattern most clearly: no agent is apparent in the sentence itself, nor can one be gleaned from context. At the same time, the object marker *z=* indicated that this is not a standard passive construction, in which a straight nominative would be expected.

The situation is somewhat more complicated in (4.19), since here an explicit agent with *i* + ABL does occur in *y=Astucoy*; at the same time, the constituent affected by the verbal action is marked as accusative, ruling out a passive reading.[288]

Impersonal constructions are not particularly common (see 4.3.2.1.4 below). Rather than assuming their historical primacy, as did Weitenberg (1986), their relative rarity and closeness to the passive construction would suggest a secondary development, possibly in analogy with the accusative object / affectee of the transitive active construction. It cannot be excluded, however, that they simply reflect an extension of impersonal expressions in other tenses, where a verb in 3.PL but without explicit subject can express impersonal statements (Jensen 1959:§359aa); if based on the transitive active perfect, a 3.PL would not standardly find any morphological expression, since the copula shows Ø agreement.

These non-standard patterns do not constitute a large part of the attested ‘true’ perfects, but are not statistically negligible, as will be discussed after a few more remarks on noteworthy behaviour of the perfect.

4.3.2.1.3 Other patterns of note

Certain features of Classical Armenian syntax have an impact on the analysis of corpus data, such as the fact that Armenian is a pro-drop language and does not require

[288] In a number of instances, *z=* before relative clauses need not indicate the case of the relative pronoun itself, but can mark the clause as referring to the object of the main clause. Since REL is inflected as ACC.PL in (4.19), however, this cannot apply here.

overt subjects in every clause if they are inferable from context. The same is true for the objects of transitive verbs, which need not be explicit. Furthermore, verbs can govern otherwise unmarked sentential objects, either in the form of infinitives or subordinate clauses. Some examples of this kind of behaviour will be given and explained briefly below.

(4.20) shows an instance of a perfect occurring without an explicit subject or agent; like in many other languages, this is very frequent in Armenian, too.

(4.20) *ew žołoveal z=amenayn iwroy išxanut‘ean=n*
and gather.PTCP OBJ=all 3.POSS.GEN.SG kingdom.GEN.SG=DET
k‘ałak‘ac‘ z=amenayn ort‘odok‘s z=episkoposs z=eric‘uns
city.GEN.PL OBJ=all orthodox OBJ=bishop.ACC.PL OBJ=presbyter.ACC.PL
z=sarkawaguns or
deacon.ACC.PL REL
‘And [the king] gathered all the orthodox bishops, presbyters, and deacons from all the cities under his dominion, who …’ (P‘B IV.5)

Here, the determination that the king is the agent can only be made from context, whilst the object is overt; even if a copula had been employed, it would not have provided any further information owing to its lack of agreement.

Similarly, in some instances there is no overt object with transitive verbs, as in (4.21) below.

(4.21) *ew sparapet=n Hayoc‘ tēr=n*
and *sparapet*.NOM.SG=DET Armnenia.GEN.PL lord.NOM.SG=DET
Mamikonēic‘ eraneli=n Vardan aṙeal ənd iwr i
PN.GEN.PL blessed=DET PN.NOM.SG take.PTCP with 3.POSS from
tanuterac‘=n Hayoc‘ ork‘
magnate.ABL.PL=DET Armenian.GEN.PL REL.NOM.PL
‘And the *sparapet* of the Armenians, the lord of the Mamikoneans, the blessed Vardan took with him [those] from among the magnates of the Armenians, who …’ (ŁP‘ §34)

Here, the object is implicit in the free relative clause introduced by *ork‘*, which owing to a lack of case-matching requirements can take on this function although it is in the nominative and part of the relative clause (Meyer fthc.*c*). On occasion, objects are also omitted after long passages of direct speech when the next paragraph begins with formulae like, e.g., *nora lueal (ē)* ‘He heard [this]’, which directly refers to the speech made.

Finally, objects can take the form of, e.g., clauses introduced by *(e)t‘ē* or *zi*, as illustrated by (4.22).

(4.22) *ew* *lueal* *ews* *ē* *im* *t‘ē* *i* *Parsiks*
and hear.PTCP further be.3.SG.PRS 1.SG.GEN COMP to Persian.ACC.PL
xōsi
say.3.SG
‘And I have also heard that he is talking to the Persians.’ (P‘B V.4)

In this instance, the clause beginning with *t‘ē* constitutes the object of *lueal ē*. As the genitive agent *im* suggests, this verb must be counted as transitive.

The purpose of this section was to briefly illustrate that the corpus analysis must account for patterns such as those listed above as well, resulting in a number of verbs without explicit subject, agents, or objects. For the purpose of this study, verbs without explicit object have been counted as transitive if context could supply one, but where listed as not having an object; the same applies to transitive verbs with sentential objects.[289]

As will become evident in the next section, a lack of explicit subject or agent is very common in Classical Armenian.

4.3.2.1.4 Statistical evaluation

With the patterns presented above in mind, the question of their distribution remains to be discussed. The numerical data concerning the marking of subject and agents is laid out in Table 4.3.

Four main observations can be made on the basis of these data. The first observation, as already mentioned above, is that the standard, expected patterns are more frequent than their non-standard equivalents by a large margin. On average, non-standard patterns only account for 9.2 *per cent* (GEN subject in ITR.ACT verbs) and 7.7 *per cent* (NOM agents in TR.ACT verbs), respectively.[290] This suggests that it is indeed permissible to speak of a standard pattern, and that these patterns must have been relatively well established in Classical Armenian already.

[289] In a few cases, otherwise transitive verbs like *asem* ‘to say something’ were deemed to be used intransitively, viz. ‘to speak’, where no explicit object could be found and no implicit object inferred.

[290] There are two outliers in this regard: Kor. for the GEN subjects (17.2%, s=4.7) and P‘B for the NOM agents (13.5%, s=3.9), the values for both of which fall just within 2s.

	SAO	Kor.	Ag.	P‘B	ŁP‘	Eł.
ITR.ACT	S=NOM	7	78	203	104	122
	S=GEN	5	11	19	17	13
	S=Ø	(58.6%) 17	(41.2%) 63	(31.5%) 102	(32.4%) 58	(34.0%) 70
	total	29	153	324	179	206
ITR.PASS	S=NOM	6	58	58	47	40
	S=GEN	0	0	4	0	0
	S=Ø	(57.1%)8	(34.1%) 31	(35.7%) 35	(42.7%) 35	(33.3%) 20
	total	14	91	98	82	60
TR.ACT	A=NOM	2	4	21	19	13
	A=GEN	15	34	65	138	69
	A=Ø	(57.5%) 23	(67.8%) 80	(44.2%) 69	(38.4%) 98	(42.3%) 60
	total	40	118	156	255	142
IMPRS	total	2	11	18	7	4
grand total		85	373	596	523	412
% of all PTCPS		23.7	33.7	34.1	19.3	38.4

Table 4.3 – *Distribution of S and A marking in perfect tense main verbs*

Connected with the above observation, it must be noted that the non-standard patterns show a particular diachronic trend, as visualised in Figure 4.1. The trends shown in this diagram tentatively suggest a diachronic decline of GEN subject marking in intransitive active verbs, but a rise in NOM agent marking in transitive active verbs.[291] This trend conforms neatly with the expectation voiced above concerning the process of de-ergativisation of the Classical Armenian periphrastic perfect in favour of nominative-accusative alignment. While the slope of the graph suggesting a rise of NOM agents is small, it must be kept in mind that language change frequently takes the shape of an S-curve, the beginning of which this trend might represent.

A third observation is the incidence of periphrastic perfects without overt subjects

[291] The graphs in Figure 4.1 are based on the simple linear regression of the percentage of non-standard patterns among the ‘true’ periphrastic perfects. Although commonly used to determine diachronic trends in linguistics, the graphs presented here can only be used as very basic guidelines for a number of reasons: there are too few distinct data points; the algorithm assumes a linear development, which may not be the case in language change; the graphs are based on the assumption of an approximately equal chronological distance between the texts surveyed, which may not reflect reality. Despite these limitations, linear regression can at least deliver an approximation of the actual trend.

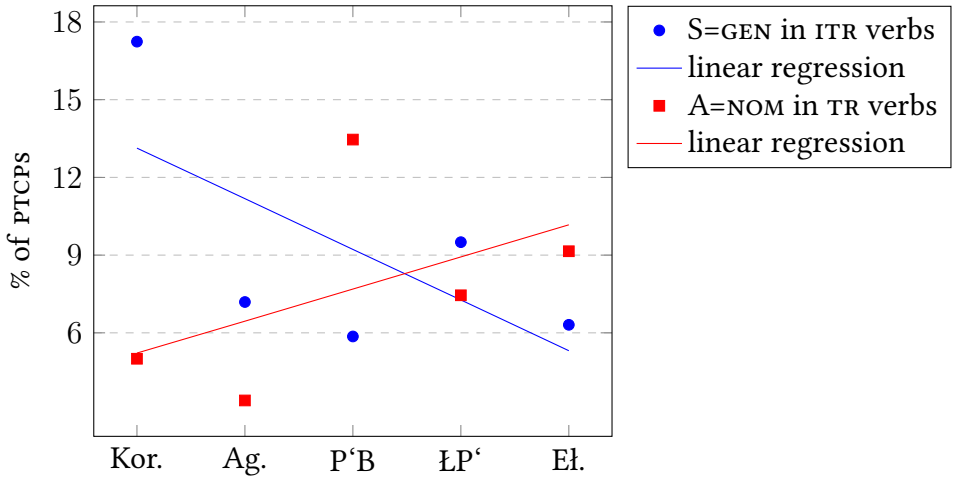

Figure 4.1 – *Incidence and trend of non-standard argument marking in the perfect*

or agents, which in all texts and groups make up for more than a third and up to two thirds of perfect forms. These numbers may be the result of the conservative data analysis principles, by which a subject governing multiple co-ordinated verbs was only counted once, namely together with the verb in whose clause it appears. While this practice may have increased the number of subjectless or agentless perfects and thus skewed that particular statistic, counting subjects or agents separately for each co-ordinated verb would have had an influence on the statistics concerning the case marking of subject and agents. As example (4.13) above has illustrated, Classical Armenian verbs in co-ordination can delete subject or agents by conjunction reduction even if they are not in the appropriate case, but solely based on their grammatical function. To avoid skews in statistics on argument marking, counting subject or agents multiple times was purposely avoided.

Finally, it will be noted that the use of the participle in the ‘true’ periphrastic perfect, where it constitutes the main verb or one of a series of main verbs and can be accompanied by the copula, makes up for only between 19 and 38 *per cent* of all uses of the perfect. As will be discussed in 4.3.3 below, the majority of instances of the perfect fall into the category of converbial forms, which may have implications for the history of the periphrastic perfect.

4.3.2.2 Copula use and agreement

Just like the variation in argument marking, the periphrastic perfect also shows variation concerning the use and agreement of the copula. They are outlined in what follows in the same way as in the previous section, beginning with the standard patterns (subject agreement in intransitive verbs; Ø agreement and a invariable 3.SG copula in transitive verbs), then moving on to non-standard patterns, and ending with a discussion of the statistical distribution of these patterns.

4.3.2.2.1 Standard patterns

The standard agreement pattern could already be observed in the examples provided in 4.3.2.1.1 above; a few more examples are cited below for convenience's sake.

In (4.23, 4.24), the forms of the copula agree with their respective subjects in the nominative; (4.23) illustrates this for intransitive active verbs, (4.24) for passive intransitive verbs.

(4.23) *ew ibrew žołovealkʻ ēin i miahamuṙ hasarak*
and when gather.PTCP.NOM.PL be.3.PL.PST in collectively public
miaban amenayn episkoposkʻ i jeṙnadrel z=surbn Barseł
unanimous all bishop.NOM.PL to ordain.INF OBJ=holy PN
'And when the bishops had all gathered together to ordain St. Barseł …' (PʻB IV.9)

(4.24) *i xorhurd kočʻēr z=paštawneays jaxakołman=n,*
to council.ACC.SG call.3.SG.PST OBJ=minister.ACC.PL left-side.GEN.SG=DET
orkʻ kapeal ēin i kṙapaštutʻean=n anlucaneli
REL.NOM.PL bind.PTCP be.3.PL.PST in idolatry.LOC.SG=DET indissoluble
hanguc'iwkʻ
bond.INS.PL
'He called to council his sinister ministers, who were bound to idolatry by indissoluble bonds, …' (Eł. p. 8)

In transitive verbs, however, the copula is mainly found in the 3.SG, as in (4.25) below.

(4.25) *i vkayanocʻi and y=aynmik z=or ēr*
in martyr-shrine.LOC.SG there in=DEM.LOC.SG OBJ=REL.ACC.SG be.3.sg.pst
šineal srboyn Epipʻanu
build.ptcp holy.GEN.SG PN.GEN.SG

'… in that shrine for the martyrs, which St. Epiphanios had built.' (PB V.28)

While the 3.SG copula in (4.25) might at first glance look like an instance of agent agreement, examples (4.13, 4.22) above have already demonstrated that this is not the case on the basis of agents in the 1/2.SG/PL.

As will be shown in the statistical evaluation in 4.3.2.2.3 below, standard patterns make up for the vast majority of those perfect tense verbs which are accompanied by a copula.

4.3.2.2.2 Non-standard patterns

Next to these standard patterns exist those which show the opposite kind of copula agreement expected, viz. a invariable 3.SG with intransitive verbs irrespective of subject number or person, and a copula in agent agreement in transitive verbs; the passive does not show any kind of variation.

Examples (4.26, 4.27) are instances of the former, intransitive verbs with invariable 3.SG copulas.

(4.26) *im* *Astucov* *kecʻeal* *ē* *ǰerm* *kʻristonēutʻeamb*
1.SG.GEN God.INS.SG live.PTCP be.3.SG.PRS warm Christianity.INS.SG
'I have lived in the sight of God in fervent Christian faith.' (PʻB V.44)

(4.27) *ew* *etʻē* *čʻ=ēr* *mer* *ačapareal* *ew* *i* *pʻaxust* *darjeal*
and if NEG=be.3.SG.PST 1.PL.GEN hasten.PTCP and in flight turn.PTCP
'And if we had not made haste and turned to flight, …' (Eł. p. 61)

In these two instances, the copula is invariably in the 3.SG, even though the subjects of *keam* 'to live' and *ačaparem* 'to make haste' are in the 1.SG and 1.PL, respectively. Although there are few instances of this pattern, it is of note that they all show not only the invariable 3.SG copula, but also genitive marking of the subject.[292] This may suggest, in turn, that while genitives can clearly fulfil agent or subject function, they

[292] For the purpose of this study, instances like *dora y=antʻiw čakat mteal ēr* 'He has entered countless battles' (PʻB V.36) , where the subject is in the 3.SG, the copula has been counted conservatively as being in subject agreement.

cannot license verbal agreement; if this is the case, non-standard agreement patterns in transitive verbs might be expected to exhibit nominative agents only.

For the most part, this expectation is fulfilled. Although again not frequent, the non-standard agreement pattern in transitive verbs mainly shows non-overt or nominative agents with agreeing copulas, as illustrated by (4.28, 4.29).

(4.28) *y=or* *jgeal* *ēin* *z=na*
into=REL.ACC.SG throw.PTCP be.3.PL.PST OBJ=3.SG.ACC
'…, into which they threw him.' (P'B IV.3)

(4.29) *minč'* *duk'* *z=jer* *anjins=d* *angiwts* *arareal*
then 2.PL.NOM OBJ=2.PL.GEN SELF.ACC.PL unfindable.ACC.PL make.PTCP
ēik' *i* *korstean=n*
be.2.PL.PST in perdition.LOC.SG=DET
'And then you made yourselves irrecoverable in this perdition.' (P'B III.14)

In (4.28), there is no explicit agent agreeing with *ēin*, but context supplies allows provides enough evidence to assume a 3.PL. In contrast, the agent in (4.29) is overt, and *duk'* is in the nominative and agrees with the 2.PL copula.

There is, however, one exception, where an overt genitive agent occurs with a copula in agent agreement, as (4.30) illustrates.

(4.30) *z=or* *jer* *i* *vat* *tohmē* *ew* *y=anpitan*
OBJ=REL.ACC.SG 2.PL.GEN from bad family.ABL.SG and from=despicable
i *mardkanē* *ašxarhi=s* *Hayoc'* *išxan*
from mankind.ABL.SG country.GEN.SG=DET Armenian.GEN.PL ruler
kargeal *ēk'*
arrange.PTCP be.2.PL.PRS
'[the man] whom you have made ruler of Armenia, from a bad family and despicable people, …' (ŁP (3)§75)

Here, the copula *ēk'* agrees with the agent *jer*, even though the latter is in the genitive. Barring this exception, however, it does indeed seem to be the case that agent-verb agreement is restricted to instances where the agent is either not overt or expressed in the nominative. If this is indeed the case, it may explain the occurrence of the invariable 3.SG copula in standard transitive perfects: since agent agreement is predicated on the nominative case, and no such nominative is available, the copula defaults to the 3.SG. To what extent this explanation harmonises with other observations will be discussed in 4.3.2.3 below.

	Agreement	Kor.	Ag.	P‘B	ŁP‘	Eł.
	S	3	87	239	120	165
ITR.ACT	invariable 3.SG	0	1	2	2	5
	total	3	88	241	122	170
ITR.PASS	S	4	65	81	54	50
	A	0	5	5	13	4
TR.ACT	invariable 3.SG	1	29	83	124	92
	total	1	34	88	137	96
IMPRS	invariable 3.SG	2	7	16	4	4
Total (verbs with copula)		10	194	426	317	320
% of ITR.ACT verbs with copula		8.8	57.5	74.4	68.2	82.5
% of TR.ACT verbs with copula		2.1	28.9	56.4	53.7	67.6
% of all main verbs		11.8	52.0	71.5	60.6	77.7

Table 4.4 – *Distribution of copula agreement in perfect tense main verbs*

4.3.2.2.3 Statistical evaluation

Now that these patterns have been presented, a statistical evaluation is in order. Table 4.4 presents the numerical data.

Apart from the qualitative observations made above, the quantitative data brings to light two further noteworthy facts.

Firstly, the incidence of non-standard patterns is very limited, and makes up for only a small percentage of the occurrences of the copula in any particular category. Furthermore, there is no clearly discernible trend that indicates the rise or fall in incidence of these patterns.[293] While variation in subject and agent marking exists, the texts of this time period do not foreshadow the later rise of agent agreement.

The second observation is that the use of the copula in periphrastic perfects in general, and in transitive verbs in particular, shows a significant increase in the course of the 5th century, from being a minority pattern in Kor. to more than two thirds of

[293] It is unclear whether the absence of these non-standard patterns in Kor. is owed to the fact that it is the earliest text, or the relative shortness of the text.

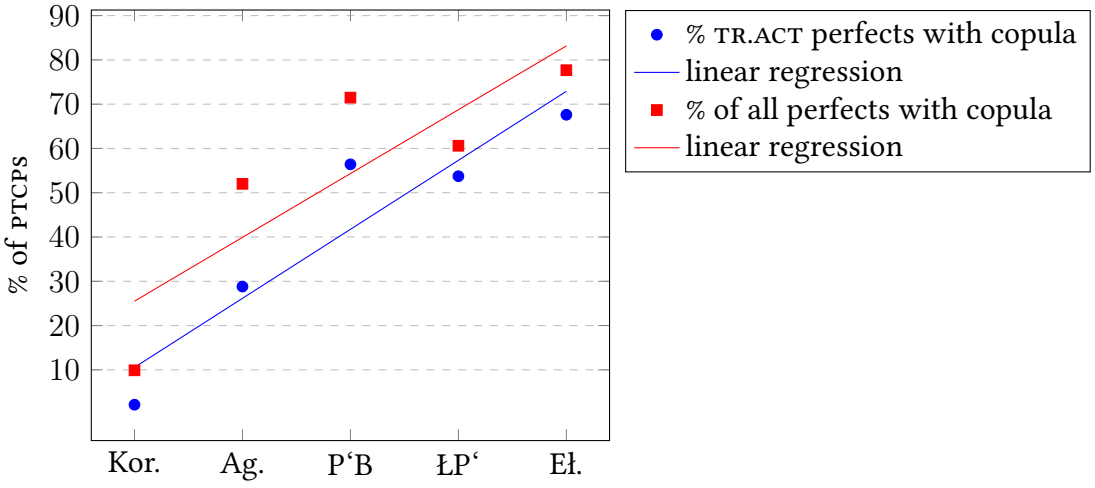

Figure 4.2 – *Incidence and trend of the copula in the perfect*

all occurrences in Eł. Figure 4.2 visualises this trend.

Based on this trend, it may be tentatively suggested that the use of the copula in the perfect in general, but certainly in the transitive perfect, was still a developing pattern at the beginning of the 5th century, which however gained momentum quite rapidly. Equally, this suggests that the use of the invariable 3.SG copula in transitive perfects is unlikely to be particularly old.

In turn, this aligns well with the hypothesis set out in 3.4 above, namely that the development of the 3.SG copula is an independent Armenian phenomenon and unrelated to the suggested West Middle Iranian model; given that the earlier texts still exhibit a majority of perfects used without a copula, as would be the case most frequently in the West Middle Iranian languages,[294] the data presented above lend further credence to this hypothesis.[295]

[294] It must be kept in mind that copula agreement in the Parthian and Middle Persian transitive past is based on the logical object, which in narrative or historical texts is most commonly a third person entity; see 3.3.2.2.3 above.

[295] No cases of copula agreement with the object have been observed. This need not speak against an Iranian origin of the Armenian perfect, however, since Armenian seems to be conservative when it comes to verbal agreement, which can only be licensed by a nominative as suggested in 4.3.2.2.2 above.

4.3.2.3 Summary

It is evident from the examples cited that, with the exception of non-standard minority patterns, the Armenian periphrastic perfect as used in 5th-century historiography exhibits tripartite alignment, with nominative subjects, genitive agents, and accusative objects. In intransitive verbs, copula agreement occurs with the subject; for transitive verbs, a invariable 3.SG copula may be used.

In the earliest texts, the copula is not used frequently in the perfect, but gains traction very quickly and by the end of the century occurs in most perfects.

Non-standard argument marking patterns, whereby transitive agents are marked nominative and intransitive subjects genitive, occur in a small number of cases. There is a clear diachronic trend showing an increase in nominative agents and a decrease in genitive subjects. Non-standard copula agreement occurs, too, but shows no comparable trend.

Based on the data presented thus far, a number of conclusions can be drawn.

The increasing incidence of nominative agents in transitive perfects corroborates the suggestion that, already in the 5th century, the Armenian periphrastic perfect is undergoing an alignment shift; this change in argument marking is indicative of the switch from tripartite to nominative-accusative alignment, as documented by the 8th century. As suggested in chapter 3, this is likely part of a larger process which originally involved the development of tripartite alignment on the basis of the West Middle Iranian ergative-absolutive model.

Similarly, the rise in the usage of the copula over the course of the 5th century outlined above, especially in the transitive perfect, suggests that it may be an Armenian-internal development. The fact that a 3.SG copula does not occur in the Parthian or Middle Persian past, where a sole participle is used in such cases, corresponds well to the state of affairs documented in the earliest texts. The development of a 3.SG copula to mark the transitive is likely the result of two concomitant facts: the use of copulas in the intransitive perfect, and the (near) impossibility of verbal agreement with non-nominative case constituents.

The data and statistics do not provide answers, or hints, concerning all questions

in this matter. It is unclear, whether the use of the copula in intransitive perfects is also a late, secondary development based on Iranian influence, or whether it is an original Armenian syntagma. The data from Kor. and Ag. in this regard point at a late development; equally, however, it is not impossible that an existing copula may have been omitted in analogy to its absence in the transitive perfect. In either case, no insight beyond speculation can be gleaned from the data as it stands.

Given the above, it is now possible to outline the potential development of the Armenian periphrastic perfect, first suggested in 3.2.3.1 in more detailed terms. Prior to the attestation of Armenian, the ergative construction of the Parthian past tense, based on otherwise adjectival participles, was copied into Armenian. The pattern was adapted to take an accusative object, likely as a result of the formal identity of NOM.SG and ACC.SG in the nominal paradigm; the choice of the genitive as marker of the agent is based on functional parallels between the Armenian genitive and the Parthian oblique case and enclitic pronouns, which mark possession. The pattern was borrowed without the copula, since with third person objects no copula occurs in Parthian; the development of the invariable 3.SG copula is a process taking place just after the beginning of Armenian literary attestation.

4.3.3 Converbial participles

The use category under which, on average, more than half of all participles fall is that of the converb, or participle in apposition, or *participium coniunctum*. These participles never have a copula, but occur in the same clause as other main verbs, often but not always share a subject, agent, or object with them, and usually relate a backgrounded action prior to or concomitant with that of the main verb.

After a brief definition of the term 'converb' and a justification of its use, this section looks at the use of these converbial participles, how they differ from those classed as 'true' perfects above, and what problems arise in their analysis. The section ends with an attempt at a statistical analysis of the converbial participle.

4.3.3.1 Converbs

The term 'converb' refers to a 'nonfinite verb form whose main function is to mark adverbial subordination' (Haspelmath 1995:3), whereby converbs differ from participles, which are not adverbial but adnominal modifiers. While the Armenian participle can be used as an adnominal modifier, the examples provided in 4.3.3.2 below illustrate that it also occurs as a non-co-ordinated adverbial form.

According to Haspelmath, converbs can but need not share their subject with the main verb of the sentence, and if they have a different subject, the latter may be expressed in a different case than canonical subjects. The use of the converb in Armenian falls into the category of free-subject converbs (cf. Nedjalkov 1995), meaning that both subject sharing and explicit subjects differing from that of the main verb are permissible.

To give but one example, in the following Lithuanian sentence the subject of the converb *tekant* 'rising' is in the dative, as opposed to the normally expected nominative.

(4.31) *Saul-ei* *tek-ant,* *pasiek-ė-m* *kryžkel-e*
sun-DAT rise-CVB reach-PST-1.PL crossroads-ACC
'When the sun rose (lit. the sun rising), we reached the crossroads.'
(Lithuanian; Haspelmath 1995:2)

Nedjalkov (1995) and König (1995) both suggest a distinction of converbs according to semantic criteria, namely whether they are specialised, carrying only particular meaning; contextual, being able to express a variety of meanings according to context; or narrative, expressing a co-ordinative connection. The use of the English *-ing*, for instance, suggests itself as a contextual converb, since sentences like 'Walking down the street, John had a toothache' are ambiguous as to whether the toothache was caused by, contemporaneous with, or in spite of the act of walking down the street. As the translations from Armenian throughout this chapter suggest, a contextual reading is also the most likely choice for Armenian, since the converb can express temporal, causal, concessive, and other relations.

Finally, Haspelmath (1995:43) notes that converbs often form part of periphrastic constructions, especially resultative ones.[296]

This minimalist introduction of the category of converb, constrained largely by lack of space, is made here not to advance a typological claim concerning the nature of converbs or the *-eal* participle, but to no small extent in order to distinguish in name the two structurally different uses of the participle, one as part of the perfect and as a main verb, the other as an adverbial modifier.

4.3.3.2 Uses of and difficulties with converbial participles

In general, the same argument marking patterns as illustrated above for the main verbs may be assumed for converbs as well; that includes the frequent absence of an overt subject or agent.

Converbs most frequently occur in close combination with a main verb, irrespective of the latter's tense. In (4.32) below, the main verb *asēr* and the two converbial participles *hawaneal* and *barbaṙeal* share a subject *na*.

(4.32) *isk* *na* *hawaneal* *vaɫvaɫaki* *barbaṙeal* *asēr*
PTC 3.SG.NOM believe.CVB suddenly speak.CVB say.3.SG.PST
'And being convinced, he suddenly spoke and said …' (Ag. §794)

It is not uncommon for these sequences of converbs to be longer, as illustrated by (4.33), where three converbs (*arareal, handerjeal, kazmeal*) precede the main verb.

(4.33) *ew* *amenayn* *əst* *asacʻeloy* *patuirani=n*
and all according-to say.PTCP.GEN.SG command.GEN.SG=DET
arareal *handerjeal* *kazmeal* *patrastecʻin*
make.CVB prepare.CVB decorate.CVB prepare.3.PL.AOR
'And they made, prepared, decorated, and arranged everything according to the command given.' (Ag. §760)

Both of these examples also illustrate why an adjectival, predicative interpretation of these converbial participles is inappropriate. For one, they do not exclusively occur with copular verbs, and rather than describing the subject or agent, more closely

[296] On a resultative interpretation of the Armenian periphrastic perfect, cf. Ouzounian (2001–2); Semënova (2016).

describe the main verbal action, or its prerequisite background. In (4.32), the subject is not described as a 'speaker', for instances, but the action of *asēr* is further described as requiring the subject to be convinced and to speak. Instead of converbs, these participles could accordingly be called adverbial; this is further supported by the fact that they frequently share not only the subject, but also the object of the main verb, as in (4.33).

A particular kind of complication arises in this very context, through subject or agent sharing. Where a converb and a main verb share a subject or agent, which of the two determines which case the subject or agent should be in? As examples (4.34, 4.35) illustrate, there does not appear to be an established rule.

(4.34) *bazum* *mardik* *haneal* *z=jukn* *ōgtēin*
many mankind.NOM.SG pull-out.CVB OBJ=fish.ACC.SG profit.3.PL.PST
i *nmanē*
from 3.SG.ABL
'Many men, having caught the fish, profited from it.' (P'B V.27)

(4.35) *ułeworac'=n* *tueal* *patasxani* *asac'in*
traveller.GEN.PL=DET give.CVB anser.ACC.SG say.3.PL.AOR
'The travellers gave an answer and said: …' (P'B V.43)

In both cases, the converbs are transitive. In (4.34), the nominative could be licensed by the main verb, but represents a non-standard pattern for the converb; the inverse is true for (4.35), where the genitive agent is appropriate for the converb, but not the main verb. Since in both cases the agent is first in the sentence, followed by the verb and object, there are no environmental factors, such as proximity to the converb or main verb, that influence the choice of agent case.

This is not intrinsically problematic, since Armenian does not have problems sharing subjects between verbs, even if they would require different overt marking; see 4.3.2.1.4 above. It does, however, present a problem for the statistics. On what basis ought the subject or agent be counted, if both main verb and converb could account for its case? Proximity to the verb does not play a role, as the two examples above already suggested.

Another example will further illustrate this problem.

(4.36) *bazum* *carayk‘* *z=iwreanc‘* *teranc‘*
many servant.NOM.PL OBJ=3.POSS.GEN.PL lord.GEN.PL
z=ganjs *əmbrṙneal* *p‘axuc‘ealk‘* *andr* *ankanēin*
OBJ=treasure.ACC.PL seize.CVB flee.CVB.PL there fall.3.PL.PST
‘Many servants seized their lords treasures, and upon fleeing arrived there.’ (P‘B IV.12)

In (4.36), the same problem arises; the agent is in the nominative, *carayk‘*, and could be licensed by either the main verb *ankanēin* or indeed the second converb, *paxucealk‘*. For *əmbrṙneal*, however, it is an instance of non-standard marking.

The result of subject and agent sharing is that in the statistical account of the corpus, converbial participles may show non-standard patterns more frequently than their main verb counterparts owing to subject or agent licensing based on the main verb; at the same time, it is not appropriate not to account for these shared subjects, since they clearly can be licensed by the converbs themselves, too, as instances like (4.35) suggests.

Furthermore, converbs on occasion also exhibit their own subject or agents, which are distinct from those of the main verbs. They can be implicit (4.37) or explicit (4.38).

(4.37) *ew* *eṫeal* *yandiman* *t‘agawori=n* *teṫekanayr* *i*
and become.CVB opposite king.GEN.SG=DET inform.3.sg.pst.pass by
nmanē *t‘agawor=n* *Peroz*
3.SG.ABL king.NOM.SG=DET PN.NOM.SG
‘And when [he] entered the presence of the king, the king was informed by him.’ (ŁP‘ §65)

(4.38) *ew* *ankeal* *zawrawork‘=n* *i* *sur* *t‘šnameac‘=n*
and fall.CVB soldier.NOM.PL=DET into sword enemy.GEN.PL=DET
meṙaw *k‘aǰ=n* *Mamikonean* *Vasak*
die.3.SG.AOR valiant=DET PN PN
‘And as the soldiers engaged the enemies in battle (lit. fell on the swords of the enemies), the valiant Vasak Mamikonean died.’ (ŁP‘ §69)

Both instances show that these converbs can have subjects and agents of their own. Even though, they are still different from the ‘true’ perfects in not being co-ordinated or subordinated to the main verb of the sentence, and qualify the circumstances of the action of the main verb more closely. The existence of this type of converb further requires that argument marking be accounted for in this category.

	SAO	Kor.	Ag.	P‘B	ŁP‘	Eł.
ITR.ACT	S=NOM	10	123	245	334	108
	S=GEN	11	12	10	126	11
	S=Ø	49 (70.0%)	121 (47.3%)	169 (39.9%)	286 (38.3%)	87 (42.2%)
	total	70	256	424	746	206
ITR.PASS	S=NOM	7	21	50	123	33
	S=GEN	0	0	0	14	1
	S=Ø	13 (65.0%)	16 (43.2%)	16 (24.2%)	47 (25.6%)	24 (41.4%)
	total	20	37	66	184	58
TR.ACT	A=NOM	5	51	111	169	29
	A=GEN	39	28	30	375	17
	A=Ø	69 (61.1%)	152 (65.8%)	192 (57.7%)	362 (40.0%)	120 (72.3%)
	total	113	231	333	906	166
IMPRS	total	0	2	3	5	1
grand total		203	526	826	1841	431
% of all PTCPS		56.7	47.6	47.3	67.9	40.1

Table 4.5 – *Distribution of S and A marking in converbs*

4.3.3.3 Statistical evaluation

Despite the caveats outlined above, the distribution and overall trends concerning the occurrence of explicit subjects and agents, and their morphological marking in converbial participles are comparable to those of the ‘true’ perfect discussed above. Table 4.5 presents the pertinent data.

The data show that like the ‘true’ perfect, a large percentage of converbs do not have an overt subject or agent. At between 40 and 68 *per cent*, converbs make up for a considerable portion of all participles, and similarly exhibit standard and non-standard alignment, although not in the same proportions as the ‘true’ perfect. As argued above, however, this may not necessarily be a reflection of grammatical change, but could be the result of subject sharing.

Nonetheless, the trends borne out by the data are the same as those of the perfect: genitive subjects are declining in use over time, while nominative agents are on the rise. As before, this is visualised through simple linear regression in Figure 4.3.[297]

[297] It is worthy of note, however, that at least in the case of the nominative agents, the standard de-

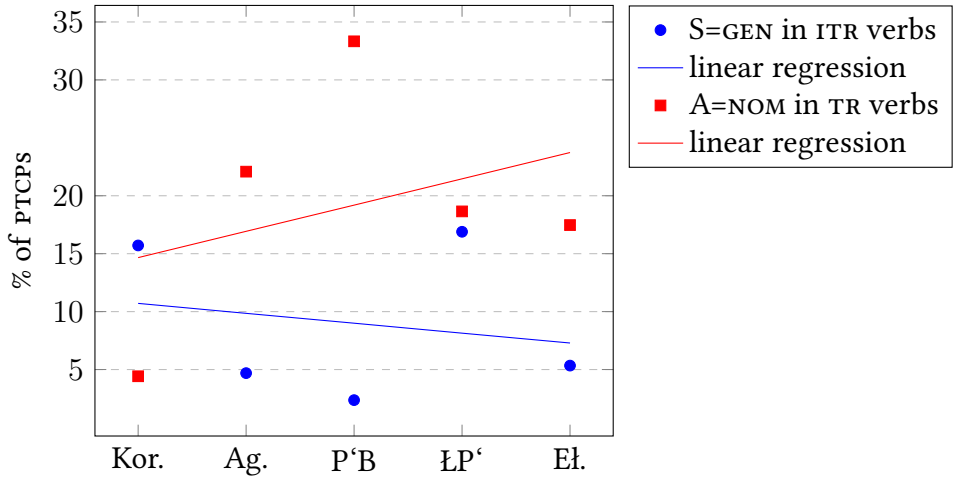

Figure 4.3 – *Incidence and trend of non-standard argument marking in converbs*

Broadly speaking, the converb data support the same conclusions drawn in 4.3.2.1.4, namely that the rise of nominative agents in transitive converbs supports the notion of an alignment change in progress.

4.3.3.4 Summary

The data of the converbs adds to the general picture already gleaned, and supports the conclusions drawn thus far. It is difficult to account for the dominant use of the participle as a converb, however. It seems self-evident that participles should be used as adjectives, and that this is one of their primary uses, whilst their development in periphrastic verbal forms is secondary.

Given that in their adjectival use, participles are restricted to intransitive use in active and passive for the most part, their transitive active use is likely a secondary development. As will be discussed on a more theoretical level in 6.1.2.2.3 below, one plausible explanation of this pattern is the following: both Parthian and Armenian use their participles as adjectives; on the basis of this coincidence, Armenian imitates the verbal use of the participle in the Parthian past tense; the use of the copula is not copied, both on account of its lower frequency (it does not occur with third person

viation in that particular dataset is more than double that of the corresponding set in the perfects, suggesting that the data of the converbs in this regard may be less reliable, or that authors differ more strongly in their use.

objects, which are common) and the unusual agreement pattern itself. This, in turn, is the basis of both the converb and the periphrastic perfect; based on its distribution, the latter is likely the younger form. It is unclear, and likely indeterminable, though, how precisely the converbial use arose.[298]

4.3.4 Other considerations

In the previous sections, the participle has been discussed with reference to the three use categories which arise—adjective, periphrastic perfect, and converb—and the correlation of valency, argument marking, and copula agreement. In what follows below, two further potential correlations will be discussed with reference to the use of the periphrastic perfect,[299] namely that of polarity and constituent order.

4.3.4.1 Polarity

In his discussion of the participle and its morphosyntactic alignment, Vogt observes that '[p]our le participle prédicatif, nous avons pu observer le rôle joué par la négation, qui entraine le génitif du sujet même d'un participe intransitif. [...] cette tendance du génitif à dominer dans une phrase négative parait très nette' (1937:60).

From this, the question arises whether there is indeed a correlation between polarity and argument marking. Givón (1979*a*:121-30) suggests that frequently, if not in all cases, negative expressions are syntactically more conservative than their positive counterparts, since intrinsically they rely on positive expressions to change first.

Accordingly, in the case of the periphrastic perfect, it might be expected that the older, more frequent patterns (nom subjects, gen agents) should be more common than their non-standard counterparts in negative sentences. This does not fully align with the sentiment of Vogt, but is more self-consistent.[300]

[298] Haspelmath (1995:17–20) suggests that predicative participles are often the historical origin of converbs; given the passive-intransitive nature of the participle, however, Iranian influence must have played a role in this development, and the periphrastic perfect could have arisen from the participle's converbial use.

[299] This discussion will be confined to the periphrastic perfect, that is the use of the participle as a main verb, owing to the issues in accounting for subject and agent sharing in converbs laid out in 4.3.3 above.

[300] Vogt (1937) observes, but does not provide any reason why the negative should be more inclined towards the genitive.

		Kor.	Ag.	P‘B	ŁP‘	Eł.
	NOM +	8	75	197	99	121
	NOM -	0	3	6	5	1
	GEN +	7	9	19	15	11
ITR.ACT	GEN -	0	2	0	2	2
	S=Ø	16	50	92	58	71
	total +	34	148	314	170	200
	total -	0	5	10	9	6
	NOM +	1	4	21	19	13
	NOM -	1	0	0	0	0
	GEN +	17	32	61	126	62
TR.ACT	GEN -	0	2	4	12	7
	A=Ø	26	61	66	98	60
	total +	46	111	148	236	133
	total -	1	7	8	19	9

Table 4.6 – *Distribution of argument marking and polarity in the perfect tense main verbs*

Table 4.6 summarises the occurrences of different types of argument marking correlated to author and polarity.

As is evident from the data, negative expressions in perfects with overt subjects and agent are not frequent. Equally, it emerges that negative expressions do occur more frequently in the standard patterns, that is with NOM subjects and GEN agents; yet, since these patterns are more common than their non-standard counterparts on the whole, this is not indicative of a causal relationship between argument marking and polarity.

Owing to the low values and zero values, tests of the statistical significance of this distribution are unlikely to be reliable, but suggest that there is little indication of a statistically significant difference between the negatives with GEN or NOM subjects or agents.[301]

[301] Pearson's χ^2-test requires a greater sample size, but Fisher's Exact Test is an option (STEFANOWITSCH AND GRIES 2003). Based on a null hypothesis that there is a significant difference in the use of NOM and GEN agents in negated perfects, the following p-values arise: for intransitive verbs p=0.205, for transitive verbs p=0.038. The latter value is below the significance threshold of p=0.05, and could corroborate the null hypothesis. Given the low incidence of non-standard patterns, and the zero values in this category, however, it is not clear how reliable this test is in this matter.

On this basis, it seems safe to assume that polarity and the choice of case in argument marking are not immediately correlated.[302]

4.3.4.2 Constituent order

A very brief discussion of constituent order in the perfect is worthwhile for one particular reason: if Armenian did copy the Parthian ergative construction, it may have had an impact on constituent order. In nominative-accusative languages, which mark S and A identically, S and A usually occupy the same place in the standard sentence, e.g. SV, AVO; in ergative-absolutive languages, which mark S and O identically, however, it is S and O which share the same space, thus, e.g., SV, but OVA.

Accordingly, the constituent order of the Armenian perfect, without having copied the word order of the West Middle Iranian languages, could show a tendency to give S and O the same spot in a sentence. A comparison of the respective word order in perfect and non-perfect tenses would be ideal, but is beyond the scope of this study. Nonetheless, even considering the constituent order patterns present in the perfect alone may provide at least some insight.

Table 4.7 presents the distribution of various constituent order constellations in the perfect tense across the corpus. The position of V is here determined by the participle, not the copula; the table only takes into account the 'true' periphrastic perfect for the reasons laid out in 4.3.3 above: the constituent order in converbs could show interference from other verbs with which it shares a subject or agent.

As the data presented suggests, however, there is no unequivocal indication that S and O are aligned in any particular form in the periphrastic perfect. The data for V, OV, and VO order attest to the fact that Armenian is a pro-drop language and does not require explicit subjects or agents. Overall, SV order for the intransitive verbs and OV(A) for the transitive verbs seem to be most common, which might speak in favour of the ergative hypothesis; at the same time, however, it must be observed that

[302] A similar distribution has been drawn up for the potential correlation between copula agreement and polarity. Since non-standard copula agreement did not show any particular trend in general, and since the p-values given by Fisher's Exact Test in this case are far above the significance threshold, there is no indication of a correlation between these features, either, and thus no need to produce the table or any further discussion here.

Consituent Order	Kor.	Ag.	P‘B	ŁP‘	Eł.	total
V	30	107	139	114	94	484
SV	22	110	213	104	147	596
VS	2	36	76	65	29	208
AV	2	2	0	14	6	24
VA	0	0	4	11	12	27
OV	17	53	52	45	41	208
VO	11	27	30	38	20	126
AVO	3	13	21	22	16	75
AOV	6	9	15	22	16	68
OVA	4	3	29	36	15	87
OAV	1	2	9	24	8	44
VAO	2	7	5	16	7	37
VOA	1	4	3	12	1	21

Table 4.7 – *Distribution of constituent order types in perfect tense main verbs*

AVO and AOV patterns are also similarly well represented, as is VO.

Overall, Armenian constituent order appears to be rather free based on the data given here, and is likely to be used for stylistic effect as much as for pragmatic purposes.[303] While the dominant order patterns align S and O, other patterns are only minimally less frequent. Without considering constituent order in other tenses, no further speculation is sensible. For the moment, then, the question whether the potentially ergative pre-history of the periphrastic perfect finds expression in the constituent order of the perfect must be left open, but based on these data would have to be answered in the negative.

4.3.4.3 Summary

Neither the enquiry into a potential relation between polarity and argument marking, nor the distribution of constituent order patterns in the perfect have yielded any insights that could shed more light on the history or development of the periphrastic

[303] Since the distribution of the respective constituent order types is relatively stable diachronically, with only minor fluctuations between authors, no attempt has been made to determine potential trends, or enquire as to the significance of a particular distribution.

perfect.

Before proceeding to the conclusions, it is necessary to consider all that may have been overlooked in the above analysis, and what other errors might have occurred which could have influenced the data.

4.4 Error analysis

There are a number of categories of errors that may have influenced both the data and their analysis as presented above.

The most basic is human error in analysing and processing the data in the first place, e.g. accidentally omitting to put in certain values in a spreadsheet, or putting in the wrong value. It is hoped that this kind of error has been largely avoided through careful checking of the data, and as part of the quantitative data analysis, during which value omissions have been corrected.[304]

A different kind of human error lies with the scribes on whose copies modern editions are based: scribal errors and emendations may have skewed (parts of) the texts used for this corpus in favour of more current constructions.

Other kinds of potential errors are largely based on omission from consideration. No particular studies of authorial style has been conducted, nor have different kinds of speech acts been taken into account.[305] The semantics of the perfect and its potential syntactic implications have not been given any consideration, either.[306]

The use of different kinds of copula, and different tenses has not been taken into account, as it likely is connected more closely to the semantics of the perfect than its syntax.[307]

[304] Where a value had been omitted, certain sum-functions would show missing values, which were then found and corrected.

[305] It is conceivable that speeches as reported in P'B, ŁP, and Eł. in particular may have sought to emulate a different kind of style, esp. for Iranian speakers. If the Armenian perfect is of Iranian origin, and writers of 5th-century Armenian were aware of this, this may have influenced their use of this pattern. At the same time, it must be noted that little in the data speaks in favour of this, since Kor. and Ag., which do not heavily feature Iranian actants, do not show developments or distributions that are wildly dissimilar from those in the other texts.

[306] Both Ouzounian (2001–2) and Semënova (2016) discuss the semantics of the perfect and come to the conclusion that one of the primary meanings is a resultative one; also cf. Minassian (1975–6: 68).

[307] It may be of note that Armenian shows a similar set of copular verbs as are used in West Middle

Finally, no systematic attempt has been made to account for the variation in argument marking or copula agreement in terms of individual verbs or semantic classes of verbs.

Any of theses errors or omissions could have an unknown impact on the patterns discussed; for the most part, it was deemed unlikely that this should be the case, e.g. in the case of semantics. Since this corpus study was undertaken with a view to finding out whether an Iranian origin of the perfect construction was plausible, and whether its diachronic trends within the 5th century corroborated the supposed de-ergativisation process, the considerations mentioned above did not seem central to the question.

4.5 Conclusions

The analysis of a corpus comprised of five Armenian historiographical texts from the 5th century CE as to their use of the periphrastic perfect, which has been reported on in this chapter, has helped to lend further credence to some of the hypotheses made at the end of chapter 3, and thus to the overall notion that the construction of the Armenian periphrastic perfect with a genitive agent and invariable 3.SG copula may be the result of Iranian influence, specifically the modelling of the Armenian perfect on the Parthian past tense.

The analysis of the adjectival use of the participle has shown clearly, that barring a few examples found in Eł., both attributive and predicative uses of the participle are restricted to the passive and active intransitive; this corroborates a number analyses of the historical morphology of the perfect as laid out in in chapter 2.

Similarly, the discussion of the variation in subject and agent marking already discussed in 3.2.1 has been expanded by means of statistics. As the data have shown, the non-standard patterns (NOM agents and GEN subjects) are clearly minority patterns, and likely a sign of an alignment shift in progress. This is further confirmed by the di-

Iranian. Next to *em* 'to be', *linim* 'to become' and *ełanim* 'id.' are used; although not counted as a copula for statistical purposes (see fn. 280 above), *kam* 'to remain' could be interpreted as a copula, too. These find exact equivalents in Pth. *'h* /ah-/ 'to be', *bw-* /baw-/ 'to become', and *'št* /išt-/ 'to stand, remain' (cf. DURKIN-MEISTERERNST 2004:384; JÜGEL 2015:123–59). Whether this is the result of borrowing or just a typologically common pattern cannot be determined clearly.

achronic trends suggested by the data, which sees an increase in NOM agents and a fall in GEN subjects; such a development might be expected of a language, or sub-system of a language, in the process of changing to nominative-accusative alignment.

The analysis of copula agreement patterns has equally shown that non-standard patterns (Ø agreement in intransitive verbs, agent agreement in transitive verbs) are in the minority; here, no diachronic trend could be identified, however. Nonetheless, it has emerged that the use of the copula in the periphrastic perfect shows a diachronic upward trend, from occurring in fewer than 10 *per cent* of the 'true' perfects in Kor., to more than 75 *per cent* in Eł. As suggested at the end of chapter 3, this is a sign that the use of the copula in the perfect, specifically the invariable 3.SG, is an Armenian-internal development; in view of the lack of agreement between copula and genitive subject in intransitive non-standard patterns, it is surmised that the choice of the 3.SG as the copula indicates that verb agreement can only be licensed by nominative case subjects and agents.

The category of converbs, or appositive participles, or *participia coniuncta*, equally corroborates the trends already discussed as part of the perfect. Owing to the nature of the converb, however, specifically its frequent subject sharing with other verbs, the quantitative data gleaned from this statistically largest group of participles is only of limited reliability, and was thus not used for other calculations. The high frequency of converbs, together with the rise of the copula during the 5th century, suggest, however, that this may have been the original locus of borrowing of the alignment pattern from the Parthian past tense, and that the 'true' perfect developed on this basis.

In two further brief reviews of the potential correlations between polarity and agent or subject marking, and the potential implications of constituent order for morphosyntactic alignment, no statistically significant observations could be made. While it was noted that the most common constituent orders (SV and OVA) did reflect an order typical of ergative alignment, other orders were also similarly frequent and not indicative of such an alignment.

The quantitative and qualitative analysis of the corpus data has served to lend further credence to the hypotheses made at the end of chapter 3, and thus the develop-

ment of the periphrastic perfect in Armenian on the basis of a Parthian model. The following chapter will discuss whether such syntactic borrowing processes can be observed in other Armenian patterns as well.

5 Other cases of Irano-Armenian pattern replication

Chapters 3 and 4 have made the case for the replication of the Classical Armenian periphrastic perfect on the model of the West Middle Iranian, and specifically Parthian, past tense, which is historically derived from a similar periphrastic construction.

To strengthen the case of Parthian influence on Armenian syntax, and to illustrate further the difficulty in this branch of language contact research, the following chapter is going to discuss three further instances of potential pattern replication: the first such pattern is that of Armenian nominal relative clauses, which have been compared to the Iranian *ezāfe*-construction already by Meillet (1899-1900); secondly, there is the functional distribution of Arm. *ink'n* as intensifier, resumptive pronoun, and switch-function marker which may be derived from West Middle Iranian; finally, there is the usage of Arm. *(e)t'ē*, *inter alia*, as both complementiser and introductory particle for direct speech (quotative) and indirect speech, including before *wh*-question words, which may have Iranian parallels.

Owing to space constraints and the nature of these patterns, their analysis will proceed in less great depth than the previous pattern; rather than offering a quantitative study, the discussion will be qualitative only and based on illustrative examples, but will provide as much detail as necessary to reflect the pattern replicated and potential issues in assigning the syntagmata in question an Iranian origin.

5.1 *Ezāfe*

While scholarship has provided insights into numerous morphological and even phraseological borrowings from Iranian into Armenian (see *chapter1* above), no such findings relating to Armenian syntax have been made bar one: Armenian nominal relative

clauses, in which a relative pronoun links a determinand (or antecedent) with a determinans describing it further. This pattern finds a potential model in the West Middle Iranian *ezāfe*-construction, which operates along the same lines.

Yet, opinions are divided as to whether nominal relative clauses in Armenian do really constitute an instance of pattern replication, or whether this syntagma is inherited from Proto-Indo-European, or developed independently. It is therefore necessary to revisit this question briefly and outline both the Armenian and the Iranian construction, as well as parallel ones in other Indo-European languages in order to determine whether replication or inheritance explain the Armenian pattern better.

After revisiting the basic structure of standard Armenian relative clauses, this section discusses the potential *ezāfe* function of the relative pronoun. This is followed by a review of West Middle Iranian relative clauses and its usage of *ezāfe*. Finally, Indo-European parallels are outlined.

5.1.1 Standard Armenian relative clauses

A standard Armenian relative clause consists of an antecedent (or pivot), a form of the relative pronoun Arm. *or*, and the clause further describing the antecedent; the relative pronoun is usually found in the case syntactically required by its function in the relative clause.[308] Since Armenian has lost morphological gender differentiation, relative pronouns agree with their antecedents only in number.[309]

A typical relative clause might thus look like the examples below; in (5.1), the relative pronoun occurs in the dative as part of the naming construction, while in (5.2), the nominative pronoun functions as subject of its clause.

(5.1) *z=ays* *greac‘* *ew* *ec‘oyc‘* *marzpani=n,*
OBJ=DEM.ACC.SC write.3.SG.AOR and show.3.SG.AOR marzpan.DAT.SG=DET
orum *anun* *ēr* *Sebuxt.*
REL.DAT.SG name.NOM.SG be.3.SG.PST PN
‘This he wrote and showed to the *marzpan*, whose name was Sebuxt.’ (Eł. p. 166)

[308] For instances of relative attraction in Armenian, (cf. Meyer fthc.*c*).

[309] The exception to this rule is the usage of Arm. *or*, the NOM./ACC.SG, for both singular and plural; Minassian (1989) links this to scribal errors.

(5.2) *ew* *z=ays* *amenayn* *lueal* *sop‘estēs=n,*
and OBJ=DEM.ACC.SG all hear.PTCP sophist.NOM.SG=DET
or *ēr* *vkayanoc‘i=n,* *…*
REL.NOM.SG be.3.SG.PST chapel.LOC.SG=DET
‘And when the sophist heard all this, who was in the chapel, …’ (P‘B IV.10)

Next to individual antecedents, relative clauses can also refer to the action of an entire clause or phrase; this is expressed most commonly in the collocation Arm. *vasn oroy* as illustrated in (5.3).

(5.3) *… i* *mēnǰ* *patuhasik‘* *ew* *y=astuacoc‘.* *Vasn* *oroy*
by 1.PL.ABL punish.2.PL.PASS and by=god.ABL.PL because REL.GEN.SG
ew *z=awrēns* *mer* *z=stoyg* *ew* *z=ardar* *grec‘ak‘*
also OBJ=religion.ACC.PL 1.PL.POSS OBJ=true and OBJ=just write.1.PL.AOR
ew *tuak‘* *berel* *aṙ* *jez.*
and give.1.PL.AOR carry.INF to 2.PL.ACC
‘… you will be punished by us and by the gods. Because of this (lit. of which) we wrote down our infallible and just religion and had it brought (lit. gave [it] to bring) to you.’ (ŁP‘ §22)

In (5.3), the relative pronoun is governed by *vasn* and is thus in the genitive; it anaphorically refers to the entirety of the previous clause. In similar fashion, the relative pronoun is often employed at the beginning of sentences to refer to a constituent in the previous sentence.[310]

Inevitably, there is more to say about Armenian relative clauses, but for the present purpose this brief recapitulation will suffice.[311]

5.1.2 Armenian *ezāfe*

Next to the standard relative clauses outlined above, there are those in which no verb occurs and which have thus been termed nominal. In the literature, they are often treated together with other nominal clauses (e.g. predicative).

Example (5.4) below contains two instances of nominal relative clauses: one with a dative, and one with a nominative relative pronoun.

[310] Cp. the notion of a connecting relative in, e.g., Latin (Menge 2009:§590).

[311] For more detailed treatises, cf. Jensen (1959:86–7, 198–9); Hewitt (1978); Vaux (1994-5:17–28); de Lamberterie (1997); Meyer (fthc.*c*).

(5.4) *zi t‘erews ordi mi linic‘i nma, orum*
for perhaps son.NOM.SG one become.3.SG.PRS.SBJV 3.DAT.SG REL.DAT.SG
anun Ormzd, or z=erkins ew z=amenayn
name.NOM.SG PN REL.NOM.SG OBJ=heaven.ACC.PL and OBJ=all
or i nosa aṙnic‘ē
REL.NOM.SG in 3.LOC.PL make.3.SG.PRS.SBJV
‘For perhaps he will have a son, whose name [is] Ormzd, who will make the heavens and everything and everything that [is] in them.’ (EK §145)

The difference between the two instances, however, lies in the fact that the phrase *z=amenayn or i nosa* would be equally grammatical without the relative pronoun, which is not the case for *ordi … orum anun Ormzd*. The first instance, then is a nominal relative clause proper, while the second may be a kind of *ezāfe* – if such a difference is to be made at all.

In some instances, it is evident that the occurrence of such apparent *ezāfe* constructions is due to Greek influence, specifically the rendition of articular phrases as in (5.5) below.

(5.5) *hogi mardoyn or i nma*
spirit.NOM.SG man.GEN.SG REL.NOM.SG in 3.SG.LOC
τὸ πνεῦμα τοῦ ἀνθρώπου τὸ ἐν αὐτῷ
‘the spirit of the man which [is] in him’ (1 Kor. 2:11)

Contrary to the speculation of Ajello (1997:252), it is not evident from this example that this rendition should be due to Iranian influence rather than a translation effect owed to the Greek original; the rendition of the Greek definite article, for which there is no isofunctional parallel in Armenian (for which cf. Ajello 1973:151–7), as an Armenian relative pronoun need not be inspired by Iranian syntax or phraseology. The potential of this kind of interference is the best reason to avoid using the biblical corpus as the basis for linguistic studies.[312]

In cases where there is no Greek model, however, no such influence can be expected. Meillet is the first to propose an Iranian origin of this syntagma (1899-1900: 379 n. 1; 1906–08:21), but also the first to reject it, since

[312] For this argument and similar translations effects in the realm of relative clauses, cp. Cowe (1994-5); Lafontaine and Coulie (1983); Meyer (fthc.*c*).

> [l]'examen des exemples écarte absolument l'hypothèse d'une influence iranienne […] Le plus souvent, la phrase relative sans verb «être» est très courte; elle se compose du relatif et d'un mot précédé de préposition ou du génitif de l'anaphorique, mais non pas d'un adjectif ou d'un génitif quelconque. (Meillet 1910–11:345)

Meillet does not address the reason for his rejection explicitly, but only refers to parallels in Latin, which in themselves are doubtful.[313]

While the construction is indeed apparently most common with prepositional phrases, there are a number of occurrences with other kinds of phrases following on the relative pronoun.

(5.6) *anun* *Astucoy* *or* *tearn=n* *araracocʻ*
name.NOM.SG God.GEN.SG REL.NOM.SG lord.GEN.SG=DET creature.GEN.PL
'the name of God which [is that of] the lord of creation' (EK §358)

(5.7) *očʻ* *z=iwr* *inčʻ* *kʻaǰutʻiwn* *sut* *hramayeacʻ*
NEG OBJ=3.POSS INDF bravery.ACC.SG falsely command.3.SG.AOR
mez *vipasanel* … *ayl* *irkʻ* *or* *ełeal=kʻ*
1.PL.DAT relate.INF but thing.NOM.PL REL.NOM.SG happen.PTCP=PL
vasn *yełanakacʻ* *yełapʻox* *žamanakacʻ*
because nature.GEN.PL variable time.GEN.PL
'He did not command us to write in any way falsely about his own bravery […] but rather about things that happened owing to the nature of changeable times …' (Ag. §12)

Connecting two nominal phrases in the same case, (5.6) is a clear counterexample to the restrictions suggested by Meillet above.[314] Interpreting the structure of (5.7) is more difficult as it depends on the analysis of *ełeal=kʻ*. As argued in *chapter 4 above*, participles even without forms of the copula can function like finite verbs and constitute the main predicate of the clause; equally, however, it has been shown that in most instances where the participle receives a number agreement marker, it is used

[313] Meillet (1910–11:345) cites Marouzeau (1010:155–6, 180–1) on Terence and Plautus. The relevance of this evidence is questionable since both of these authors wrote in verse and commonly use colloquial language which may not always reflect inherited structures; furthermore, the cases of nominal relative clauses in Latin cited therein bear little resemblance to those of Armenian.

[314] It remains open and indeterminable, however, whether this is a remnant of Greek style or diction in the writings of Eznik, who was one of the translators of the Bible.

nominally or adjectivally. Assuming the latter is the best analysis here, this would be another example speaking against Meillet's rejection.

The question remains, for the moment, whether Meillet's rejection is justified, or whether his earlier stance is more plausible; more recent scholarship (Jensen 1959: 160; Benveniste 1964:35; Ajello 1997:252) assumes that the construction may have been modelled on Iranian, but that it is impossible to prove this beyond reasonable doubt. The evidence from West Middle Iranian will shed more light on this situation.

5.1.3 West Middle Iranian *ezāfe*

Both Parthian and Middle Persian employ relative clauses widely, both in their original, relative function, as well as in various other functions when combined with particles (Durkin-Meisterernst 2014:430–1). Like Armenian, both Iranian languages do not distinguish grammatical gender; the relative pronouns do, however, have a tendency to refer to animate (WMIr. *ky* /kē/) or inanimate (WMIr. *cy* /čē/). The *ezāfe* function is fulfilled by *cy* /čē/ in Parthian, and by a separate particle *ʿy* /ī/ in Middle Persian. Apart from *ʿy* /ī/, these particles also operate as interrogatives.

Example (5.8) is a typical relative clause, in which a noun *rwšn* /rōšn/ is relativised with the relative pronoun *ky* /kē/; the relative clause contains a finite verb form *'myxsyd* /āmixsēd/.

(5.8) *byc hw z'wr rwšn ky 'd t'r 'w'gwn 'myxsyd*
but DEM strength light REL with darkness so mix.3.SG.PRS.PASS
kw
COMP
'But the strength of the light, with which darkness is so mixed that …' (M2/II/R/i/16–18; Parthian)

In basic principle, Parthian relative clauses are therefore very similar to Armenian ones, with the exception that West Middle Iranian relativisers are not as morphologically explicit, viz. marked for at least case and number, as their Armenian counterparts.

Next to relative clauses with finite verbs, there are also those which only have a participle. In (5.9) and (5.10), the relative clauses only contain participles (*HYTYt*

/āwāst/ (an Aramaic heterogram) and *qyrd* /kird/). This, of course, is the expected expression of the West Middle Iranian past when the form of the copula would otherwise be the 3.SG.PRS (see *chapter 3* above), but this is arguably not the case for (5.9), where context suggests a first person agent.

(5.9) *W {mrtwhmk} MH̲ MN prwmyn hštr MN 'nyr'n pty*
and mankind REL from Roman land from Anaryān by
'w'r HYTYt
abduction(?) take.PTCP
'And the people, which [we] have taken from Roman lands, from Anaryān, by abduction …' (ŠKZ pa 15–16; Parthian)

(5.10) *kw 'dg hym (kw) 'y(m) 'pdn wyg(')n'n [ky] (pd)*
and able be.1.SG.PRS COMP DEM temple destroy.1.SG.SBJV REL by
ds(t) qyr(d)
hand build.PTCP
'I am able to destroy this temple, which [was] built by hand.' (MKG 1180–94; Parthian)

Furthermore, Parthian too knows relative clauses containing only a prepositional phrase like (5.11) below.

(5.11) *wd '(hyn)jyd (')w br'dr-'n ky pd jfr'(n)*
and draw.3.SG OBJ brother-PL REL in abyss
'And he draws [up] the brothers, who [are] in the abyss.' (GW §34; Parthian)

Durkin-Meisterernst classes the instances cited thus far as nominal relative clauses and sets them apart from the *ezāfe*-construction *sensu stricto*, which are said to express possessive or explicative relationships mainly between nouns and other nouns or adjectives (2014:266–8; also cf. Boyce 1964), as opposed to participial phrases.

(5.12) *m'd cy dyw-'n*
mother EZ demon-PL
'mother of demons' (KPT 1194–96; Parthian)

(5.13) *twhm MH̲ LN*
family EZ 1.PL.POSS
'our family' (NPi pa §65; Parthian)

(5.14) *pd šnng 'wd srwd cy (š)'dyft*
with harp and song EZ friendship
'with the harp and song of friendship' (M5569/R/10–11; Parthian)

Such possessive relationships are not unknown in Armenian—see (5.4) above—but have to be expressed with a declined relative pronoun. Similarly, as has been argued above, whether Armenian can be said to have *ezāfe*-like constructions with adjectives as the determinans depends on the interpretation of the Armenian participle.

There are, therefore, clear parallels between the Parthian and Armenian usage of relative pronoun in nominal relative clauses and in an *ezāfe*(-like) constructions – if that differentiation is indeed necessary; Parthian exhibits a use pattern that could have served as the model for the Armenian use of the pronoun in this way. Equally, however, it is plausible that both languages should have developed these constructions independently.

It must further be noted that according to Durkin-Meisterernst (2014:265), the *ezāfe* construction in Parthian is less common, and that the language prefers expressing the determinand–determinans relationship without a linking particle, thus e.g. *'h'r jm'n* /āhār žamān/ 'dinner time' (MKG 1932) rather than †*jm'n cy 'h'r* /žamān čē āhār/.

It remains to be seen, then, whether comparative evidence from other Indo-European languages can provide any more insight into the matter.

5.1.4 Replication or inheritance?

A number of the older Indo-European languages can be seen to make use of nominal relative clauses in a way comparable to that of West Middle Iranian and Classical Armenian; the pattern is not restricted to any one branch of the Indo-European daughter languages.[315] The question remains, however, whether what follows are indeed instances of nominal relative clauses, or 'simply' of copula ellipsis.

Already in Hittite, examples of nominal relative clauses can be found, as (5.15) illustrates; for more examples and discussion, cf. Benveniste (1958:49–50).

(5.15) *kuit* *handan* *apāt* *išša*
REL.NOM/ACC.SG.N just RES.NOM/ACC.N do.2.SG.IMP
'Do that which [is] just!' (Hittite)

[315] For a slightly more detailed general discussion of nominal or verbless relative clauses in Indo-European languages, cf. Probert (2015:407–14).

Vedic similarly exhibits such nominal relative clauses (5.16); like in Hittite, the determinans is most frequently an adjective or noun.

(5.16) *víśve* *marúto* *yē* *sahā́saḥ*
all.NOM.PL.M Marut.NOM.PL REL.NOM.PL.M powerful.NOM.PL.M
'all the Maruts [storm-gods] who [are] powerful' (RV 7.34,24; Vedic)

The Old Iranian languages also show a similar pattern; the crucial difference, however, is that Hittite and Vedic use the relative pronoun in nominal relative clauses in the nominative only as per its function as subject of the relative clause, whereas in Avestan and Old Persian there are examples of relative pronouns in such clauses in both nominative (5.17–5.19) and other cases (5.20–5.22) without any evident conditioning environment.

(5.17) *maṯ* *vå* *padāiš* *yā* *frasrūtā* *īžaiiå*
1.SG.ABL 2.PL.ACC footstep.INS.PL REL.NOM.PL famous.NOM.PL Iža.GEN.SG
pairijasāi
walk-around.1.SG.PRS
'with the footsteps, which [are] famous [as those] of Iža, I shall walk around you' (Y. 50.8; Old Avestan)

(5.18) *miθrəm* ... *yō* *nōiṯ* *kahmāi* *aiβi.draoxδō*
Mithra.ACC.SG REL.NOM.SG NEG INDEF.DAT.SG deceive.VBADJ.NOM.SG
'Mithra ..., who [is] not to be deceived by anyone' (Yt. 10.17; Young Avestan)

(5.19) *adam* *Bardiya* *amiy* *haya* *Kūrauš* *puça*
1.SG.NOM Smerdis be.1.SG.PRS REL.NOM.SG Cyrus.GEN.SG son.NOM.SG
Kabūjiyahyā *brātā*
Cambyses.GEN.SG brother.NOM.SG
'I am Smerdis, who [is] the son of Cyrus, the brother of Cambyses' (DB I.39; Old Persian)

(5.20) *tāiš* *šiiaoθanāiš* *yāiš* *vahištāiš*
DEM.INS.PL deed.INS.PL REL.INS.PL best.INS.PL
'with the best (of) deeds' (Y. 35.4; Old Avestan)

(5.21) *miθrəm* *yim* *vouru.gaoiiaotīm*
Mithra.ACC.SG REL.ACC.SG wide-pastured.ACC.SG
'Mithra with wide pastures' (Yt. 10.1; Young Avestan)

(5.22) *adam* … *avam* *Gaumātam* *tayam* *magum*
1.SG.NOM DEM.ACC.SG Gaumata.ACC.SG REL.ACC.SG magus.ACC.SG
avājanam
slay.1.SG.PST
'I … slew that Gaumata, the magus.' (DB I.56–7; Old Persian)

It is worth noting that the occurrence of 'case attraction', i.e. the coincidence in case of syntactic pivot and relativiser, does not occur in other, viz. verbal, relative clauses in Avestan or Old Persian.[316]. Furthermore, Young Avestan and Old Persian show instances of nominal relative clauses linked with a generalised relative particle Av. *yaŧ*, OP *taya* (both REL.NOM/ACC.SG.N), which also functions as the complementiser (cf. LÜHR 2008:153 for the relationship between these two forms). A construction of this kind is likely to be the origin of the *ezāfe* in later Iranian.

(5.23) *puθrəm* *yaŧ* *pourušaspahe*
son.ACC.SG COMP Pourušaspa.GEN.SG
'the son of Pourušaspa' (Yt. 5.18; Young Avestan)

(5.24) *ustacanām* *taya* *aθagainām*
staircase.ACC.SG COMP of-stone.ACC.SG
'(this) stone staircase' (A²Sc; Old Persian)

Note that in (5.23), the innovative form with complementiser *yaŧ* encroaches on the older, 'attracting' construction.[317]

Greek attestations of verbless relative clauses are limited to early forms of the language (PROBERT 2015:413). Here, too, the determinans may be a noun (5.25) or an adjective (5.26); other types of phrases do also occur, but are rarer.

(5.25) *ἦ* *μάλα* *δή* *c'* *ἐφόβηcε* *Κρόνου*
truly PTC PTC 2.SG.ACC put-to-flight.3.SG.AOR Kronos.GEN.SG
πάϊc, *ὅc* *τοι* *ἀκοίτηc*
son.NOM.SG REL.NOM.SG 2.SG.DAT companion.NOM.SG
'Truly, the son of Kronos, who [is] your companion, has put you to flight.' (Homer, *Iliad* XV.91; Greek)

[316] The gamut of nominal relative clauses in Avestan and Old Persian is, however, greater than exemplified here; for more detail, SKJÆRVØ (cf. 2009:155–60) and SEILER (1960:134–70)

[317] Cp., e.g., (5.21) for Avestan and (5.24) for Old Persian, where the relativiser agrees in number, gender, and case with its pivot rather than assuming the function of subject in a verbless relative clause.

(5.26) *νηυσὶ μὲν ἐν μέσσῃσιν ἀμύνειν εἰσὶ καὶ*
ship.DAT.PL PTC in middle.DAT.PL ward-off.PRS.INF be.3.PL.PRS also
ἄλλοι ¦ Αἴαντές τε δύω Τεῦκρός θ', ὅς
other.NOM.PL Ajax.NOM.PL and two Teucer.NOM.SG and REL.NOM.SG
ἄριστος Ἀχαιῶν ¦ τοξοσύνῃ, ἀγαθὸς δὲ καὶ ἐν
best.NOM.SG Achaean.GEN.PL archery.DAT.SG good.NOM.SG PTC and in
σταδίῃ ὑσμίνῃ
upright.DAT.SG combat.DAT.SG
'Among the ships, in the middle there are furthermore others to ward [them] off: the two Ajaxes and also Teucer, who [is] the best of the Achaeans at archery, and also good in hand-to-hand combat.' (Homer, *Iliad* XIII.312–14; Greek)

Latin, too, provides some indication that it inherited nominal relative clauses; yet, these are restricted to very few examples from Old Latin.[318]

(5.27) *hi quos Augurum Libri*
DEM.NOM.PL.M REL.ACC.PL.M augur.GEN.PL.M book.NOM.PL.M
scriptos habent sic «divi qui
write.PRF.PTCP.ACC.PL.M have.3.PL.PRS so divine.NOM.PL.M REL.NOM.PL.M
potes» pro illo quod Samothraces
capable.NOM.PL.M for DEM.ABL.SG.N REL.ACC.SG.N Samothracian.NOM.PL.M
θεοὶ δυνατοί
god.NOM.PL.M capable.NOM.PL.M
'These [are the gods] whom the *Books of the Augurs* mention in writing as "potent deities", for what the Samothracians call "powerful gods".' (Varro, *de lingua latina* V.58; Latin)

(5.28) *salvete, Athenae, qui nutrices*
be-well.2.PL.PRS.IMP, Athens.VOC.PL.F, REL.NOM.PL.M nurse.NOM.PL.F
Graeciae
Greece.GEN.SG.F
'Greetings, Athens, [who is the] nourisher of Greece' (Plautus, *Stichus* 649; Latin)

The evidence provided by these early Indo-European languages suggests that nominal relative clauses, no matter whether introduced by a reflex of *ye/o- or *k^{w}i/o-, may have been inherited from the ancestor language. Their nature has led some scholars, chief among whom Benveniste (1958), to argue that nominal relative clauses indicate the original nature of the later relative pronoun, namely: a definite determiner.

[318] The relevant use of the relative pronoun does not occur in all manuscripts and may be a later interpolation, however.
Benveniste (1958:51) also gives an example from Festus, *de verborum significatione*; in context, however, an interrogative reading of *qui* seems more appropriate here than a relative one.

This suggestion is contradicted, however, by the lack of agreement between relative pronoun and pivot in some examples given above: (5.17) expects instrumental; (5.18) might expect accusative (which would also require the verbal adjective to agree); examples, where such agreements does take place, are later, independent developments.[319]

Keeping in mind that nominal sentences in Indo-European languages occur not infrequently in general (cf. Ajello 1973), and given the fact that prototypical nominal relative clauses in Indo-European daughter languages show no appreciable difference to their verbal counterparts, it may be most uncomplicated to assume that nominal relative clauses simply lack an overt verb 'to be'.

Whatever their specific development, it is evident that nominal relative clauses or *ezāfe*-style constructions are not Iranian idiosyncrasies, but a shared feature of a number of Indo-European languages. In some languages (Avestan, Old Persian, West Middle Iranian), this type of relative clauses developed into a separate syntagma; in others (Greek, Latin), it fell out of use.

5.1.5 Synthesis

It remains unclear, then, whether the nominal relative clauses of Classical Armenian are simply an inheritance from Indo-European times, found in a number of other languages, or whether they are a borrowing from West Middle Iranian.

The evidence for and against either case is weak. If Armenian participles are counted as adjectives—as they should be in at least some instances—, Armenian nominal relative clauses do not differ significantly from their cousins in other Indo-European languages. At the same time, it must be noted that in both Parthian and Middle Persian, the use of the *ezāfe*-construction is not (yet) obligatory at the time of contact, although each language has a specific preference.[320] As before, the lack of Armenian linguistic data from a pre-contact period makes any assertions in this matter impossible.

[319] On this, cf. Kurzová (1981:38); Lehmann (1984:5); Haider and Zwanziger (1984).

[320] Equally, it cannot be determined whether the texts transmitted in the West Middle Iranian languages fully reflect the spoken vernacular Armenian speakers would have been in contact with.

A speculative, compromising analysis might suggest that Armenian did indeed inherit nominal relative clauses, which like in Greek and Latin were falling out of use; yet, contact with West Middle Iranian, where a new related syntagma had formed independently, provided the necessary input to prevent the complete disappearance of such clauses. At present, however, data remains insufficient to provide any indisputable answer to this question.

5.2 Intensifier, Anaphora, and Reflexive[321]

The second pattern to be considered in this chapter revolves around expressions of intensification, anaphora, and reflexivity. First, it is shown, that an Indo-Iranian innovation of a periphrastic noun phrase as the expression of the canonical reflexive relationship (instead of an inherited Proto-Indo-European pronoun in *sṷe- alone) has been calqued in Armenian with similar material, most likely on the basis of its Parthian manifestation. Secondly, this section illustrates that the functional distribution of Arm. *ink‘n* may have replicated that of the West Middle Iranian adverb-turned-pronoun WMIr. *xwd*/*wxd* derived from PIE *sṷe-.

The Iranian data will be considered first;[322] etymologies of the relevant expressions will be discussed or suggested, and similarities with older Indo-Iranian languages discussed. This is followed by a description and analysis of the functional distribution of the pronouns MP *xwd* /xwad/, Pth. *wxd* /wxad/. In like fashion, the Armenian data will be approached.

5.2.1 West Middle Iranian: *xwd*/*wxd*

According to the discussion in Brunner (1977:78–80), the Middle Persian and Parthian ‘emphatic pronouns’, *xwd* /xwad/ and *wxd* /wxad/, serve three main functions: emphasis, i.e. reinforcement of the subject of the clause; adverbial affirmation of

[321] This section is, in essence, a revised version of Meyer (2013).

[322] Durkin-Meisterernst (2004) provides an exhaustive list of occurrences for the relevant lemmata in Manichaean texts. This section is based on the forms listed there, excluding some not accessible or available at the time of writing (fragments from the Museum für Indische Kunst, Hutter’s *Manis kosmogonische Šaburagan Texte* and unpublished manuscripts).

the whole clause; possessive marking (in Middle Persian only). Whilst his examples neatly correspond to the perspective argued for, Brunner's explanations do not paint the whole picture, are descriptively wanting, and do not touch on the question of how this particular distribution arose. Durkin-Meisterernst (2014:363–5), too, does not afford the pronouns more attention or expand on their functional distribution.

A good starting point for the latter, it would seem, is to attempt an etymological derivation of the two pronouns in order to gain an insight into the possible development of these pronouns and their functions.

5.2.1.1 Etymology

Both MP *xwd* /xwad/ and Pth. *wxd* /wxad/ regularly derive from a IIr. form *hu̯atah.[323] The Proto-Indo-European precursor to this form in all likelihood features an initial *su̯e- cluster, cp. Ved. *sva-*, Gk. ἑ- 'self, own'. The suffix IIr. *-taḥ < PIE *-tas indicates an old ablatival formation on a pronominal basis. Whilst no corresponding form of this particular word is attested in Old Persian,[324] other parallel forms such as YAv. *xvatō*, Ved. *svatas* suggest that the proto-form was likely petrified and has retained an adverbial character, close in meaning to 'by itself' or 'on one's own' as evidenced by Young Avestan (5.29) and Sanskrit (5.30).

(5.29) … *mā* *[…]* *aēšą* *yā* *kaine* *[…]*
NEG DEM.NOM.SG.F REL.NOM.SG.F maiden.NOM.FG.F
xvatō *garəβəm* *raēšaiiāṯ*
by-herself fetus.ACC.SG.M damage.3.SG.PRS.OPT.ACT
'… let the girl not damage the fruit of her womb by herself.' (Vidēvdāt 15.11)

(5.30) *agnyādheye* *yad* *bhavati* *yac* *ca*
fire-placing.LOC.SG.N REL.NOM.SG.N become.3.SG.PRS REL.NOM.SG.N and
some *sute* *dvija* *yac*
Soma.LOC.SG.M press.PTCP.LOC.SG.N twice-born.VOC.SG.M REL.NOM.SG.N

[323] The initial metathesis illustrated by the Parthian form is not restricted to this paradigm, but is a regular correspondence mechanism between Middle Persian and Parthian; as a comparandum may be adduced Pth. *wxrd* 'eaten' and MP *xwrd* 'id' (see *chapter 1* above). The phoneme represented by <xw>/<wx> is likely to be a voiceless rounded velar fricative, but no further information can be gleaned from the data to suggest whether Middle Persian and Parthian realisations would have differed.

[324] IE *su̯- developed into OP *ʰuva-*, which seems to occur only in compounded nouns, e.g. *uvaipašiya-* 'belonging to the self' (e.g. DNb 15), cp. Av. *xᵛaēpaiθya* 'own'.

cetarair *mahāyajñair* *veda*
and=other.INS.PL.M great-worship.INS.PL.M know.3.SG.PERF.ACT
tad *bhagavān* *svataḥ*
DEM.ACC.SG.N noble-man.NOM.SG.M by-himself
'That, which by placing the fire on the sacrificial fire-place and by pressed-out Soma the Brāhman becomes, and which others know through great acts of worship, the fortunate man is by himself.' (Mahābhārata 12.260.37)

In both examples, sense suggests that YAv. *xvatō* and Ved. *svatas* are used adverbially, modifying the action, rather than adnominally; this, as will become evident below, is decidedly not the position *xwd*/*wxd* take in West Middle Iranian.

5.2.1.2 Brief excursus: expressions of reflexivity

Before going into detail about *xwd*/*wxd*, one other expression making use of derivatives of PIE *sṷe- in Indo-Iranian should be considered, especially as the pronouns are synchronically not used as canonical reflexives; this concept is expressed periphrastically in West Middle Iranian.

The Indo-Iranian languages appear to share an innovative expression of reflexivity by periphrasis. Where a host of other Indo-European languages use cognates of the enclitic *sṷe- (cp. Lat. *se*, Gk. ἑ-(αυτόν), OHG *sih*, ON *sik*) to express the direct object co-referent with the subject of the clause, Indo-Iranian has introduced noun phrases which employ a possessive adjective derived from this root together with a noun meaning 'body' or 'soul'.

Two examples of this structure, YAv. *huua- tanu-* (5.31) and Ved. *(sva-) tanū-* (5.32), will suffice to illustrate this point.

(5.31) *paoirīm* *upa* *maγəm* *hakərəṯ* *āpō* *āaṯ*
first.ACC.SG.M at hole.ACC.SG.M once water.ACC.PL.F then
huuąm *tanūm* *pairi-yaoždaiϑīta.*
own.ACC.SG.F body.ACC.SG.F cleanse.3.SG.PRS.OPT.MID
'At the first hole he shall purify himself once with water.' (Vidēvdāt 9.31)

(5.32) … *utá* *sváyā* *tanvā́* *sáṃ* *vade*
and own.INS.SG.F body.INS.SG.F together talk.1.SG.PRS.MID
'… and I talk with myself' (RV 7.86.2)

This innovation is retained and expanded in West Middle Iranian, where variations on the noun exist; judging from the extant material, the most common expression is *xwyš gryw* /xwēš grīw/, lit. 'own soul', or better 'oneself', so e.g. in (5.33).

(5.33) *'w=š'n xwd ''z xwyš gryw 'ndr 'myxt*
and=3.PL$_i$ ANA greed 3.POSS$_i$ soul in mix.*pst*$_i$
'And they [the plants] then mixed in themselves him [the Third Messenger] and Greed.' (MMi. B I Ri (6); Middle Persian)

A similar collocation, *xwyš tn* /xwēš tan/, lit. 'own body', is employed in this meaning, as indicated by (5.34); this, however, appears to be a less frequently used expression.

(5.34) *'yg 'wymyzdgt'c' wd 'zdygr yzd 'y myhr yzd 'wd srygrqyrb*
then Call and Answer Lord REL Mihr Lord and woman
'y 'whrmyzdby m'd 'br xwyš t̲n
REL First Man mother to/upon 3.POSS body
'Then Call and Lord Answer, who is Lord Mihr, and a woman, the mother of the First Man, to/upon himself/themselves …' (MMi., 178 (y, 7, 2, M_7984, II, Rii, 10))

By the time of Classical Persian, the reflex of *xwd* /xwad/, CPers. *x^{w}ad*, has incorporated the functions of the reflexive pronoun (cf. WINDFUHR 1979:73ff.).

5.2.1.3 Intensifier

Based on its etymology, the oldest and most probably original function of the pronouns seems to be the intensification of an explicit, direct case noun phrase, usually the subject of the clause in question. Sentences (5.35, 5.36) exemplify this pattern.

(5.35) *'c 'ym(y)n hrwyn tw wzrgy(s)tr ['wd] rwšnystr 'yy*
from 3.DEM.SG all.PL 2.SG greatest and brightest be.2.SG.PRS
cy pd [r]'š(t)[y](f)t tw wxd bwt 'yy
because in truth you INT Buddha be.2.SG.PRS
'Of all these you are the greatest and brightest, for in truth you yourself are Buddha.' (MKG 56; Parthian)

(5.36) *'w=š yyšw' w'(x)t kw nxw(š)[t] tw wxd w'xt kw*
and=3.SG Jesus speak.PST COMP first 2.SG INT speak.PST COMP
'z hym …
1.SG.DIR be.1.SG.PRS
'And Jesus said to him: "You yourself said that I am …"' (MKG 1193; Parthian)

In both examples, the intensifier immediately follows the clause subject and is itself followed by the verb; as such, position alone cannot predict whether the marker ought to be taken as part of the subject or the predicate. Sense, however, requires that both instances of *wxd* /wxad/ be interpreted adnominally, since context allows for emphasis of the subject, but not of the verb itself.

The usage of the intensifier does not differ in Middle Persian, and obeys the same basic rules.

(5.37) *ky xwyš gryw byrwn dyd ’ndrwn ny dyd h’’n xwd*
REL own soul outwardly see.PST inwardly NEG see.PST 3.SG INT
qmb bwyd ’ny=c ks qmb kwnd
lesser become.3.SG.PRS other=EMPH INDF lesser make.3.SG.PRS
‘He, who himself saw but from the outside, and did not see the inside, he becomes little and makes others little.’ (BBB 549; Middle Persian)

The degree of intensification can be increased by repetition; it is common for the two instances of the intensifier to be separated by a phrase or clause, as in (5.38) below, where *xwd* … *xwd* are interrupted by a relative clause co-referent with the pronoun; note that the intensifier may be found on either side of its noun phrase.

(5.38) *’wd xwd ’wyš’(n) ’rd’w-’n ky=š ’c byrwn ’wd ’c*
and INT DEM.PL righteous-PL REL=3.SG from outwardly and from
’br p(yr)[’mwn ‘y]st’nd ’wyn x(w)[d] ’br h’n ’dwr
above around stand.3.PL.PRS DEM.PL INT over DEM.SG fire
wzrg ’wd ’br wysp cy=š ’ndr p’dyxš’y bw’nd [’]’yb
great and over all REL=3.SG in rulership become.3.PL.PRS fire
‘And those Righteous themselves that will stand around it, outside and above, they shall have power over that Great Fire, and over everything in it.’ (Kaw F 62; Middle Persian)

While the *xwd*/*wxd* also occur as anaphors proper (see 5.2.1.5), the usage in (5.38) is clearly still intensifying, since both occurrences have a demonstrative pronoun next to them.

Given the etymology of the intensifier and its original adverbial function, the change in its function is most probably due to re-analysis as an adnominal; instead of emphasising or focussing the verb, it intensifies the direct case nominal or pronominal subject in its vicinity. In this function, it is difficult to determine whether *xwd*/*wxd*

are pronominal adjectives or just function words; their other function may provide more information in this regard.

5.2.1.4 Anaphor and switch-function marking

Most commonly, the pronoun is employed in relative clauses in what *prima facie* appears to be an explicative function. This function is likely to be related to the original intensifier function, in that it can be interpreted as intensification of the relative pronoun; this kind of usage has parallels in other Indo-European languages.[325] This pattern is common to both Middle Persian and Parthian, as examples (5.39, 5.40) illustrate.

(5.39) *'wd jnyd ('w h)[w] d'lwg mrnyh cy wxd 's(t) [xyn*
and fell.3.SG.PRS OBJ DEM.SG tree$_i$ deadly$_i$ REL INT/ANA$_i$ be.3.SG.PRS hatred
'And he fells the Tree of Death, which itself is hatred.' (LN 27; Parthian)

(5.40) *'st](w)ynd [b](x)šyhy(d) 'y xwd (h)ynd hpt'n drwxš-'n*
material$_i$ split.3.SG.PRS.PASS REL INT/ANA$_i$ be.3.PL.PRS seven demoness-PL
''... the material ("das Stoffliche") is split, which itself consists of seven demonesses.' (KPT 364; Middle Persian)

Both examples pose the question whether the sense of these statements would change if the pronoun were to be omitted. (5.39) suggests that this may indeed be the case; if construed without *wxd* /wxad/, the relative clause need not refer to *d'lwg* anymore, but may take as its antecedent the whole previous clause, thus creating ambiguity.[326] Example (5.40) does not allow for such an interpretation, largely owing to the lack of context; other examples from the corpus, however, seem to show

[325] Cp. e.g. Lat. *Insanit hic quidem, qui ipse male dicit sibi.*-'This fellow is mad, who on his own accord maligns himself.' (Plautus, *Menaechmi* 309); both *ipse* and *sibi* are co-referent with the matrix subject, but *ipse* is neither semantically nor syntactically necessary, and serves intensifying or explicative purposes only.

[326] This ambiguity is owed to the lack of agreement marking in the relative pronoun, and may be represented as follows: 'And he fells the [Tree of Death]$_i$ which$_i$ is hatred' vs '[And he fells the Tree of Death]$_i$ which$_i$ is hatred'.

a similar pattern.[327]

In relative clauses, *xwd*/*wxd* therefore seem to function as anaphoric markers when preceded by a relative pronoun, unambiguously co-referencing a matrix clause constituent within the relative clause. (5.39) and the majority of other instances, in which the pronoun is used in this fashion, further seem to suggest that *xwd*/*wxd* indicates a switch in syntactic function: in most instances, this means that a matrix-level object will in the relative clause take subject function. As (5.40) indicates, however, this is not a hard and fast rule, but rather a tendency.[328] The development of optional switch-function marking may be the result of the morphological poverty of the West Middle Iranian case system, which does not allow for marking co-reference in any other way.[329]

This disambiguating usage of the pronoun, including its possible switch-function marking, is not restricted to relative clauses, but is used in other subordinate clauses too.

(5.41) *’w=š tgnbnd ds(t) bwrd ’w=š hw w’drwng*
and=3.SG quickly hand bring.PST and=3.SG DEM.SG ?melissa
nx’f’’d ’wṯ šwd ’w=š prw’n s’ḥ hndym’n kyr[d] kd
?distill.PST and go.PST and=3.SG before king$_i$ before make.PST when
wxd ’d ws-’n ’’z’d-’(n) [’](wṯ wzrg)-’n bzm s‘y’d
ANA$_i$ with many-PL noble-PL and great-PL banquet lie.PST
‘And she quickly carried it away (*dst bwrd*), and she distilled the melissa, and went and put it before the king when he was banqueting with many noble and rich men.’ (MKG 715; Parthian)

In this instance, the pronoun occurs in a temporal clause, but operates essentially along the same lines as stated above, viz. co-referencing the object in the matrix clause and the subject in the subordinate clause. It stands to reason that an omission

[327] Cp. BBB 186ff. (MP): *’pryd ’wd ‘stwwd hyb byḥ yyšw‘ … ‘yg xwd m’d zywyn’g …* ‘Blessed and praised be Jesus … who/which himself/itself is the life-giving mother …’; a similar syntactic ambiguity may be observed upon excision of *xwd* /xwad/, although context favours the reading co-referencing the relative clause with Jesus.

[328] Switch-function marking can be compared to, and to a certain extent is analogous to, switch-reference marking; both phenomena are cross-linguistically not uncommon, but rarely found in Indo-European languages; for a definition and overview, cf. Foley and van Valin (1984:354–60); Comrie (1989:41–2).

[329] Old Iranian languages like Old Persian and Avestan, on the other hand, do mark gender, case and number on relative pronouns, and therefore have no particular need for separate co-reference marking.

of the pronoun here would have entailed that the matrix clause subject is also taken as the subordinate clause subject, which context would not allow.

In Middle Persian, too, *xwd* /xwad/ can function as a switch-function marker.

(5.42) *sdyg kw 'wyš'n gy'n-'n pyšyng-'n 'yg pd xwyš dyn*
thirdly COMP DEM.PL soul-PL ancient-PL REL in 3.POSS religion
qyrdg'n ny hnzft 'w dyn 'yg mn ''ynd 'y=š'n
deed NEG finish.PST to religion EZ 1.POSS come.3.PL.PRS REL=3.PL
xwd dr 'y 'wzynyšn bwyd
ANA gate EZ redeeming become.3.SG.PRS
'Thirdly, that those ancient souls, which in their own religion did not complete good deeds, come to my religion, which in turn becomes the gate of salvation to them.' (MMii T II D 126 I V (9); Middle Persian)

The genesis of the pronoun's tendency to mark a switch in syntactic function between matrix and subordinate clause is most probably conditioned by the pragmatic need to disambiguate the subject identity in subordinate clauses and the pronoun's original function as a subject intensifier.[330]

Furthermore, there is a third function. The usage of *wxd* /wxad/ in (5.43) does not adhere to either of the patterns described thus far; here, there is no noun or pronoun immediately preceding or following the pronoun, disqualifying an intensifier interpretation, nor is the pronoun found in a subordinate clause.

(5.43) *'b'w mrd 'yw wzrg '(c) 'bršhr d'ry'w n'm prw'nhw hw*
then man$_i$ one great from Abaršahr Dāryāw name before DEM.SG
gd wxd 'd'n dw (b)r'dr-'n ...
go.PST INT$_i$ with two brother-PL
'Then a noble man from Abaršahr by the name of Dāryāw went before him, (that is) he with his two brothers…' (MKG 670; Parthian)

In this instance, *wxd* /wxad/ functions as a general anaphoric pronoun, possibly used for stylistic rather than syntactic purposes; the passage quoted is followed by a lacuna, making it difficult to judge whether an anaphor was necessary here. This pattern, as is described in what follows, in very common.

[330] In terms of historic developments, the switch-function usage may originally have been restricted to relative pronouns, which are close in meaning and function to actual noun phrases and which *xwd*/*wxd* would have modified as an intensifier; subsequently, *xwd*/*wxd* were re-analysed as (switch-function marking) anaphoric pronouns, grammaticalised as such, and thus extended their domain to all subordinate clauses. As such, this successive extension of meaning and function through re-analysis and analogy is in keeping with expectations of grammaticalisation processes (cf. Hopper and Traugott 2003:101–6).

5.2.1.5 Anaphor and subject resumption

Next to its anaphoric, disambiguating function in subordinate clauses, the pronoun also occurs in an anaphoric or rather resumptive function in main clauses. As in their use in subordinate clauses, *xwd*/*wxd* do not need a noun phrase and function as independent pronouns; in their use in matrix clauses, however, the original referent is the matrix clause subject. The pronouns are a sign of subject re-uptake, often but not exclusively after a change in subject or another 'interruption' of the main clause.

At its most basic, in a main clause *xwd*/*wxd* restate the subject after a conjunction with no intervening change in subject; given the pro-drop nature of West Middle Iranian, this may be done for stylistic reason, e.g. for contrast as in (5.44, 5.45).

(5.44) *byd m'nh'g ('hy)nd 'w 'skynd ky ('w 'n)y kyc r'h*
then like be.3.SG.PRS to lame REL to other INDF road
nm'yd 'w nydf'ryd 'wd wxd nšst 'št(y)d ...
show.3.SG.PRS and hasten.3.SG.PRS and ANA set.PTCP stand.3.SG.PRS
'And they are comparable to the lame, who shows the way to another man and urges him to hurry, but himself remains seated ...' (GW 79; Parthian)

(5.45) *pš kdy=š 'ndr bnd 'n'by'd bndynd ... u wxd 'ž*
after when=3.SG in prison forgotten bind.3.PL.PRS and ANA from
'br pdyxš'hynd ...
above rule.3.PL.PRS
'And after they bound him in a prison of oblivion ... and themselves took charge from above ...' (MMiii T II D 79, 79; Parthian)

(5.46), on the other hand, illustrates that the pronoun also had a resumptive function, referencing the last-but-one subject, or at any rate the last contextually sensible one.[331]

(5.46) *'wṯ pṯ r'ḫ kw šwyd tgnbnd 'w dšt 'yw wzrg ẇ*
and on path when go.3.SG.PRS quickly to steppe$_i$ one great and
wy'b'n y'dyndyḫ 'wṯ 'škyfṯ grm 'hyn(dy)ḫ 'wṯ wxd
desolate reach.3.SG.OPT$_j$ and very hot be.3.SG.OPT$_i$ and ANA$_j$
wgwd wšynd 'wṯ ṯšynd 'hyndyḫ
be-malnourished.PST$_j$ hungry and thirsty be.3.SG.OPT$_j$
'And on the path, as he walks, he quickly reaches a great and desolate steppe.

[331] Co-reference may be determined by the minimal distance principle (cf. HUANG 2000:43), as long as co-reference occurs within the same sentence. Accordingly, in this context the controllee (resumptive pronoun) would be co-indexed with its closest subject on the same clausal level.

> And it was very hot, and he was starving, hungry and thirsty.' (MKG 797; Parthian)

The change of subject, as it occurs in the clause *'wṯ 'škyfṯ grm 'hyn(dy)ẖ* /ud iškeft garm ahēndēh/, is not indicated syntactically; on the contrary, it is *prima facie* not implausible to assume that *grm* /garm/ should refer to the same noun phrase as do *wšynd* /wišāyēnd/, etc. Two arguments, however, speak in favour of construing the clause with a different, null subject: firstly, the lexicon would suggest that in West Middle Iranian, *grm* ought to refer to an inanimate object rather than an animate one, at any rate in the meaning 'hot, warm', and must thus apply to *dšt* /dašt/ rather than any other constituent;[332] secondly, the position of *wxd* /wxad/ in the second clause as well as the repetition of the predicate *'hyndyẖ* suggest that two different subjects occur within the sentence.

Where in (5.46) the change of subject can only be inferred from context, (5.47) exhibits subject re-uptake after a syntactically overt change of subject.

(5.47) *h'n gnwm 'bwsyd 'wd 'w xwyš qndwg bryd*
DEM.SG wheat$_i$ collect.3.SG.PRS$_j$ and to 3.POSS$_j$ jug bring.3.SG.PRS$_j$
ky 'c=yš 'wzyd 'wd xwdyc 'w h'n xwybš m'nd
rel from=3.SG$_i$ come-out.PST and ANA-EMPH$_j$ to DEM.SG 3.POSS$_j$ house
šwyd ky 'cy=š 'md
go.3.SG.PRS$_j$ REL from=3.SG$_j$ come.PST
'He collected that wheat and brought it to his storage jar from which it had come. And he went back to his house, from which he had come.' (KPT 2066; Middle Persian)

The clause introduced by *ky 'cy* /kē az/ refers back to *qndwg* /kandūg/, and as its subject takes *=š*, referring to *h'n gnwm* /hān gannum/. This change of subject may have been carried over to the next sentence, since West Middle Iranian is pro-drop; thus, to unambiguously refer back to the subject of the previous matrix clause, *xwdyc* /xwadiz/ is employed as a resumptive pronoun.

Further, (5.47) shows that where no referential ambiguity between matrix and subordinate clause exists, no switch-function marking takes place; instead, change of subject to the 'original' subject is effected by means of anaphora.

[332] Cp. e.g. Gk. θερμός, a cognate of *grm*: when referring to inanimates, its meaning ranges from 'warm' over 'hot' to 'feverish'; when, metaphorically, applied to animates, however, it means 'rash, hot-headed'.

5.2.1.6 Summary

In summary, *xwd* /xwad/ and *wxd* /wxad/ can be categorised as follows:

(a) Intensifier, providing emphasis to subject;

(b) Anaphor (or switch-function marker) in subordinate clauses, mainly referencing the matrix clause object;

(c) Anaphor (or resumptive pronoun) in matrix clauses, mainly used for stylistic purposes and to signal subject re-uptake after introduction of new subject.

This functional distribution is a West Middle Iranian development, springing in all likelihood from the original intensifying function: an intensifying adverb was reanalysed as an adnominal, and in relative clauses grammaticalised as an anaphoric pronoun. The development of the matrix clause anaphor function may be related to this development, or have arisen independently, for instance as extension of an intensifier with an ellipsed or null subject. Either way, it is evident that the etymological connection to the reflexive is not entirely lost, since the pronoun only occurs in subject function, albeit often referencing an object when used in relative clauses.[333]

5.2.2 Classical Armenian: *ink‘n*

With this threefold functional distribution in mind, the use pattern of Armenian *ink‘n* must be considered. In how far can any potential parallels be said to be based on the Iranian model rather than having arisen independently? And to what extent does the fact that Armenian has a richer (pro-)nominal morphology play a role in the development and analysis of anaphoric pronouns?

Jensen (1959:78) has very little to say about the precise usage of the pronoun *ink‘n*, noting that it serves as one of several reflexive pronouns and may be employed for all three persons, usually accompanied by the personal pronoun in the case of the first and second person. In contradistinction to the West Middle Iranian pronouns, *ink‘n*

[333] The situation in Classical Persian, however, is different; as noted above, the purview of the pronoun has further increased, as it can intensify NPs in all grammatical functions and further serves as a canonical reflexive pronoun as well.

is fully declinable and in fact seems to occur most frequently in prepositional phrases, and thus in non-nominative cases. As will become evident from what follows, however, in a number of respects *inkʻn* exhibits a functional distribution so close to that of its Iranian counterparts that coincidence or independent development in both families seem less likely.

5.2.2.1 Etymology

The lack of phonemic correspondence between *wxd* /wxad/ and *inkʻn* precludes lexical or phonetic borrowing; potential parallels must therefore be explained differently. In terms of the etymology of *inkʻn*, no fully satisfying analysis has been suggested yet. Martirosyan (2010:303) derives the *-kʻ-* of *inkʻn* from the same root *sṷe-, and further links it with the possessive reflexive *iwr*. An analysis as *en-sṷom, i.e. the accusative singular of the reflexive pronoun prefixed by a preposition 'in', may be one plausible reconstruction; the cluster *-sṷ- regularly develops into Arm. *-kʻ-*, cf. e.g. *sṷesor- 'sister', Skt. *svásar-* 'id.', Arm. *kʻoyr*, and *suop-no-, Skt. *svápna-*, Arm. *kʻun*. Final syllables, on the other hand, are regularly lost or undergo vowel syncope, which may explain the reduction *-sṷom > PArm. *-kʻom > PArm. *-kʻm > Arm. *-kʻn*.[334] In terms of meaning, the hypothetical 'in itself' compares quite well to IIr. 'by itself', which suggests that the original functions of both petrified expressions may have been similar; as such, *inkʻn*, too, may originally have been an adverb.

5.2.2.2 Another brief excursus: expressions of reflexivity

The fact that Indo-Iranian employed an innovative set of periphrastic reflexive constructions, consisting of a cognate of PIE *sṷe- and a noun meaning 'body' or 'soul', has been established above (5.2.1.2).

As it turns out, Armenian can also employ a periphrastic construction to express canonical reflexivity, consisting of the noun *anjn* 'person, soul, self' and a possessive pronominal adjective, e.g. *im* 'my', *kʻo* 'thy', *iwr* 'his/her/its'. The latter, particularly, is of interest, as Arm. *iwr* could be derived from *seṷe/o-ro- (Martirosyan 2010:

[334] This is a regular sound change, cp. also *deḱm̥ > Arm. *tasn*.

303).

(5.48) *yet* *aysorik* *darjeal* *yaytneac‘* *z=anjn* *iwr*
after DEM.GEN.SG again reveal.3.SG.AOR OBJ=soul.ACC.SG 3.POSS
Yisus *ašakertac‘=n* *iwroc‘* *aṙ* *covezerb=n*
Jesus.NOM.SG disciple.DAT.PL=DET 3.POSS.GEN.PL at sea-shore.INS.SG=DET
Tibereay
Tiberias.GEN.SG
‘Thereafter Jesus revealed himself again to his disciples, at the shore of Lake Tiberias.’ (Jn. 21:1)

(5.49) *Yisus* *K‘ristos,* *or* *i* *k‘ēn=d* *aṙak‘ec‘aw*
Jesus.NOM.SG Christ.NOM.SG REL by 2.SG.ABL.SG=DET send.3.SG.AOR.PASS
aṙ *mez* *…* *ew* *nkareac‘* *ew* *tpaworeac‘*
to 1.PL.ACC and depict.3.SG.AOR and imprint.3.SG.AOR
z=anjn *iwr* *i* *stełcowacs* *jeṙac‘* *iwroc‘*
OBJ=soul.ACC.SG 3.POSS in creature.ACC.PL hand.GEN.PL 3.POSS.GEN.PL
‘Jesus Christ, who was sent by you to us, … and who depicted and imprinted himself on the creatures of his own hands …’ (Ag. §95)

While the periphrasis works along very similar lines as the ones commonly used in Young Avestan and Vedic, Arm. *anjn* is not cognate with YAv. *tanu-*, Ved. *tanū́-* or *ātmán-*, but rather belongs with OIc. *angi*, ‘smell, scent’, Dan. *ange* ‘steam’, probably from *h_2enh_1- ‘to breathe’ (cf. Martirosyan 2010:94).

(5.48, 5.49) show a striking similarity between Indo-Iranian and Armenian expressions, which suggest that the Armenian expression may well be a direct calque from West Middle Iranian.[335] Can the same be shown to obtain in relation to the usage of *ink‘n*?

5.2.2.3 Intensifier

As in Middle Persian and Parthian, Arm. *ink‘n* can be used as an adnominal intensifier.

(5.50) *ew* *ink‘n* *Davit‘* *hogwov=n* *srbov* *asē.*
and INT PN.NOM spirit.INS.SG=DET holy.INS.SG say.3.SG.PRS
asac‘ *tēr* *c‘=tēr* *im,* *…*
say.3.SG.AOR Lord.NOM.SG IOBJ=Lord.ACC.SG 1.POSS.ACC.SG

[335] A similar collocation of a word referring to ‘body’, ‘person’, or the like is also found in a number of Semitic languages (cf. Lipiński 1997:311). Given the early attestation of this structure in the Indo-Iranian languages, however, this vector seems more likely, especially since the Semitic version uses a possessive enclitic rather than a pronominal adjective like Arm. *iwr*, which may have been rendered as an Armenian enclitic determiner (*=s*, *=d*, or *=n*) instead.

‘And David himself said by the Holy Spirit: the Lord said to my lord, …’ (Mk. 12:36)

(5.51) *kam orpes z=noyn ink‘n ašxarhi hoviw*
or how OBJ=same.ACC.SG INT land.GEN.SG shepherd.ACC.SG
kac‘uc‘eal, vayelēin i norun vardapetut‘ean=n
appoint.PTCP.NOM enjoy.3.PL.PST in same.GEN.SG teaching.LOC.SG=DET
‘Or how they appointed the very same man as shepherd of the land, and enjoyed his teaching.’ (Ag. §14)

Since the pronoun is fully declinable in Classical Armenian, however, it is not restricted to subjects, as was the case for West Middle Iranian, but can occur with other nominal constituents; as noted above, CPers. *x^{w}ad* underwent a similar development.

5.2.2.4 Anaphor and subject resumption

ink‘n further occurs in the same function as a main clause anaphor as MP *xwd* /xwad/, Pth. *wxd* /wxad/, and can be used both resumptively and as a straighhforward anaphor. In this function, *ink‘n* is restricted to subject function. In (5.52) there is a clear break in subject continuity, whilst in (5.53), the subject is maintained; here, *ink‘n* is likely used for stylistic reasons.

(5.52) *ew ibrew emut i nawn, gnac‘in zkni nora*
and when enter.3.SG.AOR in ship.ACC.SG go.3.PL.AOR after DEM.GEN.SG
ašakert-k‘=n. ew aha šaržumn mec
disciple-PL=DET and behold earthquake.NOM.SG big.NOM.SG
ełew i covu=n … ew ink‘n nnǰēr
become.3.SG.AOR in sea.LOC.SG=DET and ANA sleep.3.SG.PST
‘And when he embarked upon the ship, his disciples followed him. And behold, there was a great earthquake in the sea …. And he was asleep.’ (Mt. 8:24)

(5.53) *ew lueal z=ays arṙn mioy vačařakani*
and hear.PTCP OBJ=DEM.ACC.SG man.GEN.SG one.GEN.SG merchant.GEN.SG
… or ew z=lezu hayerēn xawsic‘ k‘aǰ
REL.NOM.SG also OBJ=language.ACC.SG Armenian speech.GEN.PL very
tełekabar gitēr. ew ēr ink‘n ayr mi
well know.3.SG.PST and be.3.SG.PST ANA man.NOM.SG one.NOM.SG
i mankut‘enē iwrmē kec‘eal arak‘ini varuk‘
from childhood.ABL.SG REFL.POSS.ABL.SG live.PTCP virtuous life.INS.PL
‘A certain merchant heard this … who knew the Armenian language very well. And he was a man who, from his youth, had lived a virtuous life.’ (ŁP‘ §54)

5.2.2.5 Anaphor and switch-function

In Armenian too, the pronoun can be used as a switch-function marker as its Iranian counterpart; this function is uncommon in other Indo-European languages.[336] Owing to less ambiguous agreement marking in Armenian, however, switch-function marking is comparatively less common and clearly optional, but still evident in (5.54–5.56).

(5.54) *ew aṙeal paštōnēicʻ=n ekełecʻwoy banakin*
and receive.PTCP priest.GEN.PL=DET church.GEN.SG camp.GEN.SG
z=marmin, gnacʻeal-kʻ i gawaṙ=n Tarōnay,
OBJ=body.ACC.SG go.PTCP-PL to district.ACC.SG=DET Tarōn.GEN.SG
taran i y=agarak=n meci
lead.3.PL.AOR to to=village.ACC.SG=DET great.GEN.SG
margarēanocʻin Yovhannu, ur ēr inkʻn i
place-of-martyrdom.GEN.SG PN.GEN.SG, *rel* be.3.SG.PST ANA in
kendanutʻean=n iwrum yaṙaǰagoyn bnakeal
life.LOC.SG REFL.POSS.LOC.SG formerly live.PTCP
'The ministers of the camp took his body and went to the district of Tarōn, to the place of the great martyrdom of John, where he himself had formerly lived.' (PʻB III.16)

In (5.54), *inkʻn* references the subject of a previous clause (Pʻaṙēn, here indirectly mentioned as *z=marmin*); the 3.SG verb also indicates that a change of subject must have taken place.

(5.55) *es gitem zi i hrapoyrs aṙn=d*
1.SG.NOM know.1.SG.PRS COMP in attraction.ACC.PL man.GEN.SG=DET$_i$
aydorik eleal ēkʻ dukʻ kʻanzi inkʻn axtacʻeal
DEM.GEN.SG$_i$ come.PTCP be.2.PL.PRS 2.PL.NOM because ANA$_i$ be-sick.PTCP
ē marmnov
be.3.SG.PRS body.INS.SG
'I know that you have been seduced (lit. come in the spell) of this man, [but] because he is sick of body …' (Eł. p. 169)

(5.55) states the case more clearly. Here, the genitive adjunct *aṙn=d aydorik* of the matrix clause is referenced by means of the switch-function marker in a subsequent subordinate clause, where it takes on subject function.

[336] Such marking is more common in Native American languages such as Capanahua, which have similar systems linking the subject of the dependent clause with the object of the matrix clause (HUANG 2000:280, 287–8); in such languages, however, this function is fulfilled by independent morphemes which have no other functions.

(5.56) *tesanes zi … čšmarit ordi=n Astucoy oč‘*
see.2.SG.PRS COMP true sonNOM.SG=DET$_i$ God.GEN.SG$_j$ NEG
garši tal z=iwr žaŕangut‘iwn iwroc‘
detest.3.SG.PRS give.INF OBJ=3.SG.POSS inheritance.ACC.SG 3.SG.POSS.DAT
sireleac‘=n caŕayic‘=n. or ink‘n
beloved.DAT.PL=DET servant.DAT.PL=DET REL.NOM.SG ANA$_{i/j}$?
bnut‘eamb ordi ē, anveher matuc‘anē
nature.INS.SG son.NOM.SG be.3.SG.PRS boldly bring.3.SG.PRS
‘Do you see that … the true Son of God does not disdain to give his inheritance to his own beloved servants? [He], who is by nature Son, boldly brings …’ (Ag. §160)

The interpretation of (5.56) is somewhat more difficult in that *ink‘n* could here refer to the subject of the previous clause, *ordi=n*, in which case it would likely be either an intensifier or a regular anaphor; or it could refer to the subject’s adjunct *Astucoy*. The question thus is: who is ‘by nature son’, the son of God, or God? This is not the place to enter a theological argument; the predominance of the collocation *or ink‘n* with an intensifying reading suggests, however, that this may be a more likely interpretation here.

5.2.2.6 Differences between Armenian and West Middle Iranian

Owing to the fact that Armenian has a richer pronominal morphology than either of the West Middle Iranian languages, it is not surprising that in addition to subject function, *ink‘n* also readily appears in the oblique cases.

(5.57) *ew kočʻecʻeal aŕ ink‘n z=erkotasanesin ašakerts=n*
and call.PTCP to REFL.ACC.SG OBJ=twelve.ACC.PL disciple.ACC.PL=DET
iwr
3.POSS
‘And he called to himself his twelve disciples …’ (Mt. 10:1)

(5.58) *… ur ew ink‘ean iwrov anjamb=n isk ōrinak*
where also REFL.GEN.SG 3.POSS.INS.SG soul.INS.SG=DET INT example
cʻucʻanēr
show.3.SG.PST
‘‘…, where by himself he indeed made an example of himself.’ (Ag. §846)

In these examples, oblique case forms of *ink‘n* clearly operate as canonical reflexives, referring back to the subject of the sentence. It stands to reason that this function

arose independently from Iranian, where the structural pendants to *ink'n* do not exhibit this function. Given the reflexive-linked etymology of the pronoun, it is not implausible that this function should have been one of the original ones.

5.2.2.7 Summary

The functional distribution of Arm. *ink'n* can be summarised as follows:

(a) Intensifier, providing emphasis to NPs of all cases;

(b) Anaphor (or resumptive pronoun) in matrix clauses, behaving similar to its Iranian counterpart, but occurring in all cases;

(c) Anaphor (or switch-function marker) in subordinate clauses, occurring less commonly in Armenian owing to morphological differences;

(d) Canonical reflexive, which developed without influence of Iranian.

The pronoun *ink'n* shows a similar functional distribution to that of WMIr. *xwd*/*wxd*, but owing to morphological differences between the two languages there are differences in usage and other, independent developments as well.

5.2.3 Synthesis

Based on the etymologies suggested, it stands to reason that both languages have developed their respective pronouns independently, and that originally, they may have served as adverbs, later re-analysed as adnominal intensifiers. If any pattern replication has taken place, this is a likely locus for pivot matching.

Equally, in both languages, these intensifiers have taken on anaphoric functions, broadly speaking, but in this function can only serve as subjects.[337] It is difficult to determine, whether this functional extension occurred independently in both languages, or whether Iranian has influenced Armenian.

[337] For a parallel in English *self*, Eckardt (cf. 2011:399) with references. Similarly, Latin *ipse* undergoes a similar development in Late Latin and early Romance languages, for which (cf. Ledgeway 2011:722) with references.

It is the admittedly rare occurrence of switch-function marking that may tip the scale in favour of pattern replication, since it is unlikely to have arisen in Armenian on its own owing to the its more explicit morphology, and does not otherwise occur in older Indo-European languages. Equally, since both *ink'n* and *xwd*/*wxd* otherwise only refer to subjects, but as switch-function markers both refer to non-subject, this seems beyond coincidental.

As before in the case of nominal relative clauses, it is impossible to determine with any degree of certainty what, if any, role language contact in general, and pattern replication in particular has played in the development of these functionally similar pronouns without a clear idea of diachronic development. Although the present case is not strong enough to ascribe this similarity to influence from Iranian, it is at least possible that *xwd*/*wxd* may have played a catalytic role in the development of Armenian *ink'n*.

5.3 Quotative and complementiser

The final pattern under consideration here involves the usage of Arm. *(e)t'ē* as complementiser, quotative, and indirect speech and question marker (next to a number of other functions). As will be discussed below, the usage of a complementiser to introduce indirect statements or questions is not unusual *per se*; its use as a quotative for direct statements and questions, however, is less common in Indo-European languages, particularly in the case of *wh*-questions.

This usage of Arm. *(e)t'ē* does, however, have a parallel in West Middle Iranian *kw* /kū/, which also functions as complementiser, quotative, and indirect speech and question marker next to other functions.

This sections first outlines the etymology of *(e)t'ē* and then goes on to discuss its various uses in Classical Armenian. Thereafter, the same will be done for *kw* /kū/. The final section discusses parallels in and differences with other Indo-European languages, and reasons for assuming that the functional distribution of Arm. *(e)t'ē* may be due to pattern replication from West Middle Iranian.

5.3.1 Armenian *(e)t‘ē*

5.3.1.1 Etymology

According to Meillet (1896:154 n. 1) and Jensen (1931:28–9), Arm. *(e)t‘ē* is best derived from an Indo-European demonstrative stem *te-/to-, cp. Ved. *tád*, Av. *taṯ*, Gk. τό, Goth. *þata*, etc. The origin of the initial *e-* is unclear. Jensen speculates it may relate to interrogative *k^{w}i- and compares OCS *kъto, čьto*; an alternative, and preferred, reading is to assume an emphatic or deictic particle *e-*, compare Gk. κεῖνος vs ἐκεῖνος, Ru. *mom* vs *эmo*. Ačaṙean and Nersisyan (1971-1979:II.7) implicitly suggest that the initial (*e-*) derives from relative *ye-/yo- by suggesting as cognates Skt. *yathā*, Av. *yaθa, yēiδi*, and OP *yadiy*; Martirosyan (2010) does not discuss *(e)t‘ē*.[338]

In terms of its original meaning, this etymology and the usage of *(e)t‘ē* suggest something like ‘so, thus’, which aligns well with cognate function words in other Indo-European languages, e.g. Lith. *tè* ‘there, thus’, OSax. *the* ‘that’.

In what follows, no further reference will be made to the difference in use between *t‘ē* and *et‘ē* since it has no bearing on the question discussed in this section.

5.3.1.2 *(e)t‘ē* marks direct speech, questions

One of the primary functions of *(e)t‘ē* in Classical Armenian is the introduction of statements and questions, both direct and indirect, after verbs of saying and thinking (*verba dicendi et sentiendi*). In the first, quotative use, pronominal reference and verbal agreement retain the same values as in the original statement.[339] As will be discussed in 5.3.1.3 below, it is not always possible to differentiate direct and indirect questions

[338] An additional question is which of the two form is original, and which secondarily created. The long form *et‘ē* decreases in currency over the course of Middle Armenian and is lost entirely in Modern Armenian varieties, suggesting that it may be the original form. It is equally possible to assume, however, that both forms are original, since both are used almost exclusively in some syntactic contexts; for more on this, Jensen (cf. 1931).

[339] That is to say, given a question like ‘Why aren’t you washing my car?’, a quotative rendition of this question would maintain both the verb form ‘don’t’ and the pronominal referents ‘you’ and ‘my’; in colloquial Modern English, this might be expressed as ‘He was like “Why aren’t you washing my car?”’, whereas standard Modern English might express the same question as ‘He$_{i}$ asked why he$_{j}$ was not washing his$_{i}$ car’. For a brief overview of quotative structures in English and other languages, Buchstaller and van Alphen (cf. 2012).

and statements, especially in such cases where neither pronoun nor verbal agreement would have to change.

Direct statements and exclamations are introduced by a form of, e.g., *asem* 'to say'; the quotative immediately precedes the quoted speech. Thus (5.59–5.61):

(5.59) *isk nokʻa asēin tʻē cano mez ew*
PTC 3.PL.NOM say.3.PL.PST QUOT make-know.2.SG.AOR.IMP 1.PL.ACC and
hastatea z=mits mer
confirm.2.SG.AOR.IMP OBJ=mind.ACC.PL 1.PL.POSS
'Then they said: Inform us and confirm our minds …' (Ag. §245)

(5.60) *ayspēs yišecʻekʻ ew i mti kalarukʻ*
thus remember.2.PL.AOR.IMP and in mind.LOC.SG keep.2.PL.AOR.IMP
z=ban=n teaṙn z=or asacʻ tʻē
OBJ=word.ACC.SG=DET Lord.GEN.SG OBJ=REL.ACC.SG say.3.SG.AOR QUOT
xndrecʻekʻ z=arkʻayutʻiwn Astucoy ew
seek.2.PL.AOR.IMP OBJ=kingdom.ACC.SG God.GEN.SG and
z=ardarutʻiwn nora, ew ayn amenayn tacʻi
OBJ=justice.ACC.SG 3.SG.GEN and DEM all bring.3.SG.SBJV
'And so remember and keep in mind the word of the Lord, which he said: Seek the kingdom of God and his justice, and he will give [you] everything' (PʻB IV.6)

(5.61) *aṙ hasarak atean=n z=bołokʻ barjeal ałałakein etʻē*
jointly court=DET OBJ=appeal.ACC.SG raise.CVB shout.3.PL.PST QUOT
Nersēs licʻi mer hoviw
PN become.3.SG.AOR.SBJV 1.PL.POSS shepherd
'Jointly the [members of] court raised an appeal and shouted: Nerses shall be our shepherd.' (PʻB IV.3)

While examples (5.59, 5.60) contain imperative forms and are thus to be classed as commands, (5.61) is, or can be interpreted as, a plain statement. This kind of quotative marking has parallels in other Indo-European languages (e.g. Greek, Sanskrit, Old Persian), for which see 5.3.3 below.

Next to direct statements, *(e)tʻē* can also introduce direct questions, including *wh*-questions; thus examples (5.62–5.64):

(5.62) *ew ayr=n or y=aṙajnum=n kardacʻ*
and man=DET REL in=beginning.LOC.SG=DET call.3.SG.AOR
z=anun im ew cʻucʻanēr inj asē
OBJ=name.ACC.SG 1.SG.POSS and show.3.SG.PST 1.SG.DAT say.3.SG.PRS

c‘=is *t‘ē* *ayr* *du* *zi?* *kas* *zarmac‘eal*
IOBJ=1.SG.ACC QUOT man 2.SG.NOM why stand.2.SG.PRS be-amazed.PTCP
ew *oč‘?* *i* *mit* *aṙnus* *z=mecamecs* *Astucoy*
and NEG into mind take.2.SG.PRS OBJ=great.ACC.PL God.GEN.SG
‘And the man who at the beginning had called my name and showed me [this] said to me: You, man, why do you stand [around] in amazement and do not reflect on the great [deeds/creations] of God?’ (Ag. §741)

(5.63) *ew* *ert‘eweks aṙeal* *ənd* *xoran=n* *asē* *c‘=na* *yoržam*
and go-to-and-fro.CVB in tent=DET say.3.SG.PRS IOBJ=3.SG.ACC when
i *parsik* *i* *hołoy=n* *i veray* *čemein* *t‘ē* *əndēr?*
in Persian in soil.LOC.SG=DET atop walk.3.PL.PST QUOT why
ełer *im* *t‘šnami,* *Aršak* *ark‘ay* *Hayoc‘*
become.2.SG.AOR 1.SG.POSS enemy, PN king Armenian.GEN.PL
‘And as they were toing and froing in the tent, he said to him as they were walking on top of Persian soil: Why did you become my enemy, King Aršak of the Armenians?’ (P‘B IV.54)

(5.64) *z=or* *tareal* *Vehdenšaphoy* *ew* *ork‘* *ənd*
OBJ=REL.ACC.SG lead.PTCP PN.GEN.SG and REL.NOM.PL with
nmay=n *ein* *ew* *harc‘eal* *t‘ē* *duk‘* *y=o?*
3.SG.DAT=DET be.3.PL.PST and ask.PTCP QUOT 2.PL.NOM to=what
kazmik‘
plan.2.PL.PRS
‘These [people] Vehdenšapuh and [those] who were with him drew out and asked: Where are you planning [to go]?’ (ŁP‘ §53)

Once more, *(e)t‘ē* immediately precedes the question itself, although the *wh*-marker need not be at the beginning of the sentence, as, e.g., in (5.62, 5.64), where appellations precede the question word.

Next to direct statements introduced by *(e)t‘ē*, there are instances of direct statements and questions, though less numerous, in which no function word links introductory and quoted speech; these occur throughout the corpus of surveyed texts, as well as in the New Testament translation.

(5.65) *ew* *asē* *c‘=is* *nayeac‘* *du* *i ver* *ew*
and say.3.SG.PRS IOBJ=1.SG.ACC look.2.SG.AOR.IMP 2.SG up and
tes *z=sk‘anč‘elis* *z=or* *c‘uc‘anem* *k‘ez*
see.2.SG.AOR.IMP OBJ=miracle.ACC.PL OBJ=REL.ACC show.1.SG.PRS 2.SG.DAT
‘And he says to me: Look up and behold the miracles which I [will] show to you.’ (Ag. §733)

(5.66) *isk na oč‘ aṙnoyr y=anjn z=noc‘a inč‘ aṙ*
PTC 3.SG.NOM NEG take.3.SG.PST into=soul.ACC.SG OBJ=3.PL.GEN INDF to
nosa matuc‘eal asē oč‘? vał isk asac‘i et‘ē
3.PL.ACC approach.CVB say.3.SG.PRS NEG before PTC say.1.SG.AOR COMP
‘But he did not take anything of theirs [which they had] brought to them, saying: Did I not tell you earlier that …’ (Ag. §762)

5.3.1.3 *(e)t‘ē* marks indirect speech, questions

In contrast to direct statements, commands, and questions, the phrasing of indirect statements, commands, and questions changes in that references to the first and second person should be turned into different kinds of demonstrative pronouns, which in turn is reflected in third person verbal morphology. It is difficult to determine, however, whether a statement is direct or indirect in those cases where no reference to non-third person entities is made.

(5.67, 5.68), for instance, may be indirect or direct statements, since no reference to non-third person entities is made; this is reflected in the two possible translations in (5.67).

(5.67) *isk na hawaneal vałvałaki barbaṙeal asēr t‘ē*
PTC 3.SG.NOM agree.CVB immediately exclaim.CVB say.3.SG.PST QUOT
kamk‘ Astucoy katarescʻin
wish.NOM.PL God.GEN.SG fulfil.3.PL.AOR.SBJV
‘And he, as he was convinced, immediately shouted: The will of God will be fulfilled’ / ‘… shouted that the will of God would be fulfilled’ (Ag. §794)

(5.68) *ew and edeal skizbn t‘argmaneloy z=girs*
and there give.PTCP beginning translate.INF.GEN.SG OBJ=book.ACC.PL
Aṙakac‘=n Sołovmoni, or i skizban=n
proverb.GEN.PL PN.GEN.SG REL.NOM.SG in beginning.LOC.SG
canawt‘s imastut‘ean=n əncayec‘uc‘anē linel
acquainted.ACC.PL wisdom.GEN.SG=DET recommend.3.SG.PRS become.INF
aselov et‘ē čanač‘el z=imastut‘iwn ew
say.INF.LOC.SG QUOT know.INF OBJ=wisdom.ACC.SG and
z=xrat, imanal z=bans hančaroy
OBJ=counsel.ACC.SG understand.INF OBJ=word.ACC.PL reflection.GEN.SG
‘And so they began translating the books of the *Proverbs* of Solomon, which from the beginning recommends getting acquinted with wisdom, saying: To know wisdom and counsel, to understand the words of reflection’ (Kor. §52)

(5.68) does not lend itself to different kinds of translations, direct and indirect, since what is reported is but a sentence fragment.

In (5.69), by contrast, such a differentiation is possible, both in the indirect statement and the indirect question contained therein.

(5.69) *ew noc‘a harc‘eal et‘ē oyr? ē bazmut‘iwn*
and 3.PL.GEN ask.CVB QUOT who.GEN.SG be.3.SG.PRS troops.NOM.SG
ays, luan i mardkanē t‘ē Siwneac‘
DEM hear.3.PL.AOR from people.ABL.SG QUOT Siwnik‘.GEN.PL
tearṙn=n ē
lord.GEN.SG=DET be.3.SG.PRS
‘And when they asked: Whose are these troops? they heard from the people: They are [the troops] of the lord of the Siwnik‘’ / ‘… asked whose these troops were, they heard that they were the troops …’(ŁP‘ §42)

Further instances of indirect questions can be found in abundance in all texts of the corpus.

(5.70) *isk t‘erews asic‘es du t‘ē ur? pahē*
PTC perhaps say.2.SG.PRS.SBJV 2.SG.NOM QUOT where guard.3.SG.PRS
z=erkiwłacs iwr
OBJ=worshipper.ACC.PL REFL.POSS
‘Perhaps you will say: Where does he guard his worshippers?’ / ‘… ask where he guards …’ (Ag. §229)

(5.71) *y=ors harc‘anēr Meružan=n ew asēr et‘ē*
into=REL.ACC.PL ask.3.SG.PST PN=DET and say.3.SG.PST QUOT
čanaparhs i Bagrawand ənd or? ert‘ay
way.ACC.PL to Bagrawand with who go.3.SG.PRS
‘Of them Meružan asked and said: With whom does he travel on the way to Bagrawand?’ / ‘… asked with whom he travelled…’ (P‘B V.43)

Just as in the case of direct statements, their indirect counterparts, too, do on occasion occur without an introductory function word; thus (5.72):

(5.72) *ew yaytneal aṙ Grigor hreštak teaṙ=n asē*
and appear.CVB to PN angel.NOM.SG Lord.GEN.SG say.3.SG.PRS
hačec‘aw tēr z=bnakel srboc‘=d
be-contented.3.SG.AOR Lord.NOM.SG OBJ=dwell.INF holy.GEN.PL=DET
Astucoy i tełwoǰ=d
God.GEN.SG in place.LOC.SG=DET
‘And as an angel of the Lord appeared to Grigor, it said: The Lord is contented that the Saints of God should dwell in this place.’ (Ag. §809)

The same is, however, not the case for indirect questions, of which no instance without *(e)tʻē* could be found, raising the question whether the differentiation between indirect and direct speech in Armenian is necessary.[340]

5.3.1.4 *(e)tʻē* as complementiser and in other functions

Jensen (1931) gives a full account of the various functions fulfilled by *(e)tʻē*; some of the most common ones are briefly illustrated here.

One of the most common functions of *(e)tʻē*, next to its quotative use, is that of the complementiser, which precedes sentential objects,[341] as (5.73) illustrates.

(5.73) *kʻanzi* *gitemkʻ* *tʻē* *na* *ē* *čšmarit* *Astuac*
because know.1.PL.PRS COMP 3.SG.NOM be.3.SG.PRS true God
'Because we know that he is the true God.' (Ag. §253)

A similarly common function of *(e)tʻē* is the introduction of conditional clauses, where it marks the beginning of the protasis. In (5.74), *(e)tʻē* is used in a mixed-tense counterfactual conditional.

(5.74) *zi* *tʻē* *mardoy* *pʻrkeal* *ēr* *z=jez* *i*
for if man.GEN.SG save.PTCP be.3.SG.PST OBJ=2.ACC.PL from
cařayutʻenē *[…]* *i* *mec* *barkutʻiwn* *brdēikʻ* *z=ařajin*
servitude.ABL.SG into great anger.ACC.SG provoke.2.PL.PST OBJ=first
tēr=n *jer*
master.ACC.SG=DET 2.GEN.PL
'For if a man had saved you from servitude […] you would provoke your first master to great anger.' (Eł. p.56)

(e)tʻē can further introduce unfulfillable wishes and counterfactual comparisons; an instance of the former is shown in (5.75)

[340] Ouzounian (1992) treats reported speech in Classical Armenian in great detail, and arrives at the conclusion that '[l]e discours direct est par excellence le mode de reproduction d'un discours dans la langue classique' (1992:93). Indirect speech proper is expressed in a variety of fashions, e.g. without a complementiser in an infinitive construction: *asēr cʻpatgamaworsn Parsicʻ ařˑ vałiwn ařnel nocʻa patasxani* ('He said to the Persian messengers [that he would] respond to them the next day', ŁPʻ §89, cf. Ouzounian 1992:72); or with *zi* (cf. Ouzounian 1992:82–93). This latter kind of reported speech, however, does not appear to be used to report actual utterances, but rather to relay, e.g., commands like 'tell them that…' or other purposive expressions.

[341] The coincidence of reported speech marker and complementiser is not uncommon; cp., for example, NHG *dass*, NE *that*, Gk. *ὅτι*.

(5.75) *miayn t‘ē i tērut‘ean=n ew oč‘ i p‘axstean ēr*
only COMP in reign.LOC.SG=DET and NEG in flight.LOG.SG be.3.SG.PST
vaxčaneal
die.PTCP
‘If only he had died in his reign and not on the run!’ (MX II.13)

Next to its functions as quotative marker, complementiser, and conditional, JENSEN (1931) suggests that *(e)t‘ē* can introduce purpose clauses, causal clauses, and more rarely concessive clauses. A search for such uses in a representative sample of the corpus of original texts, however, reveals that only the causal use (5.76) is (infrequently) attested therein; the other uses do not occur in these texts, and must therefore be restricted to the Bible translation. Whether they are, in fact, reflections of Greek syntax in Armenian cannot be addressed here.

(5.76) *ew barexawsel=n nora vasn srboc‘ ew*
and intercede.INF=DET 3.SG.GEN because saint.GEN.PL and
barexawsel=n Hogwoy=n Srboy aṙ i vardapeteloy
intercede.INF=DET spirit.GEN.SG=DET holy.GEN.SG for teach.INF.GEN.SG
mez zi ənd mimeanc‘ barexaws ic‘emk‘, ew oč‘
1.PL.ACC so-that with RECIP.LOC.PL intercessor be.1.PL.PRS.SBJV and NEG
et‘ē aṙ barjragown ok‘ Miaci=n kam
because for higher INDF only-begotten.GEN.SG=DET or
Hogwoy=n Srboy barexawsel=n giteli ē
spirit.GEN.SG=DET holy.GEN.SG intercede.INF=DET evident be.3.SG.PRS
‘It is evident that he [Jesus] interceded for the saints and for the Holy Spirit in order to teach us that we should be interecessors for one another, and not because the Only-Begotten or the Holy Spirit interceded for some higher power.’ (Kor. §155)

5.3.2 West Middle Iranian *kw* /kū/

In and of themselves, the use pattern of Arm. *(e)t‘ē* does not deviate greatly from that of similar particles in other Indo-European languages. It is primarily the occurrence of direct questions with both a *wh*-question word and quotative marker that are less typical.

In view of the general influence of West Middle Iranian on Classical Armenian, and given the other potential syntactic parallels shown already, it is worth investigating whether this pattern, too, might find a plausible parallel in Parthian and/or Middle Persian.

As above, after a very brief etymological note, in what follows the uses of the West Middle Iranian marker *kw* /kū/ will be illustrated briefly.

5.3.2.1 Etymology

Based on its usage and phonology, it is clear beyond doubt that WMIr. *kw* /kū/ derives from an interrogative stem *k^{w}i-/k^{w}o-; the basic meaning 'where?', so attested also in Gatha Avestan,[342] may suggest an original locative case, but word-final apocope in the development of West Middle Iranian has obscured its morphological origin and does not allow for a closer determination.

5.3.2.2 *kw* /kū/ marks direct speech, questions

As in Armenian above, direct speech is introduced by the quotative marker, upon which follows immediately the quoted sentence. No changes in pronouns or verbal agreement occur. As (5.78) shows further, direct questions are also signalled by the quotative marker before the *wh*-question word, here *'c kw* /až kū/ 'whence?' (5.78) and *cy wsn'd* /čē wasnāδ/ 'why?' (5.79).

(5.77) *('w=š w)'(cyd kw 'fr)[yd] bw'ẖ*
and=3.SG.OBL say.3.SG.PRS QUOT bless.PTCP be.2.SG.SBJV
'And he says to him: Blessed be you!' (M8286/I/V/7–14; Parthian)

(5.78) *[pd w]zrg (š)'dyft 'w mn w'xt kw 'c kw*
with great joy to 1.SG.OBL say.PTCP QUOT from where
'(yy) tw mn bg 'wd 'njywg
be.2.SG.PRS 2.SG 1.SG.POSS god and saviour
'With great joy she said to me: From where are you, my Lord and Saviour?' (MKG 126–8; Parthian)

(5.79) *ws(n)'d b't zr'd kw cy wsn'd drwšt ny*
because PN be-angry.PTCP QUOT what because well NEG
bwṯ
become.PTCP
'Because of Bat he was/became angry [saying]: Why (lit. because of what) has he not become well?' (MKG 1210–11)

[342] E.g. in *… kū aṣauuā ahurō yə̄ …* '… where the righteous Lord, who …' (Y. 53.9). Based on attestation, Avestan prefers the complex form Av. *kūθrə̃* to signify 'where' (Bartholomae 1904:473–4).

A noteworthy difference consists in the placement of object clitics, which attach to the quotative marker. Accordingly, it is not always possible to reconstruct the original sentence in its original structure with complete certainty (Durkin-Meisterernst 2014:404). This is exemplified in (5.80), which also shows that Parthian and Middle Persian operate along the same lines in this regard.

(5.80) *h'n* *w'xš* *gwpṯ* *kw=t* *'n* *ny* *pdyrym*
DEM spirit say.PTCP QUOT=2.SG 1.SG.DIR NEG accept.1.SG.PRS
'That spirit said: I will not accept you.' (MM2 M2/I/R/ii/26–7; Middle Persian)

A further similarity in speech marking—or rather lack thereof—between Armenian and West Middle Iranian consists in the fact that direct statements and questions can equally be found unmarked by quotatives, as (5.81, 5.82) show.

(5.81) *w'xt* *cy?* *bwrzy(s)tr.* *'rd'w* *w'xt* *mn* *'sp[y]r*
say.PTCP what higher just say.PTCP 1.SG.POSS sphere
'He [Mani] said: What [is even] higher? The just [man] said: My sphere.' (MKG 42–3; Parthian)

(5.82) *'w* *mn* *gwpt* *(c)[y* *r']*(y)* *ny* *šwd* *hy* *'(w*
to 1.SG.OBL say.PTCP what for NEG go.PTCP be.2.SG.PRS to
x)[wyš] *šhr.* *mn* *gwpt* *'c* *dwr* *gy'g* *'md*
REFL.POSS land 1.SG.OBL say.PTCP from far place come.PTCP
hym *dyn* *r'y*
be.1.SG.PRS religion for
'He said to me: Why did you not go to your own land? I said: I came from a far-off land for religion's sake.' (MMii M2/I/V/i/1–6)

Thus far, then, the suspected parallels between West Middle Iranian and Armenian hold.

5.3.2.3 *kw* /kū/ marks indirect speech, questions

None of the current grammars concerned with West Middle Iranian make reference to indirect speech or questions; it would seem that in both languages, reported speech is only expressed directly. Accordingly, no comparison with Classical Armenian can be attempted.

This raises two questions: firstly, whether the category of indirect statements and questions in Armenian is indeed real or just based on the absence of pronominal references; and secondly, whether indirect speech is indeed inexistent or simply unattested in West Middle Iranian.

The latter question cannot be answered for the simple reason that no data is available. The former, on the other hand, has no clear answer since no examples of unambiguously indirect questions are forthcoming in the corpus; they could equally well be rendered as direct statements. The New Testament data cited by Jensen (1931:32) provides little evidence to the contrary, and owing to its nature as a translated text is not a valid comparandum.

Accordingly, there is nothing in principle that speaks against treating expressions of direct and indirect statements—should the latter exist—in Classical Armenian as one grammatical category, and comparing them to direct statements in Middle Iranian.

5.3.2.4 *kw* /kū/ as complementiser and in other functions

Durkin-Meisterernst (2014:403–9) states that *kw* /kū/, next to its quotative function, also serves as complementiser (5.83) and causal conjunction (5.84).[343]

(5.83) *'wd kd twr'n š'ẖ dyd kw qyrbkr 'br 'x'šṯ*
and when Tūrān king see.PTCP COMP benefactor up rise.PTCP
'And when the king of Tūrān saw that the benefactor had risen, …' (M8286/I/R/1–3; Parthian)

(5.84) *'w=š'n ny hw ws(n)'d pdwh'd kw, 'g=yš'n n[y] pdwh'd*
and=3.PL NEG DEM because pray.PTCP because if=3.PL NEG pray.PTCP
'hyndyẖ 'b'w=š'n 'whrmyz(d) [b]g ny hwfry'd'd ('h)ndy
be.3.SG.OPT then=3.PL PN NEG help.PTCP be.3.SG.OPT
byc=yš'n frh' hw pdwhn
but=3.PL because DEM prayer

[343] Both Arm. *(e)t'ē* and WMIr. *kw* /kū/ can also introduce clarificatory clauses, comparable to NE 'namely', NHG 'nämlich'. Cp., e.g., Arm. *hamarec'an z=zōr=n ełbōr=n t'ē xałałut'iwn ē ek=n nora* 'They thought that his brother's army was coming in peace (lit. They counted on [his] brother's army, namely its arrival was peace)' (P'B IV.18) and Pth. *kaδ hirzēnd mardomag, kū-m nē nē wināsēnd, bašn=um bawēd zargōn yaδ ō rōž yāwēd* 'If people let [me = date palm], that is do not harm me, my tip will be green until the last day.' (DA 24–5). This usage is, in all likelihood, an extension of the complementiser function.

> ‘And they did not pray on this account because, if they had not prayed,
> Ohrmezd-Bad would not have helped them; but their prayer was for this …’
> (MMiii M2/II/R/ii/10–16; Parthian)

There is, accordingly, a reasonable amount of functional symmetry between Arm. *(e)t‘ē* and WMIr. *kw* /kū/ in that both serve as quotatives, complementisers, and causal conjunctions; the Armenian form is further used to introduce conditional statements, while the West Middle Iranian form can introduce local interrogative and relative clauses.

5.3.3 Synthesis

Given these functional parallels between Classical Armenian and West Middle Iranian, the question arises whether this use pattern was inherited from Indo-European, developed independently in both languages, or is the result of language contact.

If this pattern were inherited from Indo-European, some of the older daughter languages ought to show similar distributions. Upon further reflection, however, it becomes evident that parallels are relatively limited.

Hittite does not provide any such parallels, as it uses an enclitic particle Hitt. *=wa(r)=* as a quotative (Fortson 1998). Tokharian does not use any overt form of subordination to indicate direct speech (Adams 2015:37).

Greek *ὅτι*, may introduce direct and indirect statements (5.85, 5.86), function as complementiser (5.87), and even as a causal conjunction (5.88), but is not used to introduce direct or indirect questions.[344] It must further be noted that marking (and using) direct speech as shown in (5.85) is the exception rather than the rule.

(5.85) *οἱ* *δὲ* *εἶπον* *ὅτι* *ἱκανοί* *ἐσμεν*
DET.NOM.PL.M PTC say.3.PL.AOR QUOT ready.NOM.PL.M be.1.PL.PRS
‘But they say: We are ready.’ (Xenophon, *Anabasis* V.4,10)

(5.86) *ἔλεγεν* *ὅτι* *ἕτοιμος* *εἴη* *ἡγεῖσθαι*
say.3.SG.PST QUOT ready.NOM.SG.M be.3.SG.PRS.OPT lead.PRS.INF.MID
αὐτοῖς
3.PL.DAT

[344] For these uses and concerning direct and indirect speech in Greek in general, cf. Smyth (1984:§§2240, 2590a, 2597–2634).

‘He said that he was ready to be their leader’ (Xenophon, *Anabasis* VII.1,33)

(5.87) *οἶδ’ ὅτι οὐδ’ ἂν τοῦτό μοι ἐμέμφου*
know.1.SG.PRS COMP NEG PTC DEM.ACC.SG.N 1.SG.DAT blame.2.SG.PST.MID
‘I know that you would not blame me even for this’ (Xenophon, *Oeconomicus* II.15)

(5.88) *Λακεδαιμόνιοι διὰ τοῦτο πολεμήσειαν αὐτοῖς*
PN.NOM.PL.M because DEM.ACC.SG.N wage-war.3.PL.AOR.OPT 3.PL.DAT
ὅτι οὐκ ἐθελήσαιεν μετ’ Ἀγεσιλάου ἐλθεῖν
because NEG wish.3.PL.AOR.OPT with PN.GEN.SG.M march.AOR.INF.ACT
ἐπ’ αὐτόν
against 3.SG.ACC.M
‘[He said that] the Spartans had made war against them [Thebans] because they did not want to march against him [King of Persia] with Agesilaos.’ (Xenophon, *Hellenica* VII.1,34)

The older Indo-Iranian languages come closer to the functional distribution shown in West Middle Iranian and Classical Armenian. The particle Ved. *íti*, found mainly in Vedic prose, can mark both direct statements and questions, but differs from *(e)t‘ē* and *kw* /kū/ in following the quotation.

(5.89) *brahmajāyé ’yám íti céd ávocan*
brahmin-wife.NOM.SG.F DEM.NOM.SG.F QUOT if say.3.PL.AOR
‘If they have said: This is a Brahman’s wife’ (RV 10.109,3)

(5.90) *táṃ devā́ abruvan vrā́tya kīṃ nú*
3.SG.ACC.M god.NOM.PL.M say.3.PL.PST PN.VOC.SG why now
tiṣṭhasí ’ti
stand.2.SG.PRS QUOT
‘The gods said to him: Vrātya, why do you now stand?’ (AV 3.1)

An indirect construction exists, but according to Speijer (1886:§491) construes with the accusative and participle; the particle *íti* is, however, also used to fulfil other functions, including that of complementiser (cf. Speijer 1886:493 with examples). Equally, it is noted, however, that marking of direct speech is not always necessary.

Avestan similarly does not require marking of direct or indirect speech, but has a (rarely used) particle *u^{i}tī* that may be employed to signify quoted speech, as in (5.91) below; note, however, that the quotative marker does not immediately proceed the statement in question.

(5.91) *yaiiå* *spaniiå* *uⁱtī* *mrauuaṯ* *yəm*
REL.GEN.DU.M life-giving.NOM.SG.M QUOT say.3.SG.PRS.SUBJ REL.ACC.SG.M
aŋgrəm *nōiṯ* *nā* *manå* … *noiṯ* *uruuqnō*
evil.ACC.SG.M NEG 1.SG.GEN thought.NOM.PL.N NEG soul.NOM.PL.M
haciṇtē
go.3.PL.PRS
'… of which two the life-giving [one] thus will say to [him] whom [one knows as] the Evil [one]: neither our thoughts … nor souls go together' (Y. 45.2)

Av. *uⁱtĭ* is, however, not used as the complementiser, or indeed to introduce indirect questions. The Avestan complementiser is *yaθā̆*, *yezī*, or *yaṯ/hiiaṯ*, the former two of which can also introduce indirect polar questions; indirect *wh*-questions are signalled by the relevant form of the relative pronoun in *ya-* (Reichelt 1909:§§754–789). Next to their complementiser functions, these conjunctions (esp. *yaṯ/hiiaṯ*) can also be used to introduce causal and explanatory clauses.

(5.92) *aiiå* *nōiṯ* *ərəš* *vīšiiātā* *daēuuāčinā*
DEM.GEN.DU.M NEG properly decide.3.PL.AOR.INJ.MID Daēva.NOM.PL.M
hiiaṯ *īš* *ā.dəbaomā* … *upā.ǰasaṯ*
because 3.PL.ACC infatuation.NOM.SG.N overcome.3.SG.PRS.INJ
'Between these two [spirits] even the Daēvas did not [manage to] decide properly, because infatuation overcame them.' (Y. 30.6)

In Old Persian, the cognate conjunction OP *yaθā* is used as causal conjunction (5.93); Kent (1953:204 s.v. yaθā) further suggests it was used as a complementiser in DB IV.44, but this passage is more plausibly translated as causal, too. Direct speech, however, either remains unmarked (5.94), or is marked with different deictic particles, e.g. *avaθā* (5.95).

(5.93) *avahya=rādiy* *Auramazdā* *upastām* *abara* … *yaθā* *naiy*
for-this-reason PN.NOM.SG help.ACC.SG bring.3.SG.PST because NEG
arika *āham*
evil.NOM.SG be.1.SG.PST
'For this reason Ahura Mazda helped me, because I was not evil.' (DB IV.62–3)

(5.94) *θātiy* *Dārayavauš* *xšāyaθiya* *manā* *pitā* *Vištāspa*
say.3.SG.PRS PN.NOM.SG king 1.SG.GEN father.NOM.SG PN.NOM.SG
'King Darius says: My father was Hystaspes' (DB I.3–4)

(5.95) *hauv* *kārahyā* *avaθā* *adurujiya* *adam* *Bardiya*
DEM.NOM.SG people.GEN.SG thus lie.3.SG.PST 1.SG.NOM PN.NOM.SG
amiy
be.1.SG.PRS
'This man deceived the people thus: I am Smerdis' (DB I.38–9)

Another conjuction, OP *taya* (cp. Av. *hiiaṯ / yaṯ*), however, can introduce indirect speech and also operates as complementiser (5.96, 5.97); Kent (1953:187 s.v. ²tya) adds that *taya* may also be a causal conjunction. Kent's reading of (5.96) suggests that it here introduces indirect speech; based on the introductory phrase *azdā abava*, however, a complementiser reading seems more likely, esp. since this need not be seen as an actual utterance. Similarly, in (5.97), the occurrence of *mām* before the *taya* and the fact that the clause it introduces is effectively the object of *xšnāsātiy* favours a complementiser reading over Kent's quotative; the 1SG verb does, however, complicate the matter, leading Schmitt (1995:243) to agree with Kent (1953:§302e) that it might be an 'indirectly quoted statement', or simply an explicatory clause.

(5.96) *yaθā* *Kabūjiya* *Bardiyam* *avāja* *kārahyā* *naiy* *azdā*
when PN.NOM.SG PN.ACC.SG slay.3.SG.PST people.GEN.SG NEG known
abava *taya* *Bardiya* *avajata*
become.3.SG.PST COMP PN.NOM.SG slay.PTCP.PASS.NOM.SG.M
'When Cambyses killed Smerdis, it did not become known to the people that Smerdis had been slain.' (DB I.31–2)

(5.97) *avahyarādiy* *kāram* *avājaniyā* *mātya=mām*
for-this-reason people.ACC.SG slay.3.SG.PST.OPT lest=1.SG.ACC
xšnāsātiy *taya* *adam* *naiy* *Bardiya* *amiy*
know.3.SG.PRS.SBJV COMP 1.SG.NOM NEG PN.NOM.SG be.1.SG.PRS
'For this reason he used to slay the people lest they know me, that I am not Smerdis.' (DB I.51–3)

A different example suggests, however, that OP *taya* may in fact also introduce indirect speech, specifically *wh*-questions, where an interrogative pronoun follows on the quotative marker.[345]

(5.98) *yadipatiy* *maniyāhaiy* *taya* *ciyakaram* *āha*
if think.2.SG.PRS.SBJV.MID QUOT how-many be.3.SG.PST
avā *dahyāva* *tayā* *Dārayavauš* *xšāyaθiya*
DEM.NOM.PL.F country.NOM.PL.F REL.ACC.PL.F PN.NOM.SG king.NOM.SG.M

[345] Note, however, that the other instances of *man-* 'think' do not show complementiser/quotative (Schmitt 1995:244).

adāraya
hold.3.SG.PST
'If now you should think how many are the countries, which King Darius holds …' (DNa 38–41)

In view of the illustrative data presented above, it is difficult to establish whether a pattern of Indo-European age may have been the foundation of the functional distribution emerging in West Middle Iranian and Classical Armenian.

Of the old and early-attested daughter languages, Hittite and Tokharian do not provide any comparable information. Early Latin does not indicate that *quod*, which *inter alia* would later furnish the complementisers of Romance languages, was used in this function until after the turn of the millennia.

Greek does use the conjunction *ὅτι* to introduce direct and indirect statements (favouring the latter), as complementiser, and also to introduce causal clauses; reported direct and indirect questions, however, are not introduced by this conjunction.

Sanskrit *íti* may be used to introduce direct statements and questions, including *wh*-questions, and as a complementiser. Indirect statements are expressed differently.

Avestan and Old Persian have a number of conjunctions to introduce complementiser clauses and direct or indirect speech; of these, OP *taya* seems to best match the functional distribution described for West Middle Iranian and Classical Armenian in being able to function as quotative marker and complementiser, including before *wh*-questions.

The developments in these languages, therefore, do not allow for a reconstruction of such a functional distribution in Indo-European: the function words differ too widely in their etymology, position, and usage. Within Indo-Iranian, where these particles are used in a comparable fashion, the etymological match between these particles is imperfect, but may suggest a nascent pattern; the size of the Old Persian corpus in particular, however, makes it difficult to determine how wide-spread this functional distribution was.

Since it is therefore unlikely that the use pattern of Arm. *(e)t'ē* is based on an inherited Indo-European prototype, two options remain: either the pattern developed independently, or it was replicated from West Middle Iranian.

Typologically, quotatives based on roots with deictic function are not typologically uncommon, as are verbs signalling comparison (Buchstaller and van Alphen 2012:XIV, XVIII); this would include Sanskrit *íti* and likely Arm. *(e)t‘ē*.[346] It is therefore not to be excluded that this pattern may have developed on its own, and that the co-occurrence of reported speech marking and *wh*-question words is owed not to language contact but the fact that Armenian does, in fact, only reports direct speech and questions, wherefore this is the standard and logical way to phrase reported questions.

Equally, however, the fact that these two languages, one of which has influenced the other significantly as illustrated in the *chapters 1 and 4*, have both developed this functional distribution could allow for pattern replication. The locus of the pivot, i.e. the function which both WMIr. *kw* /kū/ and Arm. *(e)t‘ē* shared intially, is made difficult by the exclusively post-Iranian attestation of Armenian.

Since WMIr. *kw* /kū/ derives from PIE k^{w}i-/k^{w}o- and can be used as interrogative and relative ‘where(?)’ (as also attested in Avestan), one potential starting point maybe the grammaticalisation of this adverb as a causal conjunction – assuming both are etymologically related, and not just homophones. This would make for a relatively weak pivot, however, since the use of *(e)t‘ē* in Armenian as a causal conjunction is very limited.

A more likely alternative is the complementiser function, which is common in both languages and aligns more clearly with the probable original meaning of *(e)t‘ē* ‘so, thus’; the grammaticalisation path of WMIr. *kw* /kū/ from ‘where?’ to ‘that’ is less clear.

It may be speculated, then, that next to their non-shared functions as conditional complementiser (Armenian) and interrogative and relative adverb (West Middle Iranian), the two conjunctions overlapped in their use as complementisers, and possibly as markers of direct or indirect discourse. This parallel may have lead to a functional extension of Arm. *(e)t‘ē* to also introduce reported direct *wh*-questions as well as causal clauses in the same way that WMIr. *kw* /kū/ does.

[346] WMIr. *kw* /kū/, however, does not neatly fit into any of the categories from which quotatives usually develop.

5.4 Conclusions

In this chapter, the use and syntax of three Armenian function words or constructions has been discussed with a view to their potential Iranian origins: the use of the Armenian relative pronoun *or* as a NP-linker comparable to the Iranian *ezāfe*-construction; the intensifying, subject-resuming, and switch-function use of Arm. *ink'n* and possible parallels in MP *xwd* /xwad/, Pth. *wxd* /wxad/; and finally the use of the complementiser and quotative *(e)t'ē* with reported *wh*-questions in Armenian as compared to similar uses of WMIr. *kw* /kū/.

In all cases, it has proved difficult to make any certain determinations owing to the nature of the Armenian data, specifically the lack of attestations prior to Iranian influence, and the ensuing impossibility of analysing syntactic developments in 'pure' Armenian.

In the matter of the *ezāfe*-construction, the evidence is not clear enough to favour or disfavour an explanation based on language contact; the fact that nominal relative clauses do occur in other Indo-European languages may point in the direction of direct inheritance. At the same time, since in at least some languages such clauses were falling out of use, it is possible that use pattern of the Iranian *ezāfe*-construction may have helped to preserve inherited nominal relative clauses in Armenian.

The case of the use pattern of Arm. *ink'n* is similar: an independent development of at least the intensifier and subject-resumption function in Armenian is entirely cogent; it is the parallel in switch-function marking, less common but still attested in Armenian, that suggests that WMIr. *xwd*/*wxd* may have influenced the Armenian pattern, whether directly in the form of pattern replication, or as a catalyst or stabiliser for an internal development.

Finally, the use of Arm. *(e)t'ē* as complementiser, causal conjunction, and as a marker for reported speech and questions, including *wh*-questions may be owed either to independent internal developments, or to contact with Iranian. If Armenian is thought to report speech as direct speech or questions exclusively, the co-occurrence of quotative and *wh*-question words can be explained without reference to West Mid-

dle Iranian, and the functional parallels are explained as typologically conditioned. Yet, it is remarkable that two languages in close vicinity with etymologically quite different complementisers/quotatives and rather different literatures should have developed this kind of functional distribution independently from one another. This topic may benefit from a more detailed, corpus-based study to determine how widely spread each of the use patterns presented above is.

Beyond the specific cases themselves, this chapter shows in no uncertain terms why research into syntactic borrowings from Iranian into Armenian in particular, and in other corpus languages in general, has not been at the forefront of research thus far: it is often simply impossible to determine if a particular syntactic pattern is the result of an independent development or language contact if no data prior to contact between the two languages in question is available. Furthermore, next to requiring an understanding of the potential contact languages in question, it is necessary to take into consideration comparable data from related languages to ensure that a pattern is not simply a common typological development, which complicates the process.

It is unclear whether a more thorough, corpus-based investigation into the three patterns discussed above would yield clearer results. At the very least, however, it has been shown that in many instances, there is potential for a language-contact based explanation to Armenian syntactic patterns that warrants investigation, if only to be dismissed.

6 Partho-Armenian language contact and its historical context

Chapters 4 and 5 have confirmed the hypotheses suggested at the end of chapter 3, namely that Armenian has undergone significant influence from the neighbouring Iranian languages not only as far as its lexicon and derivational morphology are concerned, but also with respect to its syntax.

The distribution and usage of the Armenian past participle in *-eal* has confirmed its originally passive nature, as well as the decline of the tripartite alignment pattern of the periphrastic perfect in favour of nominative-accusative alignment as found in all other tenses of the language.[347] All this, it has been suggested, is the result of influence from Parthian, on the basis of whose past tense the Armenian perfect was modelled.

At the same time it has been shown that there are a number of smaller syntactic patterns that may have been influenced by or created on the basis of similar West Middle Iranian models, specifically the *ezāfe*-like use of nominal relative clauses in Armenian, the use of Arm. *ink'n* as a subject resumption and switch-reference marker, and the quotative use of Arm. *(e)t'ē*.

With these patterns and their likely Iranian origin in mind, the following questions arise:

1. Does the contact situation between Armenian and Parthian conform to typical scenarios discussed in the literature on language contact?

[347] To recapitulate briefly, languages with tripartite alignment exhibit different marking for subjects of intransitive verbs (S), agents of transitive verbs (A), and objects of transitive verbs (O), whereas nominative-accusative alignment treats S and A in the same way. In the specific case of the Classical Armenian periphrastic perfect, the nominative is used for S, the genitive for A, and the accusative or object-marking proclitic *z=* for O; by the 8th century CE, this system has been replaced in analogy with the other tenses, in which A is also marked as nominative.

2. Is there any other, extralinguistic evidence for Partho-Armenian bilingualism?

3. To what extent can the details of contact between these two languages be known and used to corroborate, adjust, or negate the language contact hypothesis propounded above?

In order to provide answers, or at least attempts at answers, to these questions, the following chapter first addresses question 1 and discusses language contact in general, and reviews a number of aspects of and perspectives on contact, with a strong focus on pattern replication. The Partho-Armenian situation is discussed with reference to parallel and contrasting instances of language contact, and it is suggested that it comprised multiple socio-historically conditioned phases in which different contact processes occurred. Specifically, it is argued that after a phase of potentially unilateral bilingualism on the part of upper-class Armenians, the fall of the Parthian Empire in 224 CE, the Christianisation of Armenia at the beginning of the 4th century, frequent hostilities and wars with the Sasanian Empire, and the establishment of a hereditary dynasty of Parthian rulers over Armenia have resulted in a bilingual ruling class of Parthian origin, which in time has come to self-identify as Armenian.

This hypothesis, built on the linguistic data discussed previously and on comparable instances of language contact, is then backed up by extralinguistic information from Iranian, Armenian, Graeco-Roman, and Chinese epigraphy and literature as far as is possible in view of the evidence.[348] While there is little direct evidence of bilingualism, contact-induced language shift, or attrition, historical sources provide sufficient evidence to answers questions 2 and 3 to some extent, and to corroborate, at the very least, the plausibility of such a situation.

The final section will draw together the findings from chapters 4 and 5, the extralinguistic sources presented in 6.2 below, and after presenting a parallel contact situation, namely that in post-Conquest Britain, will propose a tentative chronological outline and explanation of the development of Irano-Armenian language contact, its various linguistic manifestations, and links to socio-political events in the history

[348] Little to no use will be made of art history and archaeology, with minor exceptions for numismatics, since such evidence does not shed any closer light on the linguistic situation in question.

of the peoples concerned.

6.1 Language contact and language change

'Language contact'[349] is broadly used as a term covering the conditions – linguistic and otherwise –, processes, and results of the interaction between two or more languages or lects (Harris and Campbell 1995:32–3; Lass 1997:184-5; Myers-Scotton 2002:1); consequently, as is readily imaginable, there is a host of subfields, different contexts, perspectives, and frameworks that pertain to this field, amongst which questions regarding bi- and multilingualism, code-switching (in the broadest sense),[350] di- or polyglossia, borrowing, language shift, and convergence feature most prominently and are of greatest relevance here. These aspects are, of course, not independent from one another, and causal relations can but need not exist between any or all of them, although not in all combinations and directions.[351]

Owing to the linguistic material discussed here, as well as its historical and documentary context, the focus of the discussion below lies on different kinds of contact scenarios, their definitions, contexts, and outcomes. In its course, the Partho-Armenian situation will be analysed with reference to the theories and *comparanda* outlined in each section, and an attempt will be made at explaining its position within the wider context of contact linguistics. It is argued that, owing in part to the kind of data available and its date, the Partho-Armenian situation resists neat categorisation; rather, it is likely that there were at least two phases of Partho-Armenian contact,

[349] For a brief historical survey, cf. Clyne (2004).

[350] Depending on context and scholar, code-switching may refer either generally to the usage of items and patterns from multiple languages or lects in a single speech act (cf. Gumperz 1982:59), or specifically to such usage inter-sententially; the occurrence of items from multiple languages intra-sententially is then occasionally referred to as code-mixing (Muysken 2000:1). For the present purpose, no such distinction is necessary, and the term code-switching is used in its widest sense.

[351] This is to say that, for instance, bilingualism may be the cause of code-switching in conversation, but that the inverse is not true. Further, while diglossia may be the result of societal bilingualism, this need not be the case, viz. diglossia can exist without bilingualism, and bilingualism without diglossia (Fishman 1967). Some common examples include the situation in Tsarist Russia, where a certain amount of French-Russian diglossia existed among the upper classes without full societal bilingualism (cf. Dmitrieva and Argent 2015; Rjéoutski and Somov 2015 for details), while the situation in Wales or the Republic of Ireland may be classed, at least for some individuals, as bilingualism without diglossia, since both English and Welsh/Gaelic may be (and are) used in a variety of communicative situations (cf. e.g. Murchú 1988).

in which different contact mechanisms came to play, resulting in the form of the Armenian language as preserved in the texts discussed in chapter 4.

6.1.1 Theoretical considerations in language contact studies

This section begins with a very brief review of the relevance of language contact studies for historical linguistics, and then proceeds to consider general prerequisites, results, and constraints on linguistic change induced by language contact. Thereafter, a pertinent selection of specific language contact scenarios is discussed in more detail and with reference to the Armenian material in order to situate it within the bigger scheme. The third subsection considers motives for and constraints on contact-induced change, with a particular view to explaining the occurrence of pattern replication phenomena. The final section explores the question of primacy in contact, specifically whether socio-historical or linguistic factors more closely determine what kind of language contact phenomena occur, and to what extent.

6.1.1.1 Relevance of language contact for historical linguistics

Historically, the consideration of non-current stages of language, particularly since the Neogrammarians, has focussed on elaborating on and enquiring into the genetic relationships between that stage and its successors or predecessors, and on defining regular mechanisms by which change took place, frequently explicitly excluding contact-induced interference (Poplack and Levey 2010:392; Romaine 1988:349).[352] Whilst the main analytical tools used to accomplish such an analysis – the Comparative Method and Internal Reconstruction – can often account for the vast majority of changes between any well-attested stages of a language, provided sufficient data is available and taken into consideration, not all change is based on genetic relations. Similarly, changes that are difficult and inconvenient to explain in genetic terms – such as, for instance, the development of the Armenian periphrastic perfect considered in chapters 2 and 3 – may find more ready explanations in non-genetic, and specifically contact-induced change.

[352] Müller (1871–2:86), for example, suggests that there is no such thing as a mixed language, effectively denying any potential external influence beyond loan words.

In view of this tendency, Thomason cautions against ignoring the possibility of external influence:

> Traditional historical methodology in linguistics is so heavily biased in favor of internal causation that the absence of proof of [contact-induced] interference might be thought to be sufficient evidence for internal causation. (Thomason 1980:362)

Equally, the opposite approach, viz. assuming language contact to be the cause of all change, is inappropriate. The middle way is the best approach: language contact ought to be considered as one potential origin of change, particularly when a genetic explanation produces overly complicated or unlikely results, and when it is less likely that this change should have arisen outside a contact situation (cf. Thomason 2008: 47; 2001:62–3).

Another dimension of relevance lies in the fact that multilingualism was and is a far more wide-spread phenomenon than perceived in the Western, especially anglophone world. As Kühl and Braunmüller (2014:16) point out, both historically and at present, multilingualism and with it language contact are the norm rather than the exception. This emerges not only in multilingual inscriptions such as that on the rock cliff at Behistun or on the Kaʿba-ye Zardošt (see 6.2.1.2 below), but equally from Latin calques based on Greek,[353] grecising letters from Roman Egypt,[354]medieval macaronic sermons switching between Latin, English, and French (see 6.3.2 below, and cf. Schendl 2013), or bilingual newspapers such as the Armenian-Turkish weekly *Agos*.

Consequently, language contact must not be ruled out, and in fact has to be more actively considered as a potential source of change, particularly in languages or linguistic areas where other results of contact, e.g. loan words, have been recognised as forming a non-negligible part of the lexicon; see chapter 1.[355]

[353] Adams (2003:420–1, 459) points out, however, that these were largely learned formations and related to technical vocabulary (e.g. Lat. *qualitas* 'quality; type' < Gk. ποιότης 'id.' *etc.*), and Quintilian refers to them as *figurae*, stylistic devices, in his *Institutio Oratoria* (cf. Mayer 1999)

[354] Cf. Adams (1977:86) for the letters of Claudius Terentianus.

[355] Wiemer and Wälchli (2012:9–14) point out that there are different perspectives from which language contact may be investigated, viz. reconstruction, result, and process. The present study is mainly conducted from a reconstructive perspective in the sense that it compares and contrasts genealogical with contact explanations of Armenian grammatical structures; at the same time, there are processual elements in it, since it seeks to explain the likely paths of grammaticalisation involved in the structural borrowings concerned.

Hence arises the question of the prerequisites and conditions that have to obtain in order to make change by contact a plausible explanation.

6.1.1.2 Prerequisites for language contact and contact-induced change

One of the earlier summaries of what is required for features of one language to influence those of another is given by Winter:

> We thus have to recognize at least the extralinguistic conditions of collocality, comtemporaneity, existence of channels of communication, and presence of social stimuli as necessary presuppositions for linguistic transfer to materialize. (Winter 1973)

To rephrase this, two languages can only influence one another if they are spoken in the same area, at the same time, if speakers of both languages communicate with one another, and if one or the other group has something to gain from speaking their non-native tongue; this social stimulus might be a material advantage in the form of business relations, or relate to the 'prestige' associated with a language.

In the case of Classical Armenian and Parthian, these conditions clearly obtain: both languages were collocal, contemporaneous at least for the period considered here, and had clear channels of communication at the very least in the upper levels of society. Yet, the extent of the survival of Parthian in the western part of the Iranian world is somewhat unclear: judging by the extant manuscripts, it was used as a liturgical language of Manichaeism up until the 10th century, albeit already in a non-standard form, likely due to a lack of native speakers (Durkin-Meisterernst 2014: 10); epigraphic evidence, however, ends with the inscription of Narseh at Paikuli (Sundermann 1989*b*:116–7; Durkin-Meisterernst 2014:5–6). While it cannot be determined with any degree of certainty, there is at least the possibility that Parthian in the west slowly died out beginning with the fall of the Parthian Empire.

The other question, namely that of social stimuli or prestige,[356] seems relatively straightforward *prima facie*: Armenian nobles (*naxarar*s) wished to be on good terms

[356] The notion of 'prestige', which may variably be correlated to political, economic, cultural, and many other factors, is somewhat fuzzy. While the prestige of a language frequently coincides with the numerical dominance of its speakers in a region, this need not be the case; Matras (2009:46), for instance, cites colonialisation and other instances of foreign rule as cases in which the prestigious, dominant language is that of a numerical minority. Precisely what makes up 'prestige' is therefore context-dependent. Winter (1973:139) cites the contrast between the 'enrichment' of the numerous languages spoken in the former Soviet Union with Russian lexicon

with the ruling Arsacids, thus adopting vast amounts of Parthian vocabulary. As will be suggested below, however, the issue may be more complicated where structural loans are concerned.

With respect to the latter, Thomason (2008:49) provides a useful catalogue of prerequisites for structural loans, also called pattern replication: her first criterion consists of establishing that structural interference of this kind is not isolated in the language, viz. that multiple systems are affected. For Armenian, this has been established in 1.4 for derivational morphology, in chapters 3 and 4 for the perfect system, and in chapter 5 for the intensifier, quotative, and the *ezāfe*-construction. Secondly, a source language needs to be clearly identifiable—Parthian in this case,[357] and without doubt—and thirdly, shared features identified. The fourth criterion is the proof that the supposedly shared features did not already exist in the affected language prior to contact;[358] this too has been established in chapter 2. Finally and conversely, it must be shown that the structures in question were present in the source language prior to contact; see chapter 3.3.2 .[359]

One mechanism particularly that is of particular relevance to the focus of this study is pattern replication. As stated already by Thomason and Kaufman (1988), the

and constructions on the one hand (cf. e.g. Dum-Tragut 2009:651, Cowe 1992:335 on Modern Armenian), and the influence of Greek on Latin on the other (cf. Adams 2003); in the former, political influence was likely the main prestige factor, while the latter is more likely to relate to cultural values. In either case, a language can be considered 'prestigious' if some kind of benefit —social, material, linguistic, *vel sim.*—can be derived from speaking or imitating it; owing to the nature of the notion and the numerous unquantifiable vectors that form part of it, however, no more concrete definition can be readily provided.

[357] While Middle Persian and Old Iranian have left traces in Armenian, the amount of lexical influence found, and the duration and socio-political circumstances of interaction with these languages is unlikely to allow for structural interference; see 1.3.1 above.

[358] Where earlier stages of the language are unavailable, as in the case of Armenian, comparison with other related languages must show that the feature cannot be reconstructed for the parent language, and that it is unlikely to have been an independent innovation. For Armenian, this has been shown in 3.2.2 above.

[359] Pat-El (2013:316) further proposes that there are two characteristics that allow for the determination of the source of contact-induced language change, where such is unclear. On the example of Aramaic and Hebrew, she argues that the existence of intermediate stages of language change, and synchronic consistency of the feature across categories are typical of source languages. In the case of Armenian, of course, the source language is never in question. Given the unavailability of data for Armenian prior to contact, and the relative remoteness between Old Persian and Parthian, neither shows clear intermediate stages prior to contact; as argued in 4.3.2, however, Armenian shows clear and increasing signs of incipient de-ergativisation, as do the West Middle Iranian languages, and thus share certain developments in similar directions post-contact. Some remnants of the earliest stage of contact-induced change in Armenian may be seen in the occurrence of ergative-like patterns in the periphrastic perfect; see 3.2.3.1 above.

transfer of structural, particularly syntactical structures is only likely in contact situations in which speakers of the interacting languages are in very close and long-term contact. Nadkarni (1975:681), and following him many others such as Heine and Kuteva (2005:13, 239, 267 n. 11), suggest that 'intensive and extensive bilingualism with a certain time-depth' is necessary for structural changes to occur, where intensive relates to the fact that the model language is used for a wide range of purposes, whereas extensive suggests that the entire speech community or significant subsets thereof are bilingual.[360]

Historical data does not allow for clear judgements on the question of the extent of bilingualism in Armenian society on the whole, but as is suggested below (6.2.2.2), extralinguistic data together with the amount of loan words, calques, and derivational morphology taken from Middle Iranian, makes this a likely scenario at least for the ruling classes. The same data speaks in favour of intense contact.

As already stated in the discussion of the data, dealing with language contact in historical contexts brings with it distinct problems concerning details and analysis. These relate particularly to the ability to provide and consider data of a pre-contact stage of the language, and the clear identification and classification of speakers as regards their socio-linguistic characteristics, particularly social class appurtenance and level of multilingualism (cf. Poplack and Levey 2010:396–7, 401). Given the type of extant evidence from Armenian, the only data available is the literary language associated with the upper levels of society, which need not reflect the variety spoken at the time. At the same time, it does distinctly not pose a problem for the present purpose: whilst restricted, the data is not mixed and so can at least provide a clear perspective on the language commonly used for literary purposes. It is unfortunate but inevitable that, at least when it comes to social breadth and historical depth of data, corpus languages frequently cannot live up to the methodological standards propounded by Poplack and Levey and others.

Based on these criteria, and in view of the detailed data analysis undertaken in

[360] These conditions need only obtain in situations in which changes are introduced from L2 into L1 directly; the scenario favoured below, 6.3.1, suggests a somewhat different progression, with the initial locus of interference in Parthian-dominant bilinguals, for whom the influence would be L1 > L2.

chapter 4, the Partho-Armenian contact situation fulfils all the criteria listed above. While the linguistic and socio-historical data available for both Armenian and the West Middle Iranian languages may not be ideal compared to that used in studies on modern languages, it is still more than sufficient to paint a clear picture of background, circumstances, and motivations of pattern replication, as will be suggested in what follows below.

6.1.1.3 Issues and limitations of language contact studies

One issue relating to language contact specifically in corpus languages, namely that of data breadth and depth, has already been mentioned above. Langslow (2002:46–51) provides a short but focussed discussion of other problems that arise in contact-linguistic enquiries into corpus languages.[361] Some problems relate specifically to the concept of historical linguistics and reconstruction on a methodological and epistemic level: for traditional, Neogrammarian historical linguistics, the prime problem resides in the fact that external influence suggests that genetic relationships between languages are only part of the truth; there is no denying, however, that language contact, and thus mixed languages and grammars (in the broadest of senses) do exist. In the first instance, for some languages like Latin and Greek, external influence has little impact on their place in the tree diagrams reconstructing the language family; other languages, such as Armenian or Mednyj Aleut, in turn have clear ties to both a genetic predecessor and a contact model.

The most elementary epistemic issue, however, is the act of contact itself. As Kühl and Braunmüller (2014:15) point out, the speaker is the true locus of contact, viz. it is not languages that are in contact, but their speakers (also cf. Thomason and Kaufman 1988:4); the phenomenon as such cannot be observed directly in corpus languages, and even in modern languages it is difficult to consciously observe contact itself rather than its results; consequently, all conclusions drawn are by nature inferential (cp. Thomason 1997:181; Haugen 1958:771). To no small extent, this is

[361] It goes without saying that, at least as far as corpus languages are concerned, contact studies are liable to the same problems to which historical linguistics in general is prone, e.g. the common inability to date changes with any absolute precision as opposed to in relation to other changes (see the short but helpful discussion in Plank 2015:62–5).

not only due to the data available in corpus languages, but also based on the fact that change, esp. when contact-induced, is in most instances multicausal, and requires consideration of not only linguistic, but also social, geographic, and personal factors, as well as a weighing of numerous pressures and interactions, e.g. received standard vs local vernacular, or typological fit vs frequency (cf. Kühl and Braunmüller 2014: 16; Milroy and Milroy 1997:75; also see Figure 6.4 below).

In turn, this means that no single factor—linguistic or otherwise—is a sufficient indicator of the kind of contact-induced change that may or may not arise in any particular contact situation. There is currently no consent, either, whether one of these factors ought to receive primacy over the others, but two clear camps have emerged: one suggests that it is largely social factors that determine language contact phenomena (cf., *inter alia*, Heine and Kuteva 2005; Thomason 2003*a*, 2008; Thomason and Kaufman 1988; Winford 2003), while the other gives precedence to linguistic considerations (cf. e.g. Haugen 1950; Lass 1997; Myers-Scotton 2002; Silva-Corvalán 2008; Wilkins 1996).[362] Section 6.1.4.2 below delves into this question in more detail, and suggests that Thomason's approach is overall preferable; giving primacy to social factors, without ignoring the linguistic evidence and certain constraints, recognises the fact that a neat and detailed systematisation of contact-induced change is extremely difficult owing to the vast variety of potential scenarios that can lead to such change.[363] This refers not only to the 'bigger picture', that is language contact on a societal or class level, but also to individual usage in bilinguals as the initial trigger of change (Heine and Kuteva 2008:58–60): which language is spoken to whom by whom depends not only on the individuals involved, but also on the topic of conversation, the relationship between speakers, the locale, *etc.* It is entirely dependent on these domains, to use the terminology of Fishman (1965:70–1; 1971*a*:585, 588,

[362] The latter camp in particular attempts to systematise possible and likely outcomes of language contact, usually in the form of a 'borrowing hierarchy' or the like. As shown by, amongst others, Curnow (2001) and Thomason (2008), however, these hierarchies do not hold up to scrutiny in that numerous exceptions for each alleged constraint can be found.

[363] Heine and Kuteva (2008:77) argue convincingly that even social factors are far from sufficient in determining what type of change might happen or have happened, since languages in contact may serve as model and replica language for one another at the same time; for an example, cf. Aikhenvald (2002) on the reciprocal influence of Portuguese and the North Arawak language Tariana.

599; 1973:144), whether code-switching is permissible or diglossia arises in individual speech acts, and cyclically, sociolinguistic norms pertaining to these individual domains are dependent on perceived usage.

It is for the reasons laid out above, then, that each individual case of language contact ought to be considered in as much detail as possible, not only with regard to the linguistic material, but also as regards the circumstances, socio-historical and otherwise, of the contact situation.

6.1.2 Types and outcomes of language contact

A fine-grained systematisation of all possible outcomes and scenarios of language contact is, as mentioned above, impracticable owing to the number of interacting and interdependent factors. There are, however, more general categories of contact-induced change, the most relevant of which it is worth differentiating briefly.[364] They include, in the commonly used terminology of Thomason and Kaufman (1988): language maintenance, which is largely signalled by lexical loans and need not involve multilingualism; language shift, in which a group of speakers adopts a different language, in many cases leading to interference in phonology and syntax of the target language; and mixed languages, in which elements of two languages fuse, creating a new language that is not genetically related to either of its 'parents' in its entirety (cf. Meakins 2013).[365]

It must be borne in mind, however, that these rough categories are not mutually exclusive, and that contact between languages can be reciprocal.[366] In what follows, these three categories are addressed in more detail and their setups compared to the situation obtaining in Classical Armenian. The aim is to illustrate that, although Partho-Armenian contact may be explained as a case of language maintenance or

[364] Pidgins and creoles will not be discussed here, since they bear little relevance for the case of Classical Armenian and Parthian.

[365] Mixed languages ought not to be confused with converging languages; the latter suggests that two languages, usually spoken by a largely bilingual community, become typologically closer as a result of changes in both languages; see also 6.1.2.3.1 below.

[366] That is to say that the terms 'model language' and 'replica language' used here are relative, and that each language can but need not occupy both roles with regard to the other (Heine and Kuteva 2005:4); also cf. Thomason and Kaufman (1988:15–16, 136–7) for examples from Indic–Dravidian and Šīnā–Burushaski contact.

borrowing, there are other, potentially more likely explanations.

6.1.2.1 Language maintenance *or* borrowing

The most elementary form of contact, referred to as either language maintenance, borrowing (Thomason and Kaufman 1988), recipient language agentivity (van Coetsem 1988), or matter replication (Matras 2009), usually involves native speakers of language A, the target language (TL), incorporating non-basic lexical items from language B, the model language (ML), into their vocabulary (also cf. also Thomason 2003*a*:691–3). This type of transference is closely tied to the concept of code-switching, particularly as regards the usage of non-basic lexicon; like code-switching, therefore, borrowing does not require speakers of language A to be perfect bilingual speakers of language B, although a certain amount of (at least passive) familiarity is necessary (cf. Myers-Scotton 2002:25). In these instances, the TL is also often less prestigious, socially or otherwise ranked lower, or spoken by a minority community.

The reasons behind borrowing vary according to situation, but usually fulfil one (or both) of the following purposes: they fill a 'gap' in the lexicon of the TL, or bring with them a certain amount of 'prestige'. The former kind often involves 'cultural loans' that relate to things, activities, or concepts not native to the borrowing language's society but found in the culture associated with language B; concepts are most succinctly expressed by the replica language term (Matras 2009:149).[367]

A second potential motivation for loans is the prestige associated with the model language and its culture; again, this term is relative and need not relate to high culture or political dominance.[368] In such instances, the loan words adopted often have TL counterparts, and the difference in use relates to the circumstances of and participants in the speech act.[369] In this respect (and many others), the speaker is not only the locus

[367] In many modern languages, for instance, lexical items describing technological innovations are loans from English, e.g. *internet* and *e-mail*, which occur as such even in highly regulated languages like French, German, or Dutch.

[368] Matras (2009:150) gives the examples of English *chav* and *pal*, both of which derive from Anglo-Romani terms; these terms do not fill a conceptual gap, but show that certain speakers wished to identify with the culture associated by adopting part of its lexicon in their parlance.

[369] This domain-specificity of language use, as mentioned earlier, further impacts the material likely to be transferred from model to target language. Fishman (1965:82–3) relates that the family domain (and accordingly associated lexicon) is more resistant to outside influence than the occupational domain. This is likely effected by the lesser role of 'prestige' in familiar communication,

of contact, but also the agent of change, whether deliberately or not; Thomason (2008: 50) speaks of the 'urge to make one's own speech more different from the neighbors' speech' for purposes of differentiation and identification, either within a group or as an individual.[370]

There can be no doubt that Classical Armenian underwent a phase of borrowing from Parthian that follows these parameters. The evidence presented in 1.3.2.3 clearly identifies non-basic lexical items that relate to administrative offices (e.g. *sałar* 'general-in-chief'), concepts (e.g. *p'arǩ'* 'divine glory'),[371] and other things not previously found in Classical Armenian, thus filling a gap. Other items, however, do not fit into this category (e.g. terms like *bžišk* 'doctor, physician', a concept which must have existed before), and instead are likely to have been adopted for reasons of 'prestige'.[372] Equally, however, numerous Parthian loans in Classical Armenian are part of the basic lexicon as well (e.g. colour terms, numerals, prepositions, verbs like *hramayem* 'to order, command'; nouns such as *dašt* 'field'). Together with derivational morphology and nominal composition, this degree of influence is likely a result of what Thomason and Kaufman (1988:50, 83–95) refer to as 'moderate/heavy borrowing', presupposing particularly long and close periods of interaction between speakers of the two languages.[373]

In these moderate/heavy borrowing situations, other linguistic features are not

although cultural loans, e.g. lexical items referring to formerly unknown goods or materials, may be found nonetheless.

370 In turn, the avoidance of loanwords can in itself serve as a means of self-identification; neofascist organisations in Germany, for instance, propagate the usage of *Weltnetz* instead of the loanword *internet*, thereby attempting to artificially rid the language of foreign influence (Pörksen 2001, 2005).

371 For a closer definition and discussion of the term Arm. *p'arǩ'*, cp. Av. *x^{v}arənah*, Pth. *frn̲*, MP *prn̲* /farrah/, cf. Zakarian (2014:167–9).

372 There are a number of definitional problems here. What is 'non-basic' in the lexicon? Are basic items only those taken into consideration by Swadesh (1955, 1971) and others, or is this term more flexible? Other issues arise with terms like *baž* 'tax, levy', since it cannot be determined with any certainty whether such a concept existed before contact with Iranian speakers. For the present purpose, it is assumed that such concepts as are found in many other languages of the wider region and time must have existed before contact commenced, and a Swadesh-style definition of the basic is too narrow and not necessary.

373 Belardi (2003*a*:98–102) states that, taking the lexical data surveyed in Hübschmann (1897) as its basis, the amount of Iranian loans in Armenian is approximately 35 per cent, exceeding the *echtarmenisch* lexicon by more than 10 per cent. Such noteworthy amounts of loans can result in the creation of mixed languages (see 6.1.2.3.2 below), but also in language decay and death, if massive relexification sets in (cf. Thomas 1982:213 for the example of Welsh); this, however, has evidently not occurred in the present context.

infrequently borrowed as well; these include phonological, morphological, and syntactic structures.[374] The Iranian influence on Armenian has evidently extended so far, as calques, nominal compounds, the periphrastic perfect, *etc.* show; even on the phonological level contact-induced innovations have arisen.[375] Given that Armenians, though numerically dominant, were the ruled, lower-ranked party in the relationship with the Arsacid Parthians, and taking into account the characteristics of borrowing given here, together with the Armenian language data presented above, the contact situation in Armenia in and before the 5th century CE could therefore be described as one of moderate to heavy borrowing from Parthian by the Armenians over whom the former ruled.

One reason to enquire beyond the framework of borrowing in a language maintenance context is given very succinctly by Thomason:

> Target language speakers [...] are likely to be borrowing words from an indigenous language even while that language's speakers are shifting to the target language and incorporating some of their own native features into their version of the target language. (Thomason 1980:364)[376]

As a result, the following section must explore the explanatory power of a language shift scenario for the present context to ensure that borrowing by itself does not provide a better analysis of the Partho-Armenian data.

6.1.2.2 Language shift

6.1.2.2.1 Structural interference with and without shift

Where in a language maintenance situation, the TL borrowed mainly lexical material from another language, which TL speakers did not need to be proficient in, the

[374] As reported in Comrie (1981:167, 171, 179) Ossetic (Iranian family), for instance, has replicated from Caucasian languages like Georgian not only a great number of lexical items, but also agglutinative morphology, a more detailed case system, and a series of phonemic glottalised stops.

[375] In the discussion of loan phonology above, 1.3.2.1, it was mentioned that certain consonants and clusters are particularly indicative of loan words, including e.g. *-č-*, *-rh-* and *-šx-*. As evidenced by words like Arm. *čanač'em* 'to know, recognise' < PArm. *canač'em (cp. Gk. γιγνώσκω, Lat. cognōscō, Skt. *jñā-*; Meillet 1936:29; Martirosyan 2010:440–1), however, such sounds could spread to native vocabulary as well; in the case of *čanač'em*, this is evidenced by the anticipatory assimilation of PArm. *c to *č* before *č'*, although the affricate *č* is not an original part of the Armenian phonemic inventory.

[376] Although Thomason speaks of the 'indigenous language' as shifting, this does of course not restrict the co-occurrence of maintenance and shift to this scenario; which language is dominant depends on the individual social, political, economic, *etc.* context, as suggested above.

situation in language shift is the converse. Here, speakers who are by definition not fluent in the TL introduce features into it, first and foremost phonology and syntax. As Thomason (2003*a*:692) suggests, this process often, but not necessarily, is tied to language learning; depending on the circumstances, shifting speakers may, but need not, learn the TL imperfectly,[377] failing to learn certain TL features, e.g. because they have no parallel in their L1, and/or they may carry over features of their L1 into the TL.[378] In such cases, a version of the TL spoken only by the shifting group may develop (TL_2), which includes such non-TL features, and differs from that of the native speakers' usage (TL_1).[379] Given the right sociolinguistic circumstances, TL_2, a so-called 'interlanguage',[380] may survive as a community language, e.g. when sufficiently isolated from TL_1 speakers, or if linguistic norms are permissive. In certain circumstances, some features of the shifters' TL_2 may even be adopted by the whole speech community, creating an integrated variety TL_3. This is likely to occur when L1 speakers posses 'prestige' of one sort or another. Figure 6.1 visualises this process.

This is only one of many scenarios in which structural interference may occur; Heine and Kuteva point out that neither imperfect learning, nor indeed shift are prerequisites for interference without much lexical borrowing, since

> grammatical replication tends to involve [...] a process where speakers combine a number of different variables [...] to create novel forms of expressing grammatical meanings in the replica language. Accordingly, we are dealing – at least to some extent – with a creative process. (Heine and Kuteva 2008:77; 2005:37)[381]

[377] The kind of 'mistake' that is likely to find its way into the TL owing to language shift is, therefore, the kind that language learners are wont to make; in this respect, Haugen (1954:380) is right in stating that 'the study of bilingualism is essentially the study of the consequences of second-language learning'. As will be discussed below, 6.3.1.1, however, this is but one way in which non-TL patterns may find their way into the TL.

[378] It is of note that Thomason has revised her perspective on the likelihood of shift-induced change, which in Thomason and Kaufman (1988:51) is still deemed rarer and more common when simplificatory changes occur in the TL. In part, this change of heart is owed to the increase in data available for analysis; other considerations that may have altered her perspective include the consideration of 'markedness' as a factor, which has since been shown to be a poor predictor of structural interference (cf. Haspelmath 2006; Meyer fthc.*b*; Thomason 2008).

[379] Myers-Scotton (2002:301–2) gives the underlying reasons of the rise of such mistakes as an effect of their linguistic function. Since structural patterns and what she calls late system morphemes, viz. morphological markers that serve to clarify relationships between constituents but have no semantic value, are applied only late in the formulation of a sentence. Her and others' findings suggest that such structures are 'last in' in acquisition, and accordingly prone to mistakes (cf. also Wei 1996, 2000).

[380] Cf. Myers-Scotton (2002:188) with discussion and bibliography.

[381] Despite considerable evidence, some scholars still maintain that structural features are not trans-

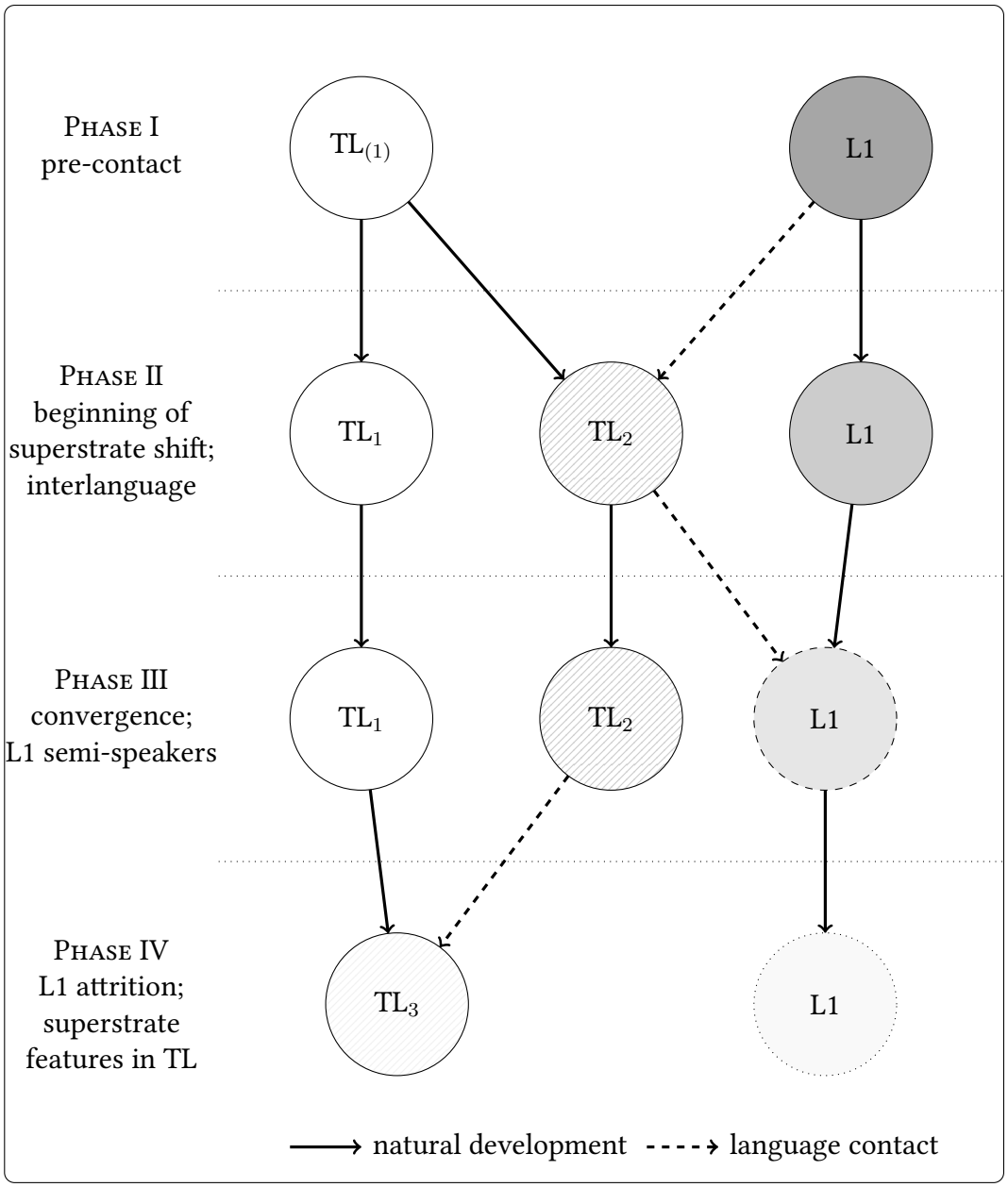

Figure 6.1 – *Simplified superstrate language shift schema*
Language shift, here of a superstrate, occurs in distinct phases. Phase I represents the languages in their unaltered, pre-contact state. In phase II, L1-speakers learn the TL, and through imperfect learning and/or pattern replication create an interlanguage TL_2; their L1 remains constant. Phase III sees the rise of importance of TL_2 for L1-speakers, and not all speakers acquire L1 fully or without interference; L1 converges towards TL_2. In phase IV, finally, TL_1 and TL_2 merge into TL_3 as former L1-speakers integrate fully into the TL society; L1 may live on as a heritage language, or disappear entirely.

ferred in contact situations; Silva-Corvalán (2008:221) suggests that, while externally-caused change does occur, 'every change allowed appears to be constrained by the structure of the af-

A similar thought is expressed in Thomason (2007), namely that contact-based language change, viz. the adoption of non-TL features into the TL, can be deliberate; potential motivations for the replication of grammatical structures, both social and linguistic, are discussed in 6.1.3 below.

Particularly in corpus languages which also show heavy lexical borrowing, it is impossible to account for the path of origin of grammatical patterns that are likely to have arisen through contact, at least on the basis of linguistic data alone (Thomason 2003*a*:693). The grammatical patterns could have found their way into the TL either through borrowing by native TL speakers; through non-native speakers shifting into TL, accompanied by structures from their L1; through a mixture of the two; or in a number of different other ways. The potential scenarios cannot be differentiated neatly by the involvement of bilingualism, either, since borrowing frequently but not necessarily involves bilingual speech communities without a clear dominant language, whereas structural interference without lexical borrowing, e.g. in a shift situation, usually involves L2 acquisition, resulting in bilingualism, but can arise in other ways as well.[382] Furthermore, if, in a shift scenario, the shifting speakers are numerically in the minority but socio-politically dominant (as in post-Conquest Britain; a so-called superstrate shift), heavy lexical borrowing in the TL may accompany phonological and syntactic loans (Thomason 2008:48; Thomason and Kaufman 1988:306–9; also see 6.3.1, 6.3.2 below). Only extralinguistic evidence can even attempt to shed any definitive light on this question; a consideration of such evidence in Classical Armenian with a view to finding out more about the sociolinguistic situation is presented below, 6.2.

For the Partho-Armenian situation studied here, one further linguistic observation is of relevance. The kind of alignment change that the Armenian periphrastic perfect

fected language'. It is unclear, however, how this suggestion can hold up in view of the adoption of, e.g., agglutinative morphology and definiteness marking from Turkish in Asia Minor Greek (Dawkins 1916; Thomason and Kaufman 1988:219–20; Janse 2004; Janse 2009*a*,*b*; Karatsareas 2011, 2016), or ergative alignment in North-Eastern Neo-Aramaic on the model of local Sorani dialects (cf. Khan 2004, 2007; Meyer fthc.*b*). For other sceptical views, cf. also Sankoff (2013: 509); King (2000); Prince (1988).

[382] Thomason (1997:199) makes the case that where a shifting group imperfectly learns the TL, resulting in a modified TL_2 variety, TL_1 may adopt features of shifters' language based on passive familiarity alone. In that sense, TL_1 speakers are not bilingual in TL_2, and actually borrow the patterns in question.

underwent on the basis of Parthian model can be classified as a case of metatypy.[383] This is of interest in so far as

> in a bilingual community, the language undergoing metatypy would be the language which was emblematic of its speakers' identity and the metatypic model would be the language used to communicate with people outside the speech community. (Ross 2007:130)

This statement makes a strong prediction about the socio-linguistic situation obtaining in Arsacid Armenia; to corroborate the hypothesis, it will have to be established whether Armenians and/or Arsacids are likely to have been bilingual, and whether the social circumstances in Arsacid Armenia in and before the 5th century CE fit this picture.

6.1.2.2.2 Mechanisms of structural interference

Before proceeding to briefly consider other contact scenarios, it is worth having a closer look at the mechanism by which structural interference may occur in bilingual speakers, and subsequently in contact situations, in order to be able to judge whether the changes suggested for the Armenian periphrastic perfect fit this model.

The borrowing of syntactical structures (or pattern replication) from one language to another, when occurring in bilingual speakers of those languages, is a language processing mechanism which involves 'identifying a structure that plays a pivotal role in the model construction, and matching it with a structure in the replica language, to which a similar, pivotal role is assigned in a new, replica construction' (Matras and Sakel 2007:830). This process, called pivot-matching, results in a replica construction that on the whole respects the structural constraints of the replica language and does not usually involve matter replication, i.e. borrowing, as well (Matras 2009:26–7).[384]

[383] Ross (2007:124) defines metatypy as a 'diachronic process whereby the morphosyntactic constructions of one of the languages of a bilingual speech community are restructured on the model of the constructions of the speakers' other language, such that the constructions of the replica language come to more closely match those of the model language in both meaning and morphosyntax'. The Armenian case may, therefore, be a marginal or incipient case in that only one subsystem was affected, but a clear affiliation to this type of change is apparent.

[384] Matras and Sakel (2007:832) suggest that the reason for the occurrence of pivot-matching and pattern replication lies in the 'syncretisation, in the two languages, of the mental procedures that map abstract operations'; that is to say, the bilingual speaker has extended the use of a syntactic pattern belonging to the model language, and now uses it in the replica language as well, thereby relaxing to some extent the degree to which their two linguistic repertoires are separated. See also Figure 6.2, p. 276 below.

Pivot-matching, and thus pattern replication, is driven by a number of forces, esp. formal linguistic, psychological, and social. For the development of the replica pattern, however, the most important factor is that of polysemy or polyfunctionality copying, which may be defined as 'the potential of a structure in the replica language to cover the (lexical or grammatical) semantics represented by the model' (Matras and Sakel 2007:852; also cf. Heine and Kuteva 2005:100; Heine 2012). Here, the bilingual speaker identifies a structure in the TL that shares some semantic features of the model construction in the source language, and extends its usage to match one or more source language features.[385] This extension frequently brings with it an increase in frequency of usage of the TL construction chosen as the basis of the replica for the source language model, and an extension of the contexts in which said TL pattern is used. Examples of this type of development include: the extension of the Basque comitative case to cover both comitative and instrumental functions on the basis of a Gascon model (Haase 1992:67; Ross 2007:124-5); the use of reduplication of verb, noun, or adjective for numerous purposes in Singlish (Singapore English) based on such usage in locally significant varieties of Chinese and Malay (Ansaldo 2010:510–2); and the creation of a new grammatical category (a periphrastic *going to* future) in American Yiddish on the basis of the English model (Rayfield 1970:69; Romaine 2010:331) [386]

A succinct way of representing this mechanism more generally is the following three-step scheme (with R being the replica or target language, and M the model language; cf. slightly differently Heine and Kuteva 2003:533):

[385] 'Structure' can include morphemes as well as syntactic relations; for the former, cf. Heine and Kuteva (2003:544–5); Haig (2001:214–6); for the latter, cf. e.g. Elšík and Matras (2006:84).

[386] This is often phrased as the development of a 'minor use pattern' (Heine and Kuteva 2005:45) or 'latent construction' (Koptjevskaya-Tamm and Wälchli 2001:626) into a major use pattern. Heine and Kuteva describe a further stage in the rise of a replica construction, termed 'incipient category', which differ from minor and major use patterns in that they are the result of the 'transition from pragmatically motivated to morphosyntactic templates, in particular to the emergence of new grammatical (functional) categories' (2005:70–1). Exponents of such novel, contact-induced categories are, however, used less frequently than the TL constructions they are based on, not regcognised by speakers or grammarians as distinct patterns, and their usage restricted to the context in which they arose; such replica categories are, in short, often less grammaticalised than their models (Heine 2012:132 in general, and Arkadiev fthc. for examples of grammatical borrowing and imperfect grammaticalisation of preverbs and aspect in contact with Russian). This, it seems, is a very apt description of the situation of the Armenian periphrastic perfect, particularly as regards the lack of agreement and non-canonical subject marking.

(1) speakers of R recognise in M a grammatical category Mx which does not exist in R, and a related category My, which has a parallel Ry

(2) R speakers draw on universal grammaticalisation strategies to develop Ry into Rx

(3) A variation of Ry is grammaticalised as Rx

A number of aspects of this process are further worth commenting on.

First of all, although steps (1) and (2) may suggest that this mechanism is employed to fill a gap in the replica language system, this decidedly need not be the case (*pace* Winter 1973:138), as numerous examples show the creation of redundant use patterns and categories.[387] Given that the first occurrence of such replicated patterns is commonly found in bilingual code-switching or interference, the creation of redundant patterns is really an attempt at economising linguistic processes (see 6.1.3 below).

Secondly, steps (2) and (3) are separated by a rather large gap; the first two steps in the process occur in the individual speaker, and account for the first inception of new grammatical structures, whether contact-induced or otherwise. The final step, however, requires the adoption of such a novel use pattern or category by a speech community. This final step is, accordingly, the result not only of linguistic processes, but also reliant on social and environmental factors in the speech community.

Finally, despite pivot-matching and polysemy copying, the outcome of the above process need not yield a pattern Rx that is isomorphic with Mx, i.e. there is no principled necessity for a one-to-one correspondence between the morphemes of the equivalent lexemes; rather, as Matras (2009:247) puts it, 'each [expression] is created within the rules of its own self-contained system, but they share a general design'.[388]

[387] An example of the creation of such a redundant pattern is the rise of a 'come'-passive in Maltese on the basis of Italian, although the language has other passive constructions (Drewes 1994:95–6; Heine and Kuteva 2008:69–70).

[388] Cf. also Heine and Kuteva (2003:538); Matras (2010:73–4). The latter gives as an example the rise of complementation in Macedonian Turkish, which unlike standard Turkish does not use an infinitive before a modal verb, but a subjunctive after such a verb; as opposed to the pure Macedonian model, however, Macedonian Turkish has no overt complementiser, wherefore the patterns are not isomorphic.

6.1.2.2.3 Application to the patterns replicated in Armenian

In applying these criteria to the periphrastic perfect in Classical Armenian, it emerges without particular complication that the mechanism outlined above is apt to describe the likely provenance of the construction. Figure 6.2 provides a diagrammatic representation.

The goal, as described in 3.3.3, is evidently the participle-based past tense of the West Middle Iranian languages, which is Mx. Owing to the occurrence of the participle in the Iranian tense, which can be used as an passive-intransitive adjective (My; cf. Durkin-Meisterernst 2014:252; Jügel 2015:271–6 with examples), it is readily pivot-matched to the Armenian participle in *-eal*, which can be used in like fashion.[389] With the pivot matched, the Parthian–Armenian bilingual is able to copy other patterns associated with the Parthian model (Mx) into Armenian, thus creating a finite perfect in that language (Rx). The latter pattern was eventually grammaticalised.[390]

The same model can be applied to explain the choice of the genitive as case of the agent; here, polysemy copying is likely to rely on its function as possessive marker, both in nominal phrases, enclitics, and in the West Middle Iranian 'have'-construction (see 3.3.2.2.3 above, and cf. Durkin-Meisterernst 2014:266–71; 370–1).

Whether the nota accusativi *z=* was equally modelled on the usage of *'w* /ō/ in Parthian cannot be determined with any degree of certainty;[391] in view of the occurrence of non-marked objects in the Armenian periphrastic perfect, which most closely reflects the construction at the earliest stages of Middle Iranian, it would ap-

[389] Durkin-Meisterernst notes, however, that the participle may also be considered indifferent to diathesis (cf. Brunner 1977:137). Jügel expresses a similar view, and views Old and Middle Iranian *-to- participles as resultative in relation to the object, where present. Since the present study makes no claims on the specific semantics of the Armenian or Middle Iranian perfect, the encompassing, descriptive term 'passive-intransitive' is preferred and sufficient.

[390] The inverse has occurred in contact between Pipil (Uto-Aztecan family) and Spanish, during which the Pipil past participle, which previously was only used as part of a finite verbal phrase, acquired a new use pattern as an adjective on the model of the Spanish past participle (cf. Heine and Kuteva 2005:54; Campbell 1985, 1987).

Overall, the process of pattern replication is comparable to that of loan shift or semantic extensions on the lexical level, where target language lexis acquires new meanings on the basis of parallels in the model language; such extensions include, for instance, NHG *realisieren* 'to make real, create' being extended to also mean 'to be aware, to notice' on the basis of NE *realise*, or NE *star* 'celestial body; famous person, celebrity' spreading its second meaning to references to celestial bodies in other languages, e.g. Heb. *kokhákv*, Russ. *звезда*, Finn. *tähti* (also cf. Bynon 1977:237–9).

[391] The optional usage of Pth. *'w* /ō/ in direct object marking is discussed in 3.3.2.3.

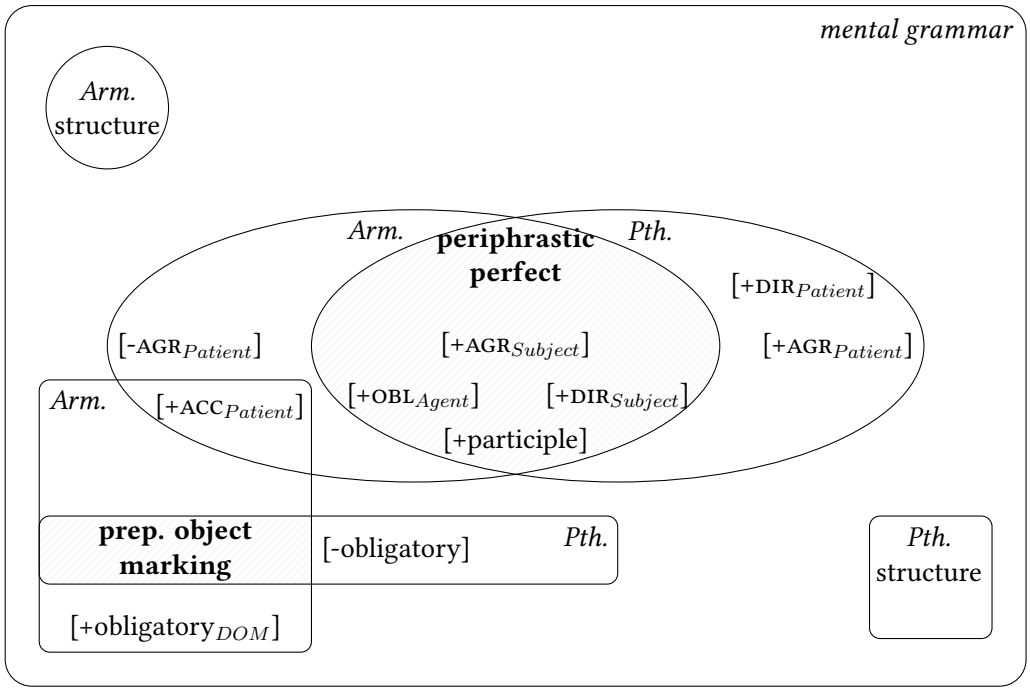

Figure 6.2 – *Pivot-matching in Armenian and Parthian*
In the mental grammar of an Armenian-Parthian bilingual, pivot-matching may be represented by means of Venn diagrams. In Parthian, there are, inter alia, two syntagmata involving the participle: the past tense with the features [+participle, +DIR$_{Subject}$, +AGR$_{Subject}$, + OBL$_{Agent}$, etc.], the usage of the passive-intransitive participle as an adjective. Since the latter pattern exists in Armenian, too, the former is replicated into Armenian under adoption of some but not all features. Other structures, such as prepositional object marking, interact with the replication process.

pear unlikely that *z=* and *'w* /ō/ should be linked intrinsically.[392] Further indicators speaking in favour of a separate Armenian development are the lack of other semantic parallels between *z=* and *'w* /ō/, and a clear functional difference, viz. the use of *z=* to express definiteness.

The difference in the usage of the copula equally does not pose a problem for pattern replication. It needs to be remembered that in Parthian the copula only occurs in non-3.SG forms, and that in Armenian overall, occurrences of the periphrastic perfect without the copula are more common (see 4.3.2.2.3, 4.3.3.3 above). Since 3.SG objects, for which a copula lacks, are likely to be most common both in texts and speech, the pattern may either have been replicated without copula in the first place, or the 'cor-

[392] Cf. Durkin-Meisterernst (2014:332–3); Jügel (2015:330–42). It ought to be noted again that the marking of the direct object in this fashion is not obligatory in Parthian.

rect', viz. inherited, usage of the copula was lost already in pre-attested Armenian. Such a development, as was explained above, is in keeping with other languages that have undergone an alignment change away from the ergative construction (see chapter 3.2.3 above), and reflects the lack of an isomorphicity constraint and the tendency for complex patterns to be replicated with differences or errors (Matras 2009:243; also see 6.1.2.2 above).

The statistics provided in chapter 4 above also indicate clearly that the periphrastic perfect constitutes a fully realised category in Classical Armenian in that it is one of the main narrative tenses employed in literature, and in its finite and converbal usage accounts for the majority of occurrences, as opposed to the inherited participial form. In contrast, the nascent usage of *-eal* participles as adjectives with an active meaning, which have arisen in analogy to the quasi-active form of the transitive perfect, is comparatively small, thus corroborating the hypothesis put forward in chapter 2.

The potential replication process for Arm. *ink'n*, *(e)t'ē*, and the *ezāfe*-construction would have proceeded along similar lines. In the case of *ink'n*, however, it is difficult to know on the basis of which function of the West Middle Iranian model the Armenian was formed, since pre-contact data is unavailable. For reasons of frequency and etymology, however, it is most likely that the intensifier function should be native to Armenian, as discussed in 5.2.3 above.

6.1.2.3 Mixed languages, convergence, and other outcomes

The outcomes of borrowing and language shift described above, either on their own or in combination, appear to explain both contact-induced change and borrowed material in the Irano-Armenian contact situation. There are, however, other types of contact as well, which for completeness' and diligence's sake it is necessary to mention briefly. As will become apparent, none of them have a significant impact and therefore need not be considered any further.

6.1.2.3.1 Convergence

The term convergence is, unhelpfully, used in a number of different ways.[393] One usage is essentially tantamount to the process of pattern replication described above, and defined as 'the adaptation of an internal element to match the scope and distribution of an external element that is perceived as its functional counterpart' (Matras and Sakel 2007:835). This usage, like that of structural interference or pattern replication above, refers to a language-internal process.

In contrast, a different perspective is taken by a larger part of the language contact community, who use the term to refer to 'any process through which two or more languages in contact become more like each other' (Thomason 2001:89),[394] resulting in the 'increasing agreement of language not only in terms of vocabulary (which may in fact remain quite distinct), but especially in aspects of their overall structure' (Hock and Joseph 1996:395) and in the general preference for the usage of structures that are common to both (or all) languages in contact (Thomason 1997:187).

This definition involves an aspect of mutual convergence that in the case of Parthian and Armenian cannot be shown to have occurred owing to the lack of Parthian evidence from the time and place in question. In its former definition, lacking the mutuality required by the latter definition, the term convergence[395] is not trivial either, in that it suggests that the converging language changes to be grammatically closer to the source language. Yet, while Armenian has indeed replicated a number of structures from Parthian, and borrowed or calqued lexical or phraseological material, it remains a language in its own right with, structurally speaking, only small overlaps with Iranian; the retention of a full case system, differentiation between multiple synthetic tenses, and an overall freer word order attest to this fact. Nonetheless it must be borne in mind that on the surface, Armenian bears many Iranian characteristics

[393] Cf. the discussion of differences in Myers-Scotton (2002:169–173). Her definition, incidentally, diverges from the most common understanding of the term in considering convergence 'as largely a one-way phenomenon. Some mutual influence is possible, but in its unmarked realization, convergence involves the grammar and lexicon of a source language, generally one that has more socioeconomic prestige, impinging on another language'.

[394] This notion can be extended to *Sprachbund* situations, in which multiple languages converge and the origin of many features is difficult to determine.

[395] If this term is to be used in this context, it may sensible to follow Mattheier (1996)'s terminology and refer to one language unilaterally becoming structurally closer to another as advergence.

owing to the vast amount of lexical loans. Although massive relexification is a sign of extreme advergence,[396] language decay, or death, the survival of Armenian, the lack of replicated inflectional morphology, and the restricted application of pattern replication suggest that contact between the Armenians and Parthians did not permit or require such a drastic outcome.[397] This may be the result of insufficient social depth of contact, viz. the restriction of bilingualism to the upper layer(s) of society, or indeed inadequate length of contact;[398] see chapter 7.

6.1.2.3.2 Mixed Language

Taking into account the amount of material that Armenian has replicated on the basis of the Parthian and Middle Persian model, and further keeping in mind the not inconsiderable syntactic influence shown to likely have obtained, the question whether Armenian might be classified as a 'mixed language' is worth asking.

Owing to the diversity of mixed languages,[399] both in form and provenance,[400] it remains difficult to arrive at a clear and unambiguous definition of the term.[401] Nonetheless, there are a number of features that all mixed languages share: they

[396] For this term, see fn. 395 above.

[397] Cf. Thomas 1982:210–14 for a contrasting Welsh example. The notion of ethnolinguistic vitality, a quantifiable score 'which makes a group likely to behave as a distinctive and collective entity within the intergroup setting' (Giles et al. 1977:308), might in theory help to measure the factors by which the likelihood of language maintenance, shift, or indeed death is determined. Unfortunately, too little concrete, quantifiable information is available in the case of Partho-Armenian contact to calculate this score, since demographic information is lacking entirely; for a brief overview of the information required, cf. Mullen (2012:26–8).

[398] In fact, it is Parthian that may well have ceased to be spoken in the area as evidence by the lack of any documentary evidence of the language in Greater Armenia after the end of the Parthian Empire (see 6.3.1); Parthian as a language is, of course, attested for much longer, but language shift and convergence often only affect specific speaker communities as opposed to languages as a whole, cf. Pauwels (2016:18).

[399] The diversity of mixed languages, in degree and kind, is indeed such as to have prompted Schuchardt (1884:5) to state that '[e]s gibt keine völlig ungemischte Sprache', since all languages at one point in time and to some degree or other have undergone foreign influence and have taken on foreign material or patterns.

[400] For an overview and finer subcategorisation attempts, cf. Matras and Bakker (2003); Meakins (2013).

[401] Thomason (2003*b*:21) defines a mixed language as 'a language whose grammatical and lexical subsystems cannot all be traced back primarily to a single source language'; this definition, however, also covers pidgin languages, whose genesis, developmental tendencies, and socio-historical environment can differ substantially from that of mixed languages in the narrower sense: the former, for the most part, develop as linguistically rudimentary languages serving minimal communicative needs, gaining in complexity over time and possibly creolising, while the latter are based on two already complex languages in long-term and intense contact, involving wide-spread bilingualism. Thomason's differentiation might be amended to reflect that both the mixed language and its source language(s) must be spoken natively, thus excluding pidgins.

have two genetic ancestors (as opposed to one); they usually arise not as a primary means of communication between two peoples, but 'rather they are markers of an in-group identity, whether it be a new identity created through mixed marriages [...] or the maintenance of an old identity which is under threat' (Meakins 2013:216),[402] and are therefore often created in times of social upheaval; they show a clear mix of structural and material influence from both languages in question.

Looking at structural and lexical features alone, there are two big categories of mixed languages (see also Figure 6.3): those which use the lexicon of one and the grammar of another language (grammar-lexicon split; e.g. Angloromani, Media Lengua, Ma'a); and those which inherit certain categories of items from one language, and others from the other language (verb-noun split; e.g. Mednyj Aleut, Michif, Light Warlpiri).[403] The spectrum of this type of language is, in general, very broad. Angloromani uses English grammar and structures, but makes deliberate use of some Romani vocabulary in socially salient situations; Matras et al. (2007) refer to this as a 'lexical reservoir' used for expressing a sense of solidarity or group cohesion. This contrasts, on the one hand, with Media Lengua, whose grammar is that of Quechua, but whose lexicon is almost entirely Spanish; and on the other hand, with Mednyj Aleut, in which a largely Aleut lexicon and nominal grammar is combined with Russian finite verb syntax and morphology.

As detailed above, Classical Armenian contains a large amount of lexical material from Iranian languages, numerous calques, a small amount of derivational morphology, and some structural features. A verb-noun split does not occur either grammatically or lexically, and structurally, Armenian mainly adheres to inherited rules (with the exceptions discussed in this study).

While Armenian can, therefore, be called a mixed language on account of its mixed lexicon and certain non-inherited structural loans, it does not belong at any extreme of the mixed languages spectrum, showing more standardised lexical interference

[402] This is an opposition to creole languages, which come about as a communicative necessity between two non-bilingual speech communities; cf. Golovko (2003:191); Muysken (1997:375).

[403] For an overview of types, cf. Bakker (2003); for the individual languages, cf. (in order and e.g.) Bakker (1997); Matras (2010); Mous (2003); Muysken (1997); O'Shannessy (2005); Thomason (1997).

than Angloromani, but less lexical bias for any one language than, e.g., Mednyj Aleut, as well as only limited structural influence from Iranian. Accordingly, the realisation that Armenian is a mixed language brings with it certain questions, esp. concerning the social circumstances of the advent of this 'mix', but has very little impact on its perception in general.[404] Since it does not fall at any one end of the spectrum, like many other languages containing lexical and structural borrowings, the 'mixed' nature of Classical Armenian is almost trivial in that 'all languages are mixed in a weak sense: there is no natural human language in which foreign material is wholly lacking' (Thomason 2003*b*:21).

6.1.3 Intrinsic motivation of contact-induced change

The Armenian data leaves no doubt as to the fact that Armenian has been in contact with Iranian languages for a considerable period of time. With the theoretical background concerning the mechanisms underlying the process of borrowing and interference having been discussed above, there remains one key question: why? What is the purpose or benefit that motivates the adoption of lexical material, syntactic patterns, and other non-native linguistic features into a language?

One aspect mentioned above is that of 'gaps'. Lexical material, and conceivably structures, are borrowed when semantically similar items or syntactically isofunctional patterns do not exist in the replica language (cf. Heine and Kuteva 2005:124–30; Matras 2009:134 and see above 6.1.2.2.2). The closing of such gaps is particularly motivated from a communicative point of view since it allows speakers to express the same concept in both languages without running the risk of misunderstandings. Yet, as pointed out already, gaps are not a necessary requirement for borrowings or contact-induced change.

Especially as regards pattern replication, however, the main motivating factor is found in language processing itself.[405] For a bilingual speaker, applying the same

[404] The 'mixed' status of Armenian does, however, underline one of the intrinsic issues with the standard *Stammbaum* model still often employed by historical linguists, which makes no provisions to account for non-genetic influence. For a convincing argument in favour of combining the *Stammbaum* model and *Wellentheorie*, cf. Labov (2007) and Drinka (2013:397–407).

[405] In fact, Pienemann et al. (2005:147) suggest that empirical evidence points towards processabil-

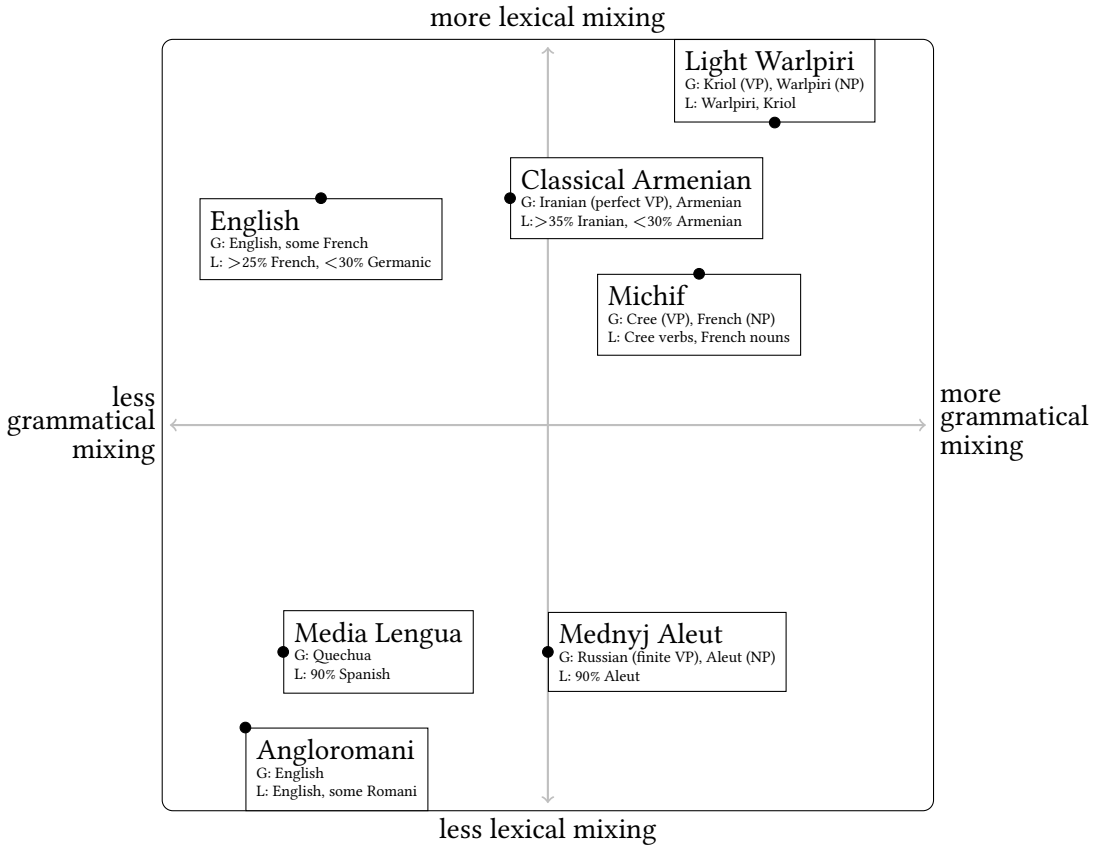

Figure 6.3 – *The mixed language continuum (cf. Meakins 2013:161–4, 179) Virtually no language is entirely unmixed, wherefore languages can be positioned relative to one another depending on the degree of non-native material in their grammar and lexicon. Lexical and grammatical influences are correlated to a certain degree, as the absence of languages with much grammatical but little lexical borrowing suggests.*

structures to both languages in his repertoire requires less cognitive processing than having to go through the necessary stage of assuring that the current language in use and the pattern in question are indeed coindexed (Kühl and Braunmüller 2014: 19; Myers-Scotton 2002:190–1; Matras and Sakel 2007:832). The lessening of the psycholinguistic burden on the speaker further allows them to 'exploit [...] the full potential of [their] linguistic repertoire' (Matras 2009:5), wherefore pattern replication can be motivated by 'a reduction in the tension surrounding certain language processing tasks' (Matras 2007:69). A strong, but well-supported, phrasing of this

ity as one of the key constraining factors on L2 transfer, and can override typological distance (see 6.1.4.1).

motivation can be found in Myers-Scotton:

> structural pressure[s] within the system of language in general [tend] toward a single unified source of abstract lexical structure. […] nature abhors the structural variation that bilingual speech introduces […] The push is toward a unified source of the abstract grammatical frame (Myers-Scotton 2002:297),

which need not derive from one language alone. While this drive may manifest in adult speakers, e.g. through regular code-switching and eventual grammaticalisation, pattern replication is most common, creative, and thus productive in (pre-)adolescents (Ross 2013:26–7), who in acquiring the speech habits of their parents may (begin to) grammaticalise their idiosyncrasies, but equally creatively use patterns from both languages in the other language.[406]

Figure 6.2, p. 276 above (cf. Höder 2014:45–6 *in abstracto*), has already illustrated the mental grammar of a hypothetical speaker of Classical Armenian and Parthian with reference to the periphrastic perfect. There is a clear set of items coindexed solely with one of the two languages, while the formation of the perfect is unindexed, and thus applicable to both languages. Other structures, such as object marking, do not have a clear index; this is to indicate that similar structures exist in both languages, but that the available data does not allow any judgement concerning their potential influence on one another.

The choice of the Parthian structure as the model, as opposed to using, e.g., the Armenian aorist, is likely rooted in a number of factors. One is the existence of a matching pivot (the participle) in Armenian; another, if replication is assumed to have occurred in a language shift situation, is the dominance of Parthian as the L1 of first-generation bilingual speakers, and the bilingual but possibly linguistically biased upbringing of children in later generations.[407] The social and historical dimension of bilingualism and language dominance in Armenia is discussed in 6.2 below.

[406] A child during language acquisition learns to differentiate appropriate contexts for language use and will, all being equal, use the form coindexed with the context. Where such is unavailable, unknown, or less readily retrieved than an isofunctional or synonymous form, the bilingual child may use a form counterindicated by context, thus filling the gap or easing the mental processing load (Matras 2009:65; Müller 1998). This is a natural and sensible strategy particularly in view of the fact that the child speaker has no abstract notion of a language's grammar, and may not yet have acquired an index for the pattern or item in question.

[407] Matras (2009:23, 61) points out that 'dominance' is not an absolute term, but varies according to speaker, their environment, and time. A more general dominance of one language in a bilingual society can, of course, arise through institutional backing or social norms (2009:45). In individual

Cognitive processing efficiency can, however, only be one motivating factor, which in turn is constrained by the need for communicative clarity. For although pattern replication, synchronically in code-switching or through L2-acquisition mistakes, may lead to more efficient language processing, it need not result in more efficient communication, especially when the addressee is unfamiliar with the model pattern.

Another important factor therefore is constituted by the prestige, overt or covert,[408] of a particular language, and whether learning or acquiring this language is seen as politically, socially, economically, *etc.* advantageous enough (Myers-Scotton 2002: 34). In view of the fact that structural interference of the kind that occurred in Classical Armenian is frequently associated with socio-politically motivated language shift (cf. Myers-Scotton 2002:22), and given that, locally, Parthian is likely to have been a minority language, even if that of a politically dominant speech community, the Armenian language must have had a very particular appeal. Of what nature this appeal was is discussed in what follows.

6.1.4 Driving factors and constraints of contact-induced change

The tendency towards cognitive processing efficiency described above constitutes the basis of contact-induced language change in that it provides a subconscious driver to encourage such processes. As already discussed, however, such changes need not be subconscious, but can be creative, deliberate processes.

It is thus that one of the longest standing debates in language contact research concerns the question of what is possible and impossible in contact scenarios, whether there is some material that is always replicated, and, in turn, whether there are elements or structures that (almost) never take part in replication processes?

speakers, the development of a dominant language is dependent on multiple factors; depending on circumstances, however, shifting speakers' descendants not infrequently develop a more positive attitude (and thus dominance) towards the public, majority language as opposed to the heritage language spoken at home (cf. Bolonyai 2009:258 with references).

[408] Cf. Kühl and Braunmüller (2014:20); overt prestige refers to the advantages of speaking a language that is associated with political power, cultural refinement, or similar aspects of social dominance, whereas covert prestige relates to the contrastive force that speaking a specific language (variety) can have, e.g. a local dialect, sociolect, or argot, whereby the speakers differentiate themselves from the rest of the speech community.

A second, related point of discussion revolves around the driving factors of contact-related change: are they based on more or less abstract linguistic rules, distinct processual clines and hierarchies that determine which elements can be borrowed, or is it rather socio-political and environmental factors that play the most significant role?

The approach to these two questions advocated here aligns with that of Thomason and others in suggesting that in language contact everything is possible (although not necessarily likely) in principle, and that it is indeed socio-historical factors that are of most importance in determining what kind of contact-induced change might take place, if any.[409]

Since this section is not intended as a fully fledged attempt at a refutation of structurally driven approaches to language contact, issues with the latter will be illustrated exemplarily on the basis of the concept of linguistic markedness (or typological distance) as a formal constraint against replication.[410]

6.1.4.1 The typological markedness constraint

The notion of markedness has frequently been cited as one of the constraints and predicting factors at the heart of language contact (Thomason and Kaufman 1988: 194, 213; Myers-Scotton 2002:190–1; Heine and Kuteva 2005:256). In this particular context, the definition of markedness derives 'primarily from typology (more widespread = less marked), and secondarily from first-language acquisition (first learned = less marked)' (Thomason and Kaufman 1988:26–7).[411] Unsurprisingly, the lack of a clearer definition and the opaque and relative nature of markedness have called into doubt its validity, leading to suggestions that the concept best be aban-

[409] There have been numerous attempts at creating a taxonomy of factors influencing language maintenance or shift; for an overview, (cf. Pauwels 2016:100–15). Many such attempts, however, are not suitable for dealing with corpus languages where the amount of extralinguistic data is very limited.

[410] For an overview of other constraints on synchronic and diachronic manifestations of language contact phenomena, cf. Muysken (1995:183–4); Myers-Scotton (2002); and Müller and Cantone (2009); Poplack (1980, 1981) on code-switching and code-mixing; Silva-Corvalán (2008: 221) on syntactic replication.

[411] That is to say that, on the one hand, cross-linguistically more common patterns, e.g. nominative-accusative alignment or SOV word order, are less marked than less frequent patterns, e.g. tripartite alignment or OSV word order (cf. Tomlin 1986:22). At the same time, for a native speaker of a language with a cross-linguistically less common pattern (e.g. Warao in northeastern South America), the universally less marked patterns would be more marked. Therein lies one of the problems of the concept of universal markedness.

doned (e.g. Myers-Scotton 2002:231; Haspelmath 2006).[412]

The notion of markedness, or an intimately related concept, is still applied in a more clearly defined form in the guise of typological distance, which suggests that elements and patterns in the model language diverging typologically from parallel ones in the potential replica language are less likely to be adopted; this constraint applies mostly to phonological and syntactic interactions. In the realm of syntactic borrowings (or pattern replication), however, this constraint is not infrequently violated,[413] wherefore the question arises whether, like the notion of markedness on the whole, typological distance had best be set aside as a criterion in considering language contact processes, or whether it can be retained in a different role.

In the specific context of typology, the notion of markedness refers to the co-occurrence of certain structures or patterns; a pattern A is considered marked in relation to pattern B, if and only if languages with A also always contain B, but not necessarily *vice versa* (Eckman 1977:320).[414] In turn, this markedness differential has been seen as an indicator of L2 acquisition difficulties, where target language structures more marked than those in L1 are less readily learned (cf. Rutherford 1982; Eckman 1996; Eckman 2004).

It is this notion of markedness that in the past was thought to bear relevance for language contact situations. The likelihood of a model language pattern being replicated in the recipient language has been correlated to the typological distance, or marked-

[412] Haspelmath (2006) points out the polysemy of the linguistic term markedness, subdividing it into twelve senses and dispelling its assumed usefulness as a concept. To give but one example: a specific semantic distinction may be marked, regarding for example its inclusivity; the unmarked NHG *Hund* 'dog' can refer to a canine of any gender, whilst its feminine counterpart *Hündin* 'bitch' exclusively refers to female members of the species (cf. Jakobson 1971:3–4). The feminine form is, therefore, more marked since it is less inclusive, referring only to a subset of instances of the concept 'dog', whereas the masculine form refers to all subsets. Countering Rice's suggestion (2003:390) that 'capturing exactly what markedness means is by no means a straightforward task' but that linguists have come to have a strong intuition about it, Haspelmath (2006:63) suggests that linguists can dispense with the term 'markedness' and many of the concepts that it has been used to express. It can be readily replaced by other concepts and terms that are less ambiguous, more transparent and provide better explanations for the observed phenomena.

[413] They suggest that 'in slight to moderate borrowing, source-language features that fit well typologically with functionally analogous features in the borrowing language tend to be borrowed first' (1988:72); rather than a constraint, this appears to be an order of precedence, dictated as much by socio-historical factors as by typological distance.

[414] An instance of this typological markedness can accordingly be found in, e.g., Greenberg's Universal 34: 'No language has a dual unless it has a plural' (1966:94); since it follows that all languages with a dual category also have a plural category, but not all languages with a plural also have a dual, the dual is a marked feature.

ness, of said pattern, acting as a borrowing constraint: the greater the distance, the less likely is borrowing (Meillet 1921:87; Givón 1979*b*:26). Yet, in the case of pattern replication, it is difficult to judge the effectiveness of such a proposed constraint, since its application does not effect change;[415] the result is essentially an *argumentum ex silentio*. This is further exacerbated by the fact that pattern replication, where it can be shown to occur beyond reasonable doubt, is almost exclusive to intense contact situations with wide-spread bilingualism (Thomason 1997; Aikhenvald 2007), thus severely limiting the set of potential cases to be studied.

Weakening the base of this supposed typological markedness constraint even further, it is precisely in these intense contact environments where contraindicated, typologically marked constructions are replicated – as is the case for the replication (and subsequent adaptation and grammaticalisation) of originally ergative alignment patterns in Classical Armenian. A few examples from the literature will serve to illustrate this further: Indo-European languages typically have person categories roughly equivalent to those in modern West European languages like French, English, or German, with three persons in singular and plural. A small set of Indic languages, such as Sindhi and Gujarati, however, has added a category by differentiating between an inclusive and exclusive 'we', a distinction found in a neighbouring Dravidian language (Emeneau 1962:56).[416] Another Indic language, Šīnā (see 3.2.3.1 above), has gone so far as to adopt the ergative alignment pattern of the neighbouring Tibetan language Balti (Verbeke 2013:256–7; Anderson 1977:344). In the Americas, Silverstein (1974, 1977) reports on the creation of a gender system in proto-Chinookan 'under heavy categorial influence from the languages surrounding on the coast' (Silverstein 1977: 154), specifically Tillamook, Chehalis, and other Coast Salish languages.[417]

[415] In instances of phonological borrowings, this is true in principle, too, since the lack of replication of phonotactic or morphophonemic rules cannot be observed. With regard to material replication, however, the inverse is true: if lexical items are borrowed, they either need to be adapted to the phoneme inventory of the replica language, or that inventory needs to be appended. That of Standard High German, for instance, contains a voiced palatal affricate [d͡ʒ] and a voiced palatal fricative [ʒ], which are exclusively found in loanwords such as *Dschungel* 'jungle' or *Journal* 'journal'; in some dialects, however, the replicated phoneme [d͡ʒ] is instead replaced by the native [t͡ʃ], thus e.g. *Dschungel* ['t͡ʃʊŋl̩].

[416] Many languages are, of course, able to express clusivity by means beyond inflectional morphology, e.g. It. *noialtri* (exclusive); yet, the standard pronouns or verbal forms in these languages are ambiguous as to clusivity.

[417] For a wider discussion of the borrowability of structural categories with a similar perspective, cf.

Already Thomason and Kaufman state that a typological distance constraint is more honoured in the breach than the observance:

> The evidence we have collected that bears on this point does not permit a firm conclusion about the validity of the general hypothesis [concerning the role of typological distance]. [...] We have solid evidence from cases of heavy structural borrowing (e.g., Ma'a, Asia Minor Greek) and even moderate structural borrowing (e.g., various contact situations in India) that features can and do get borrowed regardless of their typological fit with borrowing-language features (Thomason and Kaufman 1988:53).[418]

They do suggest, however, that this constraint should apply 'in cases of light to moderate interference' (1988:54).

In view of even these few examples, the plausibility of a constraint or even tendency so readily overridden must be called into question; either it is to be discarded entirely, or its parameters and effects are to be defined more closely.[419] As it stands, the constraint does not apply in casual or less intense contact situations, where pattern replication generally is not observed and only non-basic lexicon is likely to be borrowed. In more intense contact situations, where pattern replication has been noticed most frequently, there are numerous cases of constraint violation as just mentioned (cf. also Kühl and Braunmüller 2014:17).[420]

The examples contraindicating a typological constraint mentioned above serve to show that absolute rules cannot be readily applied to contact-related change, as indeed to a number of other linguistic phenomena such as analogy (cf. Mańczak's critique of Kuryłowicz 1949); this does not entail, of course, that such 'rules' may

Matras (2007).

[418] Thomason maintains this view in her more recent work, e.g. Thomason (2001, 2007, 2008), and is backed by others; cf. Aikhenvald (2007); Curnow (2001); Harris and Campbell (1995); Heine and Kuteva (2003). Yet, as Heine and Kuteva (2008) point out, the development of replicated patterns is still constrained by other factors, namely those underlying other language change processes, e.g. the unidirectionality of grammaticalisation, *etc.*

[419] On the level of morphological borrowing, Seifart (2015:98–9) comes to similar conclusions. His quantitative analysis of affix borrowing suggests that structural similarities (or typological differences) between the languages in contact play a very minor roll, if any, in affix borrowability; also cf. Seifart (2013).

[420] Yet, according to Thomason and Kaufman (1988:52–3) such morphosyntactic borrowings are still more common in instances where there is no typological distance between model and recipient language in the pattern concerned; see Figure 6.4 below. Since they do not provide any quantifiable data to back this assertion, however, it has to be taken on good faith; in view of similar assertions concerning the borrowing of affixes (Thomason and Kaufman 1988:75), which have been rejected by with empirical evidence by Seifart (2015), other broad claims may have to be called into question as well.

not be tendencies, or indeed applicable at a different stage in the language change process together with other forces influencing the latter.[421]

6.1.4.2 A social primacy approach to language contact

Instead of viewing formal notions such as typological markedness as a constraint in the strict sense, it appears more sensible to see typology and other hierarchies as one of a number of factors that influence the conscious or subconscious decision to adopt non-native material or patterns. The prime consideration for contact-induced change is, however, the social circumstances underlying it.

The reason to assume that social (and with it political) considerations are key in explaining, and, to a very limited extent, predicting language contact phenomena lies in synchronic observations, e.g. of code-switching and diglossia. The retention and usage of local dialects, for instance, has been linked to the notion of *Ortsloyalität* (roughly *sense of place*); small, closely-knit communities are, amongst themselves, more likely to make use of their local dialect instead of the standard language, not because of a communicative necessity but rather as a means of identification with their community (Mattheier 1985; Taeldeman 2010). Such a dialect can be said to have covert prestige, in that it does not associate the speaker with an economically, politically, or otherwise powerful speech community, but rather with a small, select group that wish to set themselves apart for a variety of reasons.

The use of one language over another in a specific context is therefore often a distinct choice and can be 'bound up with the identity which a person is seeking to project on a particular occasion' (Adams and Swain 2002:2);[422] accordingly, language choice can vary over time, social context, and addressee, and with it varies the

[421] This section does on purpose not engage with the fine-grained and principled hierarchies and constraints analysed in detail in, for instance, Myers-Scotton (2002), since their focus lies on the replication of morphological material, and bears little relevance for the consideration of pattern replication.

[422] 'Occasion' here refers both to what Fishman calls domains (work, family, friends, *etc.*), and individual communicative situations. In largely multilingual societies, such as in Belgium or Switzerland, different languages may be required or appropriate for different domains; yet, a particular situation might warrant an exception to those rules, e.g. discussing local sports news with work colleagues and thus code-switching or code-mixing with the language or variety that is normally associated with that subject, rather than speaking the language they would use for communicating at work.

degree of impact that one language has the other in a bilingual speaker and speech community.[423]

This often conscious and deliberate use of different languages by bilingual speakers on a synchronic level also has an influence on the diachrony of the languages involved, especially as language shift enters the picture. Since prestige, particularly in the guise of economic and political power, is desirable, 'it is necessary to display appropriate linguistic and cultural knowledge [of the prestigious language] in order to gain access to the game' (Heller 1995:160). In shift situations, where the first generation may be expected to acquire the language in post-adolescence, and therefore potentially imperfectly, the potential influence of the shifting speakers' L1 on the newly acquired L2 may be twofold: synchronically, it may, through pattern replication and similar mechanisms, leave structural traces in the TL by creating TL_2,[424] which diachronically remain in TL_2 through the process of language acquisition of the second generation. TL_2 brings with it a new identity associated with that language.[425] If the standard $TL_{(1)}$ is sufficiently accepting of the shifting speakers and is not too highly regulated, adoption of the shifting speakers' variety of TL by native speakers is a possibility (see Figure 6.1, p. 270 above).

While the filling of gaps and the economisation of cognitive processing are the underlying, more or less unconscious factors that motivate the usage of non-native patterns, they are unlikely to have any impact on language use unless the social factors in the bilingual speech community in question are conducive. If a language is highly regulated, or foreign-seeming material and patterns are disfavoured owing to social

[423] Cf. e.g. the different communicative habits of Russian-Hebrew bilinguals in modern Israel, which Gasser (2015) describes as differing according to identity and language attitude of each speaker generation.

[424] For issues of imperfect language learning in adults in this context, cf. Ross (2013).

[425] That language and identity are closely interconnected is not new (cf. e.g. Fishman 1971*c*:566–8; Myers-Scotton 2002:262). It is of note, however, that the creation of mixed languages, as mentioned already, is often associated with the adoption or creation of a new identity (Thomason 2003*a*:707; 2007:50), and can in certain circumstances adopt an iconic status or be associated with a particular ideology as well. Specifically the concept of *iconisation*, i.e. the association of 'linguistic features that index social groups or activities [… as] iconic representations of them' (Irvine and Gal 2000:37) is relevant in the present context, as the Arsacids may have 'iconised' Armenian as a language without ties to the rival Sasanian Empire (as opposed to their native Parthian), and (at least some) Armenians in turn may have adopted the Parthian shifting speakers' version of Armenian as that of the prestigious ruling class; for a further discussion, see 6.2 and 6.3.1 below.

or political pressures, contact-induced change originating in bilinguals will be either entirely lacking, or restricted to a small, particular speech community. Conversely, where one language enjoys particular prestige,[426] and bilingualism is widespread, economising, gap-filling and other contact-related replication processes may be actively encouraged.[427]

Consequently, the right socio-political situation must be considered the primary constraint and equally motivator for the propagation of contact-induced change, particularly in diachrony. If synchronically code-switching, code-mixing, and pattern replication are permissible in a speech community, then—and only then—can grammaticalisation processes begin; these are accompanied by formal linguistic considerations such as typological distance and pattern frequency, and in diachrony determine the grammaticalisation path (or lack thereof) of a replicated pattern.

For a pattern to be replicated, grammaticalised, and retained over time, then, the socio-political situation must be such as to allow for it in principle; the replicated pattern must fulfil a purpose (economy, gap, or otherwise communicative), fit within the grammatical system of the replica language, and be used sufficiently frequently to spread across the speech community (cf. Meyer fthc.*b*). In other words, the grammaticalisation and retention of contact-induced change is dependent on three factors: a continuously favourable socio-political situation in the bilingual speech community; a good typological fit of the model pattern in the replica language; and the frequency of replica pattern use. These factors are independent from one another, but all interact with the grammaticalisation and retention process, as Figure 6.4 below illustrates.

In summary, Thomason's assertion that 'the social relations between the two speech communities, not the structures of their languages, determine the direction and even the extent of interference' (Thomason 2008:53; cf. also Myers-Scotton

[426] As pointed out already, prestige or dominance can but need not be associated with an elite status or the size of a speaker community (Matras 2009:46, 220); as the concept of *Ortsloyalität* mentioned above, and the case of Angloromani illustrate, small, covertly prestigious groups can be equally influential; the same is true for secret languages or jargons as have historically developed among certain layers of society in Germany under the cover term 'Rotwelsch' (cf. e.g. Efing 2005). Conversely, a large but politically subordinate speech community can become dominant under the right socio-political circumstances, e.g. in the case of Middle English in post-Conquest Britain in spite of the Norman French ruling class (see 6.3.2 below).

[427] These are, of course, extreme situations, and there are a number of scenarios that lie in the middle.

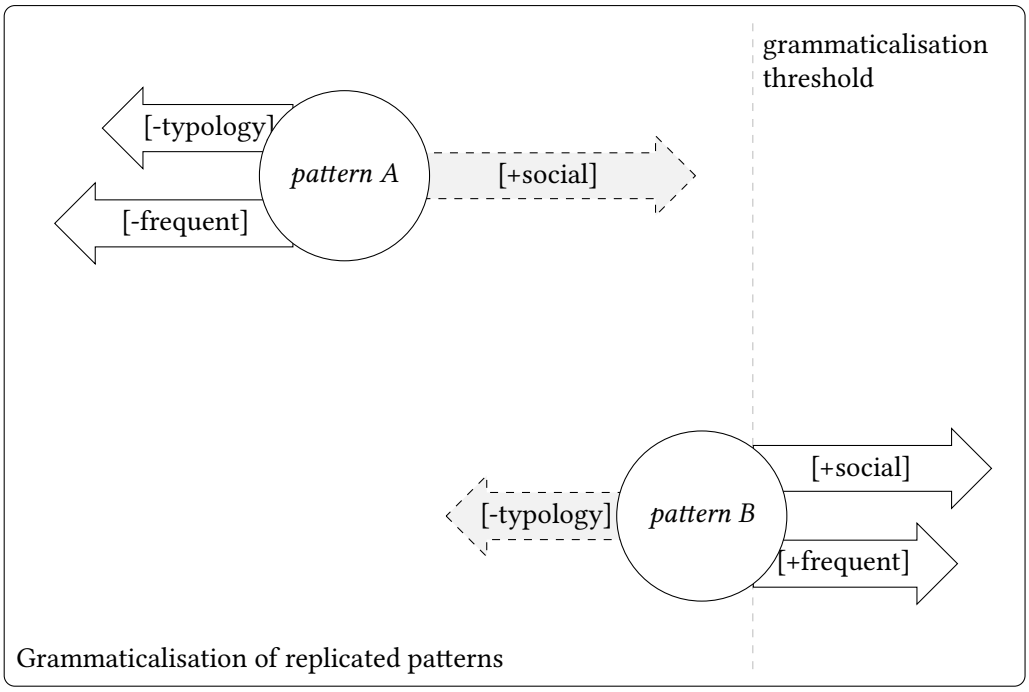

Figure 6.4 – *Contact-induced grammaticalisation*
Once a pattern is replicated through code-mixing or switching, it enters the grammaticalisation process. Success or failure of grammaticalisation of a replicated pattern depend on a number of independent factors, at least: typological fit of replicated pattern with replica language; usage frequency of the pattern; and socio-historical circumstances. Only if one or more of these vectoral factors is sufficiently strong does grammaticalisation take place.

2002:193; Poplack 1997:285) is valid, but must be amended in so far as structures can determine what is or is not to be replicated. At the same time, her warning concerning the limitations of social factors as necessary but not sufficient conditions for structural interference must be borne in mind, together with the caveat that 'whether [interference] occurs or not depends on cultural factors that are likely to remain permanently beyond our predictive grasp' (Thomason 2007:58; cf. also Heine and Kuteva 2008:77).

Coming back to the situation in historical Armenia, the data presented in chapter 4 above clearly indicates that the periphrastic perfect as a pattern was in use frequently enough in Classical Armenian,[428] and was the only past tense formation in

[428] This frequency relates, of course, only to written text, and no estimations can be made whether it would have occurred at a similar rate in spoken discourse. If modern languages which have both synthetic and analytical past tenses are an indicator, however, it is likely that the periphrastic form would have been frequent then, too, with the potential of ousting synthetic forms; cf. the

the West Middle Iranian languages. Frequency, therefore, is likely to have favoured the grammaticalisation of the replicated patterns as suggested above. Likewise, pivot-matching was sufficiently successful, and the typological mismatch regarding the grammatical marking of constituents small enough not to impede grammaticalisation in the first place.[429]

The socio-political situation in 5th-century Armenia and before must therefore have been such as to allow and actively foster pattern replication and grammaticalisation. The details of the historical background are explored on the basis of epigraphic and literary sources in what follows, and the most plausible scenarios for the rise of the periphrastic perfect are presented in 6.3 thereafter.

6.1.5 Summary

This section has shown in some detail the practical and theoretical considerations that underly language contact studies, and has attempted to relate them to the situation of Classical Armenian and Parthian.

It has been suggested that owing to the lack of a satisfactory explanation of all the grammatical features of the periphrastic perfect based on Armenian-internal changes and developments alone, a language contact approach is sensible (Poplack and Levey 2010). Although the Armenian data does not offer any synchronic signs of code-switching or code-mixing, the amount of lexical, phonological, and derivational morphological loans from Parthian and Middle Parthian leave no doubt that language contact over an extended period of time and with some intensity must have taken place. This is corroborated, of course, also by the pre-Hübschmann-ian perception of Classical Armenian as an Iranian language.

It has been emphasised that there are a set of different scenarios that might explain the precise situation that led to the pattern replication of the periphrastic perfect described here: language maintenance in Thomason and Kaufman's terms, suggesting

tendency for *Präteritumsschwund* in European languages (Abraham 1999; Drinka 2004).

[429] The mismatch between constituent marking in the perfect as opposed to the rest of the verbal system would, however, still have constituted a counterforce to grammaticalisation. It was not strong enough to prevent it, owing to frequency and socio-historical circumstances, but is likely to have played a significant role in the alignment change of the originally ergative construction, first into a tripartite, and finally into a nominative-accusative pattern.

that bilingual Armenians adopted the Parthian model on their own accord; language shift, that is the decision of native Parthian speakers to acquire Armenian for communicative purposes, and the subsequent imperfect learning of Armenian syntax, resulting in the 'sneaking in' of the perfect construction; or grammaticalisation of code-switching habits of proficient bilingual speakers.

The possible scenarios raise the question of the motivation of and constraints on contact-induced change. It has been argued above that, *a priori*, there are no intrinsic, linguistic constraints on contact-induced change on a synchronic level, viz. code-switching and the like, and that typological factors only come into play at the grammaticalisation level, where they interact with (and thus can be overruled by) other factors, esp. frequency and socio-historical context.

Accordingly, Thomason's stance on language contact in general as a mainly socially driven and constrained phenomenon has been adopted and advocated here. In turn, this raises the question what can be known of the interactions between Parthian and Armenian speakers in and before the 5th century. Was bilingualism wide-spread? If so, was this the case amongst all classes, or only in the higher echelons of society? Was there diglossia, i.e. did the choice of language used depend on the communicative purpose and/or situation? Did Armenian speakers attempt to emulate their Parthian colleagues to such an extent as to adopt elements of their syntax, or was the social situation such as to motivate Parthian speakers to adopt Armenian as their main mode of communication?

The next section addresses these question in some detail in order to determine more closely the likely social and political situation in the time under investigation here, and subsequently to determine which of the contact scenarios presented above is more likely to have brought about the cases of pattern replication dealt with in this study.

6.2 Extralinguistic sources for Irano-Armenian language contact

The primacy of socio-historical factors such as duration of language contact, the political circumstances of the co-existence of multiple languages, and the prestige associated with one of the languages in question makes it necessary to take into account material and sources going beyond the linguistic data presented in the preceding chapters. For reasons of space, this cannot include an extended history of the interaction between Iranians and Armenians, a brief account of which has been given above, 1.1;[430] yet, in order to determine whether the findings of chapters 4 and 5 can be accounted for in accordance with the models of language contact presented above, it will prove useful to investigate whether the notion of societal bilingualism at least within the ruling class(es) can be upheld by epigraphic and literary evidence or not.

This section therefore systematically discusses all the potentially relevant mentions of Armenians and Parthians, and especially their languages, in the epigraphic and literary sources of Iranian, Armenian, Graeco-Roman, and select other origins, in this order.[431] Owing to insufficient evidence, no groundbreaking insights can be won from these sources, but some of them do provide a certain amount of corroboration for the ideas voiced above.[432] The primary goal of this discussion is, therefore, to determine whether multilingualism, linguistic prestige, or potential learning difficulties are mentioned in any way and may thus enrich the picture painted by the linguistic data presented above.

[430] Detailed accounts and discussions of Armenian history can be found in, e.g., Garsoïan (1989); Garsoïan et al. (1982); Hovannisian (1997); Redgate (1998); for Parthian history, cf. Curtis and Stewart (2007); Ellenbrock and Winkelmann (2015); Schippmann (1980).

[431] No reference is made to Syriac or Georgian sources. Syriac literature has no relevant historiographic tradition and its hagiographic texts make no reference to the linguistic habits of Iranians or Armenians (David Taylor, p.c.); the only relevant contemporary source in Georgian, *The Passion of Saint Šušanik* attributed to Iakob Tsurtaveli, dates to the late 5th century and contains no relevant information, either (cf. Rayfield 2010:44–7).

[432] While Simkin (2012:104–5) points out, at the example of languages on the Iberian peninsula in contact with Latin, that even few bilingual inscriptions or instances of code-switching can help to elucidate the synchronic sociolinguistic situation of one or more speaker communities, the case of Partho-Armenian contact affords neither of those. All insights into the contact situation and speaker communities that go beyond immediate linguistic evidence must therefore be gleaned from other facets of historical and literary sources.

A secondary question relates to the mutual intelligibility of the two Iranian languages in significant contact with Armenian, viz. Parthian and Middle Persian. If concrete evidence of intercommunicability between Parthians and Persians, and thus Arsacids and Sasanians, can be provided, this would better explain the ease with which Middle Persian loans have found their way into Armenian;[433] mutual intelligibility among the West Middle Iranian languages may also be seen as one of the underlying reasons of the Arsacid Parthian language shift towards Armenian proposed in detail below (see 6.3.1), since the Arsacids may have sought to set themselves apart even linguistically from their Sasanian cousins; this shift, in turn, contributes to the adoption of Parthian syntactic patterns into Armenian.

As has been pointed out in 1.1, in considering the outcome of Irano-Armenian language contact, it must be borne in mind that only the literary language as preserved in historiographical, poetic, and other texts can be studied and thus analysed; this register may represent the language of the upper classes (royalty, nobility, clergy, *etc.*), or may be an artifice of literature. Owing to a lack of evidence, it is impossible to determine whether the vernacular of the 5th century or before would be as heavily influenced by Iranian or not.

6.2.1 Iranian sources

6.2.1.1 Old Iranian sources

As noted in chapter 1, the first unequivocal mention of the geographical designation 'Armenia' occurs in the Old Persian inscription of Darius I at Behistun, where it features variably as the noun /Armina/ or the derived adjective /Arminiya/; similarly, the term occurs in later inscriptions such as that of Darius at Susa, or that of Xerxes at Persepolis.

Like most Old Persian inscriptions, the instances in which Armenia is mentioned

[433] Owing to their closely related phonology, morphology, and syntax, as well as a number of common developments, Parthian and Middle Persian have only been considered distinct languages since Henning (1958:102–4). Their historical relatedness and geographical coexistence make it likely that they were mutually intelligible to at least some extent (cf. also Sundermann 1989*c*:106, 110; Durkin-Meisterernst 2014:1); further corroboration of this hypothesis may be provided by Chinese sources (see 6.2.4 below).

are highly formulaic; both noun and adjective occur either in a list of territories held by the king (e.g. DB I.15, DB II.30, DPe 12, XPh 20), or as a designation of origin for an individual discussed (e.g. DB II.29, DB III.78, DB IV.29).

The same restrictions apply to the Old Persian word for Parthia, /Parθava/, which similarly occurs only in lists or as a designation of origin. No mention is made of interactions between both peoples, nor their respective idioms.

There are no indications that a word for Armenia occurred in any of the Avestan material; Median is not attested in its own right.

6.2.1.2 Middle Iranian sources

The Parthian inscriptional evidence is severely limited.[434] The most recent summary (Durkin-Meisterernst 2014:4) lists the Nisa ostraka,[435] three letters from Avroman and one from Dura Europos, a number of inscriptions of Arsacid kings, and Arsacid coin legends.

The latter, owing to their brevity and basic nature, allow for no insight into the question at hand. Similarly, the ostraca from Nisa are both too early and too geographically remote to contain any relevant information; neither Armenia nor any aspect of Irano-Armenian multilingualism occur in these documents (cf. Diakonov et al. 1976–7).

In like fashion, the extant letters, which deal with the sale of a vineyard, make no mention of either Armenian or Parthian, and generally provide only very spurious evidence (cf. Gignoux 1972:43–4; MacKenzie 1985)

Similarly, those Parthian inscriptions that predate the Sasanian period are largely executed in Aramaic heterograms and are of very limited use, containing at best personal names and, in later inscriptions, phonetic complements (cf. Schmitt 1998).

[434] The amount of Sasanian Middle Persian inscriptions is larger, and both words for Armenia(n) and Parthia(n) feature, e.g. in the inscriptions of the *mobed* Kerdīr at Naqš-e Rajab and Naqš-e Rastam (cf. Gignoux 1972); none of them are of relevance, however, since they only list both territories as belonging to Kerdīr's sphere of influence. For an overview of extant Parthian writing, cf. Ellenbrock and Winkelmann (2015:187–191).

[435] These consist of *c.* 2,000 ostraca (inscribed potsherds) from Nisa (near Ashkhabad, Turkmenistan), dated to the 1st century CE. Their content is largely formulaic, and deals with economic topics, esp. the sale of wine. Owing to the size of the extant ostraca, full sentences are rare, and their usefulness for the present purpose extremely limited.

An example of such an inscription on Armenian territory is the royal inscription of Artašēs I in Zangezur (Périkhanian 1966), which reveals only his and a few other names, and his dynastic affiliation with the Orontids.[436]

Two Parthian inscriptions contain a toponym and ethnonym relating to Armenia (*'rmny* /Armani/ and *'rmnyn* /Armanīn/, respectively):[437] the trilingual Šāhpuhr inscription on the Kaʿba-ye Zardošt (MP, Pth., Gk.; ll. 1, 4, 18, 20 , 21) and Narseh's bilingual inscription at Paikuli (MP, Pth.; ll. 9, 17, 18). In the former, Armenia is listed, as in the Achaemenid inscriptions, as one of the territories under control of the Sasanians; further mention is made of the foundation of a fire temple in Armenia for Hormizd-Ardašir, who ruled Armenia from 251 CE (the beginning of Šāhpuhr's second campaign against Rome)[438] until his succession to the Sasanian throne in 270 CE (cf. Huyse 1999).

In the Paikuli inscription, which details Narseh's deposing his nephew Wahrām III from the Sasanian throne, Narseh is initially referred to as the king of Armenia; King Trdat, presumably Trdat III of Armenia, is mentioned as one of the Kings supporting his accession (cf. Humbach and Skjærvø 1978–83).

While both inscriptions also make mention of toponyms and ethnonyms relating to the Parthian language, neither of them allows for any further insights into Irano-Armenian multilingualism. It is noteworthy, however, that after the reign of Narseh (*r.* 293–302 CE) Sasanian royal inscriptions no longer feature a Parthian version. In view of this fact, and in view of the two extant multilingual inscriptions mentioned above, Durkin-Meisterernst suggests that

> [d]a die Sasaniden Mp [Middle Persian] sprachen und von keinem Sasanidenkönig nur eine pa [Parthian] Inschrift ohne mp Version (aber auch vor Narseh keine ausschließlich mp. Inschrift) überliefert ist, und da noch vor der letzten pa Inschrift der Oberpriester Kerdīr seine Inschriften nur auf mp anfertigen ließ, scheint das Pa in diesen Inschriften sekundär zu sein oder es zumindest im Laufe der Bezeugung zu werden. Es ist durchaus wahrscheinlich, daß die ersten Sasaniden eine funktionierende

[436] Line 4 reads *mlk 'rwnd[kn]*, translated by Périkhanian as 'roi, Eruandide', a variant designation of the Orontid dynasty.

[437] Spelling variations with <l> for <r> exist as well.

[438] Shayegan (2004) plausibly suggests that this occupation began with the assassination of the Armenian Arsacid King Xosrov II, which may have been instigated by the Sasanians.

> parthischsprachige Kanzlei übernahmen, für die es bald keine Fortsetzung mehr gab. (Durkin-Meisterernst 2014:5)

This lack of Parthian inscriptions after the 3rd century CE will prove to be of interest with regard to the question of the fate of the Parthian language in general; this issue is discussed in 6.3.1 below.

In Parthian and Middle Persian Manichaean literature, a word for Armenia (*'rmyn* /armen/) does occur, but only once in a fragment housed in the Turfan Collection, Berlin (M1524 V 3; cf. Durkin-Meisterernst 2004:53). The Parthian language is mentioned twice, once in another Turfan fragment (*phrwg* /pahrawag/ in M871c A i 4, cf. Durkin-Meisterernst 2004:274), which does not afford any context, and again as *phlw'ng* /pahlawānag/ in a Manichaean text (MMii M2 I R ii 1; cf. Andreas and Henning 1933:302–3), where Mari Amu, one of the main apostles of Mani, is said to be conversant in this language. Neither occurrence sheds any further light on the usage of Parthian.

No mention of Armenia is made in Greek inscriptions on the territory of the Parthian or Sasanian Empire (cf. Rougemont and Bernard 2012; Morano 1990).

6.2.2 Armenian sources

6.2.2.1 Armenian epigraphic sources

Owing to the late date of the invention of the Armenian alphabet at the beginning of the 5th century CE, few inscriptions exist that can be securely dated to the period under consideration here, viz. the 5th and early 6th century.

The oldest dateable inscriptions distinctly written in Armenian script stem from Wadi Haggag in the Eastern Sinai and other places of pilgramage in the Holy Land (cf. Stone 1990–1; Stone et al. 1996–7); these graffiti of personal names are dateable to the beginning of the 5th century, within a few decades of the invention of the Armenian script. Their content, however, is of no linguistic consequence.

There is but one other inscription from the 5th century, formerly located in the Church of St Sarkis in Tekor (Digor, Turkey) and dateable to the 480s CE (cf. Greenwood 2004:89–90); the inscription contains statements regarding its builder, Sahak

Kamsarakan, and consecrator, Yovhannēs Mandakuni (*in officio* 478–490 CE). The house of Kamsarakan, an offshoot of the Kāren Pahlav, was one of many Armenian noble families of Parthian origin (cf. Toumanoff 2010). The fact that the dedicatory inscription was composed in Armenian, rather than Parthian or Middle Persian, may reflect the fact that the Kamsarakan were conversant in, and comfortable to be associated with the Armenian language.[439]

The chronologically next closest inscription, another dedication in the Church of St. Hřip'simē, already dates to early 7th century, and thus bears no further relevance.

6.2.2.2 Armenian literary sources

Since Armenian epigraphic evidence provides no information pertinent to the question of multilingualism in and before the 5th century CE, the only other Armenian language sources available are the same literary works, which above have formed the corpus of texts from which linguistic data was extracted. Most of them fall within the genre of historiography (PB, Eł., ŁP, and here also MX) , but at times exhibit hagiographical tendencies (Kor., Ag.); only one text is entirely different, belonging to the genre of theological or philosophical writing (EK).

While none of these works can make a claim to absolute accuracy and freedom from political or other bias,[440] they still provide otherwise unavailable and thus crucial evidence that directly or indirectly address the question of multilingualism or (linguistic) identity in different ways. In addition to this, they give a very clear picture of the political and cultural relationship between Armenians, Parthians, and Sasanians, which is essential for the determination of the type of contact situation that obtains in this setting. It must be borne in mind, however, that the picture presented by these texts, especially as regards the representation of society, is heavily restricted and likely to

[439] At the same time, Greenwood (2004:70–1) notes that the Sasanian *hazarapet* Manan was involved in the erection and dedication of the church; his knowledge of and stance on the Armenian language cannot be gauged. In view of the Sasanian multilingual inscriptions at Paikuli and on the Ka'ba-ye Zardošt, it may be assumed that the Sasanian policy on languages, if such ever existed, was inclusive rather than exclusive.

[440] While this is true of any work of literature, Thomson (1978:7–10, 40–61) makes a particular point about Movsēs Xorenac'i's account of Armenian history, which is not infrequently at odds with other historiographical sources. In part, so Thomson, this is the result of a political agenda favouring the Bagratuni clan, the author's patrons.

provide information only about the ruling classes.

In the following, the evidence from these literary sources[441] is discussed with a focus on material that can shed light on who spoke what to whom, whether Parthian and Middle Persian were mutually intelligible, whether all Armenians were bilingual and spoke Parthian (or later Middle Persian), and what was the perceived relationship between the three language communities. The question of language will be dealt with first, followed by a brief consideration of kinship relations between Armenians and Parthians and what might be their linguistic repercussions. Thereafter, the connection between ethnic appurtenance and language usage will be addressed, followed by two sections on the relevance of religion and politics to the language contact situation.

6.2.2.2.1 Language

Movsēs Xorenacʻi provides a clear background for the establishment of the Armenian language as the dominant means of communication in the Armenian highland: the namesake of Armenia, Aram,[442] after his successful fight against the Titans, is said to have ʻordered the inhabitants of the country to learn the Armenian speech and language'.[443] Thomson (1978:95 n. 5) remarks that the Armenian phrasing may well allude to the recognition of multiple dialects, since Arm. *zlezus* must be read as an accusative *plural* here and in another passage (MX III.60), and elsewhere occurs as an unequivocal genitive plural form (MX III.52). Although significant differences between Armenian dialects are attested in the medieval and modern period, what works survive in Classical Armenian are over all rather uniform in their language.

Indirectly, the predominance and general importance of the Armenian language is attested, for example, in the fact that the history of the Armenian people written by the unknown author called Agatʻangełos was, at least notionally, composed in that

[441] Other sources will not be discussed owing to a lack of relevant information The Armenian synaxarion, for instance, mentions three saints, who are said to have lived in the relevant time period: Astuacatur Istbuzid (5th–6th century), Tʻēodoros Salahuni (3rd century), and Xačʻik Vardapet (6th century); cf. Nadal Cañellas et al. (1998) and Bayan (1910–30:XXI.81, 438–40, 514–5). Their stories are very short and have no bearing on the present question.

[442] Aram is a character of folklore, and has no clear historic correspondence; a potential date for this character might be the early 9th century BCE, based on his son Ara's liaison with Semiramis, or his identification with the Arame of Urartu, a historic king living at the same time as Shalmaneser III of Assyria.

[443] *zxawss ew zlezus haykakan*; MX I.14. A similar claim, for a different time period, is made by the Greek geographer Strabo; see 6.2.3 below.

language for King Trdat III (cf. Ag. §7).[444] To the mind of the author, therefore, it was normal that a work commissioned by the Arsacid, thus presumably Parthian-speaking, king should be written in Armenian, suggesting that he was bilingual.[445]

Similarly, the other key persona in Agatʻangełos' history and converter of Armenia to Christianity, St Grigor Lusaworičʻ, is said to 'speak Armenian'[446] to the people at large and presumably also to the king. This may be particularly surprising given that Grigor himself is thought to be of Parthian origin by Agatʻangełos and Movsēs Xorenacʻi, belonging to the clan of Surēn Pahlav (cp. Ag. §37 and MX II.28, 74, 91).[447]

Further corroboration of the notion that, at least by the 5th century CE, all strata of Armenian society were fluent in Armenian can be found in Koriwn's description of the teaching and missionary work of St Mesrop Maštocʻ: 'And there they instructed the present royals, together with the entire camp of nobles, in the divine wisdom'.[448]

Since Koriwn's treatment of Maštocʻ focusses on the invention of the Armenian alphabet and the subsequent translation of scripture into Armenian, the assumption from context that the teaching was undertaken in Armenian seems plausible. With the crowd addressed being composed both of Parthian families and clans of other origins like the Mamikoneans, Maštocʻ's teaching in Armenian accordingly requires that they understand him.

A similar notion, namely that all of Armenia spoke Armenian, emerges from the description of mourning at the departure of Katʻołikos Nersēs I in the *Epic Histories*, where 'the entire realm of the Armenian tongue'[449] is said to be saddened. Hence further emerges the identification of the Armenian people with their native language,

[444] As Thomson (2010:7) points out, in its extant version, the Armenian text cannot have been composed in the 4th century CE owing to the lack of an Armenian script. The identity and dates of the Agatʻangełos remain unknown.

[445] A further passage in the Greek version of Agatʻangełos notes that Trdat was also conversant in Latin and Greek, having spent his youth in Rome (§183 Vg; cf. Thomson 2010:485).

[446] *hayabarbaṙ hayerenaxaws*; Ag. §854. Thomson (2010:454) notes that the Armenian phrasing suggests that Grigor only at this point in the story began speaking Armenian, but attributes this to Agatʻangełos' 'awkward adaptation' of a similar passage in Koriwn (Kor. §56), where the same phrase refers to the Armenian translation of the Bible.

[447] In Ag. §50 (cp. Vg 2), however, Trdat does not recognise Grigor's Partho-Armenian origins, since he had been brought up in Cappadocian Caesarea during the Sasanian occupation of Armenia. Whether or not this is reflected in his usage of language, or his accent, is uncertain.

[448] *ew iwreancʻ andēn zaṙəntʻerakacʻ arkʻunisn, handerj amenayn azatagund banakiwn, astuacełēn imastutʻeambn vardapeteal*; Kor. §71.

[449] *ašxarh amenayn Hayocʻ lezuin*; PB IV.12.

and indeed the suggestion that whoever speaks the language at this time may count as an Armenian.

These passages, together with a distinct lack of any evidence to the contrary, suggest that Armenian was the language of general communication even among individuals of Parthian lineage. The absence of any historiography in the Parthian language, and indeed poor epigraphic attestation on Armenian territory,[450] raise the question whether there is any evidence at all of Parthian being spoken by the Partho-Armenian ruling classes.

References to Parthian itself only occur very rarely and in combination with place names: in Ag. §790 and §817, for instance, two villages are mentioned by their Parthian names.[451] Other information about the knowledge of Parthian, it seems, can only be gained indirectly.

In the *Epic Histories*, an incident involving the Armenian King Aršak II at the court of the Sasanian king Šāhpuhr II is related as follows:

> It then happened that [...] Aršak king of Armenia went for a stroll around one of the stables of the king of Persia, while the chief-stabler of the Persian king sat within the stable house. When [this man] saw the king he in no way honored him or paid him any respect, but displayed contempt and even hostility, saying in the Persian language: You [there], king of Armenian goats, come sit on a bundle of grass. Hardly had the *sparapet* commander-in-chief of Greater Armenia, whose name was Vasak from the house of the Mamikonean, heard these words than he flared up with great fury and rage. He raised the sword that hung by his side, and on the spot he struck off the head of the chief-stabler of the Persian king [...]. (PB IV.16)[452]

Since Aršak is explicitly insulted in the Persian language, both he and Vasak Mamikonean, who reacts on his behalf, clearly do and are meant to understand the insult,

[450] What little evidence there is of Parthian epigraphy in Greater Armenia is written in Aramaic heterograms, with only onomastic evidence, formulaic structure, and (later) phonetic complements pointing at a Parthian origin (cf. Schmitt 1998:167–174).

[451] The villages in question are Bagayaŕič in Ekeleac‘ province, and Dic‘awan on the Upper Euphrates, translated as ‘worship of the God’ (cf. Thomson 2010:388) and ‘city of God(s)’, respectively.

[452] *apa ełew dēp ōr mi yawurc‘ ekn emut t‘agaworn Hayoc‘ Aršak šŕǰel zaspastanaw miov zark‘ayin Parsic‘. isk axoŕapetn ark‘ayin Parsic‘ nstēr i nerk‘s i tan aspastanin: ibrew tesanēr zt‘agaworn, oč‘ inč‘ aŕ laws kaleal mecareac‘ zna, ew oč‘ inč‘ šuk‘s dnēr nma. ayl ew anargans ews dnēr t‘šnamanac‘, aselov i parskerēn lezu t‘ē aycic‘ Hayoc‘ ark‘ay, ek nist i xrjan xotoy i veray. zor bans ibrew lsēr sparapetn zōravarn Hayoc‘ mecac‘, orum Vasakn koč‘ēr, i Mamikonean tohmēn, mecaw barkut‘eamb ew bazum srtmtut‘eamb barkanayr. i ver aŕeal zsusern, zor ənd mēǰn uner, hareal andēn i teławoǰn zaxoŕapetn ark‘ayin Parsic‘ glxatēr i nerk‘s yaspastani and.*

requiring them to have at least a passive knowledge of Middle Persian. Alternatively, assuming that Parthian and Middle Persian were mutually intelligible owing to their close linguistic relationship, knowledge of Parthian may have sufficed. For the Arsacid king of Armenia, an active knowledge of one of the West Middle Iranian languages may be assumed without further question. As for Vasak, it is not implausible to assume that he became bilingual only later in life (maybe in early adolescence), since the Mamikonean family is not of Parthian descent;[453] yet, as a senior member of one of the major *naxarar* families and the *sparapet*, acquiring Parthian or Middle Persian is likely to have been an essential part of his upbringing.

That not everyone spoke Middle Persian or Parthian is evident from the story of the captivity of Sahak Partʻev, the head of the Armenian Church at the end of the 4th and beginning of the 5th century. On two occasions, Sahak's proficiency in the Persian language is mentioned: once in a conversation with the Sasanian chief-magus (Եł. p. 148), and a second time when he acts as interpreter for the Armenian priest Levond and his Sasanian interlocutor (Եł. p. 162). Sahak's Parthian descent is reflected in his epithet, and his proficiency in Middle Persian, and thus presumably also Parthian, corroborate the above assumption that families of Parthian origin kept their mothertongue alive despite their Armenian-speaking domains. In turn, not all Armenians spoke an Iranian language, as the priest Levond's need for an interpreter suggests.[454]

Although no Classical Armenian source makes mention of Parthian being spoken,[455] historiographers were not as a matter of principle opposed to speaking of other languages. Koriwn, for example, mentions Mesrop Maštocʻ's mission to convert the inhabitants of the region of Markʻ, who were difficult to approach 'not only because of their demonic, satanic and evil character, but also owing to their very crude and rough language'.[456] It is unclear whether Koriwn's statement is a value judgement of

[453] The Mamikoneans are said to be of royal ancestry (cf. PB V.4, 37; MX II.81), specifically descended from the kings of *Čʻenkʻ*. Movsēs Xorenacʻi connects these to the Chinese, which is rather unlikely (cf. Garsoïan 1989; Toumanoff 1963, 1969, 1976); an origin in the Caucasus is deemed more likely (cf. Thomson 2000:54 n. 342).

[454] This episode is also mentioned in ŁP §55; Thomson (cf. also 1991:146 n. 2).

[455] That is with the exception of the two village names given in Parthian in Agatʻangełos; see fn. 451 above.

[456] *očʻ miayn vasn diwakan satanayakir barucʻn čiwałutʻean, ayl ew vasn xecʻbekagoyn ev xošoragoyn lezuin*; Kor. §60.

an Armenian dialect, or whether it refers to an entirely different language, especially since the region of Markʻ, northeast of Lake Urmia, was both a border region between Armenia and Media, and not always an integral part of the kingdom. Not even the reassurance that after Maštocʻ's intervention with multiple generations from Markʻ they 'were made to speak clearly and eloquently'[457] can help in this determination, since it remains unclear whether they were taught Classical Armenian as a second language, or were given something akin to elocution lessons.[458]

Next to Armenian itself and the Iranian languages, Greek played a not insignificant role. Graeco-Roman sources suggest that Greek was one of the court languages of Tigranes II (see 6.2.3 below), and the dependence on Greek and Syriac as ecclesiastical languages prior to the invention of the Armenian alphabet in the early 5th century CE as well as frequent interactions with the Roman Empire suggest that some knowledge of Greek was maintained amongst the ruling classes.[459] Owing to the political and cultural conflict between the Sasanian and Roman Empire, Greek was, however, also the subject of proscription under Sasanian rule, as attested in both Koriwn and Movsēs Xorenacʻi:

> There he found Sahak the Great engaged in translating from Syriac, there being no Greek [books available], for the Greek books of the entire land had previously been burned by Mehrujan, and again at the division of Armenia, the Persian governors did not allow anyone to learn Greek in their part but only Syriac. (MX III.54)[460]

Despite repeated attempts at converting the Armenians back to Zoroastrianism, the prohibition of Greek language material is more likely to be politically than religiously motivated, since the other language closely associated with Christianity, Syriac, had

457 *parzaxōss, hṙetorabans, … kacʻucʻanēin*; Kor. §60.

458 Other instances of languages being mentioned explicitly include: the languages of Georgia (Kor. §91); the language spoken in the region of Taykʻ (close to the Black Sea and Georgia; ŁP §62); the language spoken in Cʻopkʻ (southwest Armenia, between Euphrates and Tigris) in the time of Tʻargom (Togarmah, the grandson of Noah; PB III.13). Unfortunately, no further discussion of these languages occurs in the texts, and for geographic reasons none of them are likely to be Iranian in origin.

459 This suggestion finds further corroboration in the writings of Łazar Pʻarpecʻi, where Greek and Syriac are mentioned as the languages in which decrees and accounts were noted (ŁP §10). Also consider the presence of Armenians at Greek schools in the eastern Mediterranean as described in, e.g., Kor. §§95–109.

460 *ew gtanē zmecn Sahak tʻargmanutʻean parapeal yasorvoyn, yočʻ lineloy yuni. kʻani nax i Mehružanay ayreal linēin əndhanur ašxarhis yoyn girkʻ. darjeal i bažanel zašxarhs Hayocʻ, čʻtayin parsik verakacʻukʻn yoyn umekʻ usanel dprutʻiwn yiwreancʻ masinn, ayl miayn asori*; cp. Kor.II §94.

not been banned. Such a language policy must have been an exceptional occurrence, since the geographical extent of the Sasanian Empire and the diversity of its peoples, and lacking infrastructure would not have allowed for the enforcement of Persian (or any other) monolingualism.[461]

The image that emerges from Armenian historigraphical literature is, therefore, not as clear as would be ideal for any attempt at determining the status of the various languages spoken by the different peoples living in the Armenian kingdom. For the most part, sources deal with and are composed by the upper strata of society, wherefore next to no information is available about society at large.

From what little evidence there is, however, it may tentatively be postulated that Armenian was the predominant language of the upper classes, certainly by the 5th century CE. With literature in Armenian composed for and commissioned by nobles of Parthian origin, the absence of any comparable Parthian literary sources, and a number of clues in the Armenian sources, it is highly likely that even the Parthian ruling families in Armenia spoke the language of their subjects.

In turn, there is good reason to believe that Parthian, or a Middle Iranian language at any rate, was spoken also by the Armenian nobles; bilingualism, whether acquired during childhood or later in life, seems to have been the norm for members of the ruling classes. Whether Greek was an integral part of the set of languages spoken is less clear; continuous contact with the (East) Roman Empire and the spread of Christianity suggest that Greek was highly relevant in some respects; in the absence of a greater number of native speakers, however, it would appear more likely that it served as a language of learning and diplomacy, as opposed to the more ubiquitous use at home and in company of both Armenian and Parthian.[462]

[461] This is corroborated by Iranian epigraphic sources, such as the trilingual Kaʿba-ye Zardošt inscription of Šāhpuhr I (Middle Persian, Parthian, Greek), and remaining Greek inscriptions in Armenia, e.g. at the temple in Garni.

[462] There was, without question, a period of Hellenisation in Armenia, after the conquests of Alexander the Great (cf. Garsoïan 1997*b*:50–2), during which elements of Greek culture were adopted and some awareness of the language must have spread as evidenced by, e.g., the Greek letters from Awroman. Yet, the epigraphic evidence of Greek in the Iranian world is quite limited (Huyse 1998; Rougemont 2013), and in Armenia, all Greek inscriptions pre- or post-date the Arsacid period (cf. Greenwood 2004:88 for a possible exception in Ereroykʿ). The Greek spoken by the Armenian clergy, and used in mass before the translation of the gospels and the liturgy, was likely learnt abroad, e.g. in Samosata or Constantinople (cf. Kor. §§46, 137–9); in her commentary on Koriwn, Winkler (1994:257) further points out that there were very few cities in

6.2.2.2.2 Marriage, tutelage, and other relationships

One of the key questions regarding the potential multilingualism amongst the Armenian and Parthian ruling classes is that of its origin: how, and when, did Parthians acquire Armenian, and *vice versa*? Historiographical sources suggest two main avenues for this linguistic intermix: the creation of multilingual families through intermarriage between Armenian and Parthian speakers;[463] and the institution of the tutelage system, whereby one clan's youth was brought up and educated by a different clan.

A prominent example of the establishment of such familial ties is the marriage between Vardanduxt,[464] daughter of *sparapet* Manuēl Mamikonean,[465] and the Arsacid king Aršak III in the late 4th century, thus establishing a link between the Parthian speaking Arsacids and the Armenian speaking Mamikoneans.[466] Aršak III's grandfather, Aršak II, was in turn married to, amongst others,[467] Pʻařanjem Siwnecʻi, a member of an old Armenian *naxarar* family with lands east of Lake Van (cf. PB IV. 15, MX III.24).

Of course, not all marriages amongst nobles were between Armenians and Parthians. The union of Yusik, grandson of St Grigor Lusaworičʻ, and the unnamed daughter of the later king Tiran, for instance, is arranged between members of two Parthian families, the Gregorids[468] and the royal Arsacids (cf. PB III.5; and similarly for Yusik's sons, cf. PB III.15). Similarly, the marriages of Tačat and Garegin II Ṙštuni with Mamikonean women (cf. PB III.18, MX III.7; PB IV.59) attest bonds between Armenian

Armenia, in which Greek settlers might have resided.

463 For a brief overview of Parthian marriage policy, Ellenbrock and Winkelmann (cf. 2015:95–7).

464 It is of note that the name Vardanduxt itself is of Iranian origin (Ačařean 1942–62:V.74); since the Mamikonean family is not originally of Iranian descent, this suggests that Iranian names had spread throughout at least this stratum of society, whether by imitation of other noble families, by adoption of names and conventions used in (oral) literature, or by another form of acculturation.

465 A different lineage is suggested by Movsēs Xorenacʻi (MX III.41), but Garsoïan (1989:425) prefers the reading in the *Epic Histories* owing to Movsēs' negative stance towards the Mamikoneans.

466 As explained in fn. 453 above, the exact origin of the Mamikonean family is unclear; no evidence suggests, however, that they should generally speak a language other than Armenian at the time in question.

467 Aršak II's other wife, Olympias, is mentioned elsewhere (MX III.21).

468 St Grigor, according to tradition, is the son of Anak the Parthian.

families.[469]

Next to marriage between Parthian and Armenian families, the *dayeak* ('tutor') system is the second important element of Armenian culture that is likely to have contributed to the establishment and maintenance of societal bilingualism. Garsoïan (1989:521) briefly describes the system as an 'institution […] whereby *naxarar* youths were raised by foster-fathers of their own social class', a tradition widely attested in Armenia as well as the Sasanian Empire.[470]

Examples of *dayeak*s are found throughout Armenian literature for youths of both genders.[471] The Mamikonean family, holding the hereditary office of *sparapet*, were traditionally charged with the upbringing of the Arsacid heir-apparent (cf. PB IV.2, 11, 47, 53),[472] but also took in children from other houses, e.g. from the Arcruni or Ṙštuni families (cf. PB III.18).[473] Other Arsacid youths, however, were allotted *dayeak*s from other houses, as is the case of King Varazdat, the nephew of his predecessor, King Pap (whose son, Aršak III, ascended to the throne after Varazdat). Varazdat had been tutored by Bat Saharuni, whose family is of Armenian origin with domains in the Armenian heartland (cf. PB V.35, 37).

Both intermarriage and the *dayeak* system were, of course, political institutions primarily meant for the establishment of close bonds between the different families in an attempt to assure both peace and stability amongst the *naxarar*s. The opportunity arising from giving Armenian speaking youths into the care of Parthian speakers and *vice versa* was certainly advantageous, but is unlikely to have been a primary goal of these liaisons.[474]

[469] There is some debate about the heritage of the Ṙštuni family, specifically whether they are of Armenian origin, an offshoot of the Siwni family (cf. MX II.7), or of Urartian origin as argued by Toumanoff (1963:244–8, *passim*); also cf. Garsoïan (1989:402).

[470] Łazar Pʻarpecʻi, for example, notes that the Sasanian general Šāhpuhr was raised by Armenians (cf. ŁP §77).

[471] Fewer cases of girls being brought up by other families are attested (Thomson 2010:214), but cf. Ag. §§138, 217 for mentions of Hṙipʻsimē and Xosroviduxt, and PB IV.59 for Hamazaspuhi Mamikonean.

[472] Next to pedagogical functions, the *dayeak* also served as a general protector of the ward, as the story of the future king Trdat's rescue suggests (cf. Ag. §36).

[473] This traditional role is obscured by Movsēs Xorenacʻi, cf. MX II.82 and Garsoïan (1989:521).

[474] One explicit mention of the function of intermarriage occurs in Łazar Pʻarpecʻi: in the account of Yazkert's installation of Šāhpuhr as Armenian king, it is noted that 'through intermarriage they [the Armenians and Iranians] will communicate with each other while those [Armenians] thus separated [from Christianity] will love [their spouses] as well as their [Zoroastrian] customs' (*ayl ew amusnutʻeancʻ sturewaṙiwkʻ hałordealkʻ aṙ mimeans, zatucʻealkʻ aynuhetew orošin i siroy nocʻa*

Nonetheless, these interfamilial and cross-linguistic ties corroborate the suggestion made above that members of the ruling families spoke both Parthian and Armenian at least to some extent. If indeed some of them were educated in families speaking a language different from the tutee's native tongue, this would speak in favour of their acquiring both Parthian and Armenian at a reasonably young age[475] from native speakers.

6.2.2.2.3 Religion

One crucial aspect of Armenian history, as pointed out already, is the process of Christianisation that began in the very early 4th century CE. On the surface, the introduction and spread of a new religion does not have an intrinsic bearing on language use, but in the case of the Christianisation of Armenia is, for a number of reasons, likely to have played a significant role in the increased importance of the Armenian language.

The Armenian language acquires the status of a liturgical language at the beginning of the 5th century CE with the introduction of the Armenian script by Mesrop Maštocʿ (cf. Kor. §§43–52). Prior to the invention of the script, all religious teaching and liturgies were by necessity conducted in either Syriac or Greek, depending on the geographical region in question;[476] but with the translation of the New and Old Testament into Armenian, it had become possible to preach and teach in Armenian, and thus to reach a wider spectrum of people. The importance of this transition from other languages to Armenian is particularly clear in a passage of Koriwn:

> When Moses, teacher of the law, arrived [in Armenia] unexpectedly with

ew yawrinacʿn; ŁP §12). There is, therefore, clearly a political agenda behind at least his notion of intermarriage. Note, however, that Łazar also mentions that the spouses will get to talk with each other – could this be an expression of his hope for a spread of Middle Persian?

[475] There is, unfortunately, no information concerning the age at which children would have been given into the care of *dayeak*s, wherefore it remains unclear whether the other language was indeed acquired in childhood, or learned in adolescence. If the situation in Sasanian society is in any way related, education in early childhood (up to age 5) was overseen by the mother or other female relative, whereafter formal education started (Rose 1998:36–7); Zakarian (2014: 111–20) suggests that in Armenia, too, women were the main educators, but sources do not provide an age range. In this context it is worth noting that as far as language habits are concerned, women often maintain their native language for longer than men under similar circumstances (cf. Langslow 2002:28); in context, this might mean that Parthian women may still have spoken Parthian whereas their male relatives could already be shifting or have shifted to Armenian.

[476] Syriac dominated in the south, Greek in the north; vestiges of a Bible translation from Syriac into Armenian can still be found (Cowe 1984, 1990-1; Leloir 1972).

> a host of prophets, and [with him] the progressive Paul with the entirety of the apostles, together with world-redeeming Gospels of Christ, at the two of them [= Sahak and Maštocʻ], they were found to speak and sound Armenian. (Kor. §65)[477]

According to this passage, scripture only truly arrived in Armenia with its translation from Greek and Syriac by Maštocʻ and his disciples. In the parallel passage from Agatʻangełos, in contrast, it is St Grigor himself who, like Moses and Paul, appears and suddenly speaks and sounds Armenian (Thomson 2010:454). Between the two texts, it is clear that the conversion of the people and the spread of the faith could only progress in Armenian.

In view of this, it is ever more relevant that this conversion took place at the hands of an ethnic Parthian, and that, according to historic accounts, the Arsacid ruling class was the first to be converted. The Parthian origin of St Grigor is mentioned numerous times, e.g. in Agatʻangełos, where after the murder of King Xosrov and his final command to apprehend his murderers, it is reported that ʻonly two infants from among the sons of the Parthian [= Anak] did someone save'.[478] One of the infants was Grigor, who later ʻtook the men of the Arsacid family and instructed them in [Christian] doctrine. […] He persuaded them all to worship only the Lord their God and to serve him alone'.[479] This conversion and the ensuing baptism are also the occasion for the spread of the faith to the wider masses, esp. royal army (cf. Ag. §§833, 835).

From the perspective of the Sasanians, however, the spread of Christianity in Armenia was not always welcome. While tolerated at certain times, the fact that the Armenian Arsacids belonged to a different faith than their Persian relatives and the Sasanian dynasty led to both war and attempts at forced conversion back to Zoroastrianism (cf. Russell 1987 with references). A particularly telling episode occurs in the *Epic Histories*: Šāhpuhr II doubts King Aršak's loyalty, suspecting him to have sym-

[477] *yorum yankarc uremn ōrēnsusoycʻ Movsēs, margarēakan dasun, ew yaŕaǰadēmn Pawłos bovandak aŕakʻelakan gndovn, handerj ašxarhakecʻoycʻ awetaranawn Kʻristosi, miangamayn ekeal haseal i jeŕn erkucʻ hawasarelocʻn, hayabarbaŕkʻ hayerēnaxōskʻ gtan*; cp. Ag. §854.

[478] *baycʻ miayn erkus mankuns pʻokʻrkuns yordwocʻn Partʻewin prceal omn aprecʻucʻanēr*; Ag. §34; cp. also Ag. §37; MX II.80.

[479] *aŕnoyr aynuhetew zAršakuneacʻ tohmi orearn i varžs vardapetutʻean parapecʻucʻeal. […] apa amenecʻun zays dnēr i mti, zi teaŕn Astucoy iwreancʻ miayn erkir pagcʻen, ew nma miayn spas tarcʻin*; Ag. §783.

pathies for the Roman emperor, and thus makes him swear an oath on the Gospels, thus acknowledging his Christian faith; shortly thereafter, however, and through the deceit of Vasak Mamikonean, Šāhpuhr sees his doubts confirmed and exclaims:

> You love him because he belongs to your faith. […] You desire the dominion of the Aršakuni over yourselves and you seek it. […] I will not leave a single man alive who belongs to this Christian faith. (PB IV.16)[480]

For Šāhpuhr, religion is associated not only with an individual's personal belief, but also with his loyalties to others of that faith.[481] Christianity here becomes synonymous with rebellion against tradition, with separatist ideology.[482]

In turn, Zoroastrianism also lost the position it had once had in Armenia.[483] On multiple occasions, Armenian historiographers make clear their stance against Zoroastrianism in general, but its forceful reintroduction in particular.[484] After a battle against the Sasanians with heavy losses on both sides, including the *sparapet* Vačʻē Mamikonean, the patriarch Vrtʻanēs consoles his people by reminding them that these deaths helped prevent a worse fate:

> For if the enemy had taken this realm, they would have implanted here the laws of their lawless, impious, godless religion, which we implore 'May it not be!' (PB III.11)[485]

On other occasions, Armenian nobles agree to accept direct Sasanian rule as long as their religious freedom is respected (cf. ŁP §22), or fallaciously pay lip-service to imposed Zoroastrianism, but not without considerable debate about the righteousness of such an act (cp. ŁP §55). Both literary and more theologically minded works in this

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480 *ew or uni zōrēnsn jer, zna sirecʻēkʻ […] ew kamikʻ dukʻ ztērutʻiwn Aršakuneacʻ i veray jer, ew znoyn xndrēkʻ. […] očʻ miayn mardoy, or yaydm ōrēns kʻristonēutʻean ē, očʻ tam aprel.*

481 Such a notion of faith is transparent also in another passage, in which are described Mušeł Mamikonean's loyalties to his fatherland, his family, his faith, and all those pertaining to it (cf. PB V.20).

482 Here cf. e.g. Thomson (1982:2), who sums up the theme of Ełišē's work as 'the resistance of Christian Armenians to religious persecution'.

483 Owing to its political dependency on the Iranian cultural sphere, Armenia was predominantly Zoroastrian prior to its Christianisation. Yet, it seems that a particular cult of Anahit had developed in the country that was not as such paralleled in the Parthian or Sasanian empires; cf. Ag. §53; Garsoïan (1989:347); Russell (1987:235–60); also cf. Strabo, *Geography* XI.14.16.

484 The question of reintroducing Zoroastrianism occurs repeatedly under Šāhpuhr II, but also under Yazkert II, in varying degrees of severity (cp. Ełː 62, 83–5 and ŁP 22). Freedom from religious oppression is finally granted only under Peroz (cp. ŁP §110); cf. Thomson (1982:134 n. 3) for further notes on the tolerance of Christianity in Iran after Yazkert.

485 *ew etē zašxarhs unicʻin ardewkʻ tʻšnamikʻn, ew ziwreancʻ zanōrēn zankrōn zanastuac krōnicʻn zōrēns ast ardewkʻ hastatēin. or, zor xndremkʻs, kʻaw ew mi licʻi.*

fashion emphasise that Zoroastrianism was no longer a viable religion for Armenians (cp. EK §148).[486]

The issue of religion is inextricably intertwined with questions of territory and political appurtenance, with the Sasanian Empire and Zoroastrianism on the one hand, and the Roman Empire and Christianity on the other. Equally, however, religion in this case relates to the self-identification as Armenian. Inevitably, Armenian became the language of Christianity in this region, at the very least after the invention of the Armenian alphabet and in non-clerical circles. Despite their Parthian, and thus Zoroastrian, origins, the Arsacid rulers of Armenia, and with them the Mamikonean family, are the instigators and staunchest supporters of Christianisation. If not before, then at least during the spread of this faith, the converted would have learnt and spoken Armenian to profess their faith, including the Iranian ruling class.

6.2.2.2.4 Origins and ethnicity

It has so far been assumed that the contact between the Parthian and Armenian language relied largely on its ruling-class speakers – at least as far as evidence can bear witness. This assumption requires, however, that there were sufficient speakers of Parthian, viz. not just the royal Arsacids, and that, in one way or another, these speaker groups can be distinguished from their Armenian-speaking counterparts. To confirm the validity of these facts, the following paragraphs enquire into the origins and ethnicity of some of the noble families mentioned in historiographic literature.

First of all, there can be no doubt that both Armenians and Iranians differentiated between Parthians and Persians as different peoples; in Agatʻangełos, it is made clear that Ardašir, the first Sasanian king, ʻunited the forces of the Persians, who abandoned, despised, rejected, and disdained the sovereignty of the Parthians'.[487] Despite

[486] One of the exceptions to this assertion is the rule of King Pap (*r.* 370–74 CE), during which, it is said, ʻmany people turned back to the ancient worship of demons, and they erected idols in many places in Armenia with the permission of King Pap' (*bazum mardik i hnutʻiwn diwapaštutʻean darjan ew ənd bazum tełis Hayocʻ kuŕs kangnecʻin i harmarjakutʻenē tʻagaworin Papay*; PB V.31).

[487] *miabaneacʻ zzōrs Parsicʻ, orkʻ lkʻin xotecʻin meržecʻin anargecʻin ztērutʻiwnn Partʻewacʻ*; Ag. §18. In the Laurentiana MS of the Greek version of Agatʻangełos, this disdain is, amongst other things, related to the origin of the Parthians: 'The Parthians are loathsome to Persian and Assyrian men, having come among us from the land of barbarians' (Thomson 2010:124–5). This may be a reference to the influence of the Parnian invasion of Parthia, see 1.3.5.1 above and fn. 520 below.

these harsh words, Parthians remain an important part of the Sasanian court,[488] retain their role as rulers over Armenia,[489] and evidently in other states bordering the Sasanian Empire.[490] Together with the existence of bilingual inscriptions in Middle Persian and Parthian from the early Sasanian period, this is a clear indication that the Parthians were still a force to be reckoned with in the Sasanian Empire.

The same is, of course, true for the Parthian rulers of Armenia. Movsēs Xorenacʻi, in his genealogy of Armenia, lists great men, 'especially the kings, down to the rule of the Parthians. For these men [descended] from our kings are dear to me as compatriots and kindred'.[491] While it is acknowledged, therefore, that the Arsacids are of Parthian descent, for Movsēs they are still Armenians. This perception is arguably also reflected in the fine-grained, clan-based designation of most families; with minor exceptions, individuals, and particularly *naxarar*s are identified by their clans (Aršakuni, Mamikonean, Kamsarakan, Surēn, *etc.*),[492] rather than by their ethnicity. While it is likely that this reflects the confederative character of the Armenian kingdom, with the Arsacid king as *primus inter pares* (Garsoïan 1976, 2005), it also suggests an incipient concept of identity (if not nationhood) beyond ethnic, tribal, and potentially linguistic boundaries (see 6.3.1 below).

Nonetheless, tribal appurtenance was of relevance in a number of respects, includ-

488 cp. Ag. §20.

489 The tenet that 'whoever was king of Armenia had second rank in the Persian kingdom' (*or Hayocʻ tʻagawor ēr, na ēr erkrord Parsicʻ tērutʻeann*; Ag. §18) was apparently maintained.

490 Agatʻangełos (§20) mentions King Xosrov's appeal to the Kušans, the empire bordering the Sasanians in the east. While Agatʻangełos does not suggest any close relationship between Kušans and Arsacids, other Armenian historiographers differ: in the *Epic Histories*, a war between the Sasanians and the 'Aršakuni king of Kušan' (*aršakunin tʻagaworn Kʻušanacʻ*; PB V.7, 37) is mentioned; this, however, is more likely to refer to the invasion of Kušānšāhr by Chionites (cf. Garsoïan 1989:313, 384; Frye 1963:216–18). Other branches of the Arsacid family also ruled in the neighbouring regions of Ałuankʻ and Iberia (Garsoïan 1989:355). The suggestion that the Kušānšāh at this time may have been an Arsacid Parthian is, however, corroborated further by Movsēs Xorenacʻi's (II.67), and supported by Lozinski (1984).

491 *manawand tʻē tʻagaworacʻ, minčʻew cʻtērutʻiwnn Partʻewacʻ. kʻanzi inj aysokʻik arkʻ i merocʻ tʻagaworacʻ en sirelikʻ, orpēs bnikkʻ ew imoy arean aṙukʻ*; MX I.22.

492 This clan mentality is particularly pronounced, for example, in Manuēl Mamikonean's speech against King Varazdat, in which the good co-operation of the two clans is mentioned, and Varazdat vituperated for bringing shame to his family name (cf. PB V.37). The Parthian origin of some clans is further mentioned explicitly, so for instance the Siwnikʻ, which are supposedly related to the Arsacids (cf. MX I.14); the Surēn Pahlaw (cf. Garsoïan 1989:409–10 with references); or the Kamsarakan, to whom Trdat III grants *naxarar* status with the request that 'he might banish from his mind the memory of his original land called Pahlaw' (*miayn zi i mtacʻ nora heṙacʻusacʻē zyišatak bnik ašxarhin or Pahlawn kočʻi*; MX II.90).

ing inheritance of titles, offices, responsibilities, and precedence at court.[493] One such instance is the assumption of control over Armenia of Aršavir Kamsarakan after the death of Xosrov II ‘as the preeminent and most honourable man after the king’,[494] which Thomson makes out to be a reference to his Parthian origins.[495] Another case is the formulaic invocation of the ‘protection from our heroic Parthians, from the glory of [our] kings and brave ancestors’,[496] with which King Trdat III addresses his *naxarar*s; here, the mention of his Parthian origins serves as reminder of their pre-eminence, royal status, and possibly the former empire.[497] The nature of the Arsacid Parthians’ royal status in Armenia is further underlined in the repetition of the phrase ‘natural lord’ (*bnak tēr*) or variations thereon, which are meant to justify the hereditary Arsacid rule.[498]

At least in historiographic literature, then, an individual’s ethnic origin or clan appurtenance is made out to have an impact on on that person’s importance, and, in part, trustworthiness. Yet, while the memory of Parthian descent of numerous clans is retained and mentioned, and is reflected in their position at court, it is neither sufficient nor necessary to attain rank and honour, as the Mamikoneans on the one hand, and the Sasanian and Kušān Parthians on the other demonstrate. Clearly, then, the ruling class of Armenia was composed of both Armenian and Parthian clans, who at one point in time would have spoken their respective native languages. To what extent, or indeed whether, this was still the case by the end of the 5th century CE is impossible to determine with any certainty. The identification of the various

493 See for example the discussion of the Mamikoneans’ hereditary office of *sparapet* and the *dayeak*-ship to the Arsacid heir-apparent above, 6.2.2.2.2. Similarly, consider the heredity of the office of Armenian patriarch (*episkoposapet*) between St Grigor Lusaworič‘ and St Sahak Part‘ew (cf. ŁP §13).

494 *orpēs glxawori ew yoyž patuakani yet ark‘ayi*; MX III.10.

495 Cf. Thomson (1978:263 n. 4); Toumanoff (1963:206–7).

496 *ew i mer diwc‘axaṙn Part‘ewac‘ hasc‘ē ayc‘elut‘iwn, i p‘aṙac‘ t‘agaworac‘ ew i k‘aǰ naxneac‘*; Ag. §127.

497 Another passage harkening back to the heyday of the Parthian Empire is found in the *Epic Histories*, when Aršak offers frank words to Šāhpuhr, supposedly under the influence of magic: ‘Away from me, malignant, servant, lording it over your lords!’ (*i bac‘ kac‘ yinēn, caṙay, č‘aragorc tirac‘eal teranc‘n k‘oc‘*; PB IV.54)

498 Consider, for instance, Łazar P‘arpec‘i’s dichotomous description of Armenian subjects: ‘some were true to the divine command and stood in obedience to their natural Arsacid kings, while others wanted to serve foreign kings, to the ruination of themselves and their land’ (*omanc‘ əst astuacayin hramanatowut‘ean i hnazandut‘iwn bnik iwreanc‘ Aršakuni t‘agaworac‘n, ew ayloc‘ caṙayel kamaw awtar t‘agaworac‘n, i korust anjanc‘ ew ašxarhis*; ŁP §3); also cf. Garsoïan (1976: 180, 196–7; 1989:517).

tribes, Parthian and otherwise, with the Armenian kingdom and its Arsacid rulers, the expressed difference between the Armenian Arsacids and other Parthians in the Iranian world, and the emphasis of the natural, viz. hereditary, rule of the Arsacids over Armenia does, however, suggest a considerable divide between the Iranian and Armenian Parthians, which *may* also have found expression in the roles of the Parthian and Armenian languages.

6.2.2.2.5 Politics

Perhaps the overall most complicated issue portrayed in Armenian historiography is the political and diplomatic relationship between the Armenian Kingdom and the Iranian and Roman Empires. To an extent, this is a result of historical fact and the changing allegiance and appurtenance of Armenia over the course of the centuries (cf. Garsoïan 1997*a*,*b* for a summary); on a different level, the political history can be difficult to follow owing to idiosyncrasies of the works which describe them. Movsēs Xorenacʻi's political agenda almost completely eradicates the Mamikonean family from his version of history, which in general has some issues as Thomson points out (1978; 2001; see also fn. 440 above). Others differ on finer points, so for example the reasons underlying the persecution of Christian Armenians by Yazkert in the early 5th century: Ełišē describes it simply as a plot by a malicious Sasanian king and his counsellors, intending to eradicate potential rebels; Łazar Pʻarpecʻi, on the other hand, suggests that the issue arose in the Siwnikʻ family as a dispute between Vasak and his son-in-law Varazvałan (cf. Thomson 1982:3).

Despite their differences, Armenian historiographical works of the 5th century do have at least one thing in common: they discuss Armenia at its historical turning points, be that the Christianisation in Agatʻangełos, the struggle of a Christian people in the Zoroastrian Iranian cultural sphere in the *Epic Histories*, or the revolt against the Sasanians in Ełišē. Similarly, it emerges quite clearly that the Armenian relationship with the Sasanian Empire is a very fraught one; this, in turn, is of relevance when considering the linguistic developments discussed above.

The reasons for the problematic relationship with the Sasanian Empire have, in part, been discussed already; other reasons include the buffer status of Armenia be-

tween the Greeks and Romans on the one side, and the Parthians and Sasanians on the other side, as well as the relegation to lower political and societal status of the Parthians after the fall of their empire and the rise of the Sasanians. More specifically, Łazar suggests two prime motivations for the Armenian dislike of the Sasanians: he laments the fact that the part of Armenia that fell under the influence of the Sasanians after the Peace of Acilisene (*c.* 387 CE) was 'humbled by the bitter and tyrannical service tendered to the king of the Persians'[499] before a new king (Xosrov IV) was installed. The second reason, at least in Łazar's eyes, was the abolition of the Arsacid rule under Vahram V (*r.* 420–38) at the behest of the Armenian *naxarar*s but under protestations of the head of the Armenian Church, St Sahak;[500] this resulted in the incorporation of the former kingdom into the Sasanian Empire as a *marz*, i.e. a border region.

It ought to be kept in mind that Łazar's displeasure at Sasanian rule is founded not only in the loss of Armenian sovereignty, but also in the previous history the kingdoms have shared. After the fall of the Parthian Empire in 224 CE, Trdat II and later his son Xosrov II resisted the Sasanian attempts at expanding their territory to include Armenia under Ardašir I, fighting back and 'for ten years [making] continual incursions […], plundering all the border land which was under the suzerainty and authority of the Persians'.[501] Following the death of Xosrov II at the hand of a Sasanian agent, and a period of Sasanian rule (*c.* 252–87), the newly established King Trdat III pursued a similar policy towards the Sasanians, and 'spent the whole period of his reign devastating the land of the Persian kingdom and the land of Asorestan'.[502] Descriptions of hostilities, for a variety of reasons, are found also in the *Epic Histories* (cf., e.g., PB III.21 on Trdat III's reign), and *passim* in Ełišē and Łazar, whose works are, to no small extent, dedicated to the conflicts and wars between Armenians and Sasanians (Hacikyan 2000:213–17, 239–43).

While there is distrust and hostility towards the Sasanians, the same cannot be said

[499] *zkołmn arewelic' xonarhec'uc'anelov daṙn ew bṙnawor caṙayut'eamb ark'ayin Parsic'*, ŁP §6.

[500] Cf. ŁP §14: 'they [the *naxarar*s and the Sasanian king] wanted to do away with the kingdom', *k'anzi kamēin baṙnal i mijoy zt'agaworut'iwnn Hayoc'*.

[501] *stēp stēp zays awrinak awar aṙeal awerēin zamenayn erkir sahmanac'n, or ənd t'agaworut'eambn ew ənd išxanut'eambn ēr*; Ag. §23.

[502] *isk t'agaworn Trdat zamenayn žamanaks iwroy t'agaworut'eann awerēr k'andēr zerkirn Parsic' t'agaworut'eann ew zašxarhn Asorestani*; Ag. §123.

about their Parthian predecessors, or indeed about the Armenian Arsacid rulers. This transpires most clearly in the above-mentioned installation of the Arsacid King Xosrov IV, which according to the *Epic Histories* occurred at the request of the Armenian *naxarar*s (cf. PB VI.1);[503] this aligns neatly with the notion of the Arsacids as the 'natural' rulers of Armenia (see 6.2.2.2.4 above). A similar situation occurs, according to Łazar, after the rule of Šāhpuhr IV (*r.* 415–20), who had been imposed on the Armenians by Yazkert I after the death of Xosrov IV (cf. ŁP §13), when the *naxarar*s once more request an Arsacid king, Artašes IV, who would be the last Arsacid ruler of Armenia. Especially in Ełišē, the role of religion, particularly if imposed by force, further emerges as a reason for hostility. After a failed attempt at ransacking a church in Angł (north of Lake Van) owing to a revolt of the Armenian populace against the Sasanian forces, it is the realisation of the Sasanian chief-magus that best expresses the Armenian stance on Zoroastrianism and its proselytisers at that time:

> even if the gods themselves were to come to our aid, it would be impossible for the religion of magism to become firmly established in Armenia [...] even if the soldiers [...] were magi, these [Armenians] would not spare them in their slaughter – not only the outsiders but also their brothers and sons and all their relatives, and even their own selves. (Ełišē p. 59)[504]

Long-standing as it is, the conflict between Armenians and Sasanians is of a political – and, as shown, religious – nature; questions of history or tradition, viz. the long-lasting rule of Arsacids, do, of course, play a role, too. Yet, the hostilities, skirmishes and outright wars are not immediately related to matters of ethnicity or nationalism (in so far as the latter term is even applicable).

Despite these general tendencies, Armenian politics are not monolithic, and there is considerable evidence of strife within the Arsacid camp, and occasionaly sympathies for the Sasanians. Both the *Epic Histories* and Movsēs Xorenac'i, for instance, mention Sanēsan (or Sanatruk), an Arsacid kinsman of king Xosrov III, and his unfruitful attempt at invading Armenia from the north (MX III.3; PB III.6–7).[505] Other

[503] It must be borne in mind, however, that Xosrov was only a replacement for Aršak, who was considered too weak after the death of the *sparapet* Manuēl Mamikonean.

[504] *et'ē ew ink'eank' astuack'n ekesc'en mez yōgnut'iwn, č'ē hnar ōrinac's mogut'ean i Hays aṙnul zhastatut'iwn [...] zi t'ē ēin zōrk' [...] mogk', oč' inč' xnayēin sok'a i nosa satakmamb, oč' miayn zartak'insn, ayl ew yełbars ew yordis ew yamenayn merjawors iwreanc', naew oč' yanjins iwreanc'.*

[505] For the Arsacid Parthian origins of Sanēsan, also cf. Lozinski (1984:126–8); Garsoïan (1989:406).

instances of discord frequently include: the Siwnikʻ clan, who, owing to their border territory, on occasion pursue their own policies (cf. the conspiracy of Varazvałan and Vasak Siwnecʻi mentioned in 6.2.2.2.5 above and Garsoïan 1989:409); differences concerning the stance towards Christianity; and acts of treason or secession (e.g. the revolt of Bakur, PB III.9; or the rebellion of Meružan Arcruni, PB IV.58–9, MX III.26). Of particular note is the resistance to the initial Sasanian take-over under Ardašir of the Parthian Karēn Pahlav clan (cf. MX II.71); since they retained their position at the Sasanian court, however, this is unlikely to refer to the entirety of the clan (cf. also Garsoïan 1989:383 for their relationship with the Kamsarakan clan).

Overall, therefore, the evidence concerning what might be called politics, viz. the hostility between Arsacid Armenia and the Sasanian Empire, corroborates the outcomes from the previous short discussions on religion, ethnicity, and social relationships. While ties to the Sasanian world exist in one form or another – no matter whether through intermarriage or imposed religious beliefs –, Armenian historiography clearly makes the Sasanians out as the enemy. This doesn't preclude temporary alliances or positive remarks, nor indeed does it render all Arsacids or Armenians proverbial saints. The image presented is that of Christian Armenia and its Arsacid rulers on the one side, and Zoroastrian Persia, its Sasanian lords, and at times Parthian subjects on the other side. As will be argued in more detail in 6.3.1 below, these political and religious tensions, together with the close affiliation of families of both Armenian and Parthian origin in Armenia has had a very clear linguistic impact on the Armenian language.

6.2.3 Graeco-Roman sources

Greek and Latin literature contains frequent references to Armenians and Parthians owing to, amongst other things, their frequent military conflicts and political alliances. Not all occurrences of either people can here be dealt with, for one as a result of their sheer number, and further because only a diminishingly small number of them are of relevance for the question of multilingualism.

Strabo in his *Geographica* devotes one chapter to Armenia, descibring its location,

customs, and, to some extent, its ties to other surrounding cultures, stating for example that Armenians and Medians share the same customs, which are however of Median origin (XI.13.9). Of greater interest, however, is a comment on the expansion of the Armenian sphere of influence under Artaxias and Zariadres, former generals of the Seleucid king Antiochus III:

> Ἱστοροῦσι δὲ τὴν Ἀρμενίαν μικρὰν πρότερον οὖσαν αὐξηθῆναι διὰ τῶν περὶ Ἀρταξίαν καὶ Ζαρίαδριν, οἳ πρότερον μὲν ἦσαν Ἀντιόχου τοῦ μεγάλου στρατηγοί, βασιλεύσαντες δ' ὕστερον μετὰ τὴν ἐκείνου ἦρξαν ὁ μὲν τῆς σωφηνῆς καὶ τῆς Ἀκισηνῆς καὶ Ὀδομαντίδος καὶ ἄλλων τινῶν ὁ δὲ τῆς περὶ Ἀρτάξατα, συνηύξησαν ἐκ τῶν περικειμένων ἐθνῶν ἀποτεμόμενοι μέρη, ἐκ Μήδων μὲν τήν τε Κασπιανὴν καὶ Φαυνῖτιν καὶ Βασοροπέδαν, […] ὥστε πάντας *ὁμογλώττους* εἶναι. (Strabo, *Geographica* XI.14.5)

While Strabo suggests that all the inhabitants of the newly conquered regions spoke the same language, he neglects to specify what language it was. Judging by the fact that this relevant chapter is concerned with Armenia, this seems like the obvious answer. At the same time, it cannot be entirely excluded that Artaxias, whose name is attested in Armenian historiography and in an Aramaic inscription as Artašes, may have been a speaker of an Iranian language.[506] In his commentary on Strabo, Radt (2008) joins Hübschmann (1904:217) in the assumption that Armenian was spoken by all the peoples of the region governed by the Artaxiads, but was the predominant, presumably native language only of the Armenian core territory, and elsewhere of the ruling classes. Hewsen (1978–9:83) further suggests that in many instances, Armenian may only have been a second language.

Hübschmann's assertion

> daß sich schon damals eine nach Sprache, Religion und Sitte gleichartige armenische Nationalität entwickelt hatte, die in einigen Provinzen die ganze Masse oder überwiegenden Teil der Bevölkerung, in den anderen wenigstens die herrschende Klasse lieferte (Hübschmann 1904:217)

is likely to be too broad in its purview. As mentioned already, a number of the ruling *naxarar* families as well as the ruling royal dynasties, both Artaxiad and Arsacid, are of Iranian origin, and may accordingly have been native speakers of Parthian. Yet,

[506] This suspicion is further exacerbated by the Orontid lineage he claims in the Zangezur stele; see 6.2.1.2 above.

Artaxiad coinage initially bears Greek legends (cf. Bedoukian 1968),[507] and literary evidence suggests that at the court of Tigranes II Greek is likely to have been one of the main languages of conversation, since Greek philosophers were welcomed at court, Euripides' *Bacchae* was performed at the wedding of Tigranes' daughter, and his son Artawazd is said to have composed in Greek (cf. Plutarch, *Lucullus* 22, 29; *Crassus* 33).

The passage from Strabo given above therefore serves to assert that Armenian was spoken, and even widely, in the territory of Artaxiad Armenia, but cannot be taken as proof that it was either the sole language of the region, nor indeed that it was *the* language of the ruling class or the royal court. Instead, it must be assumed that multilingualism was the norm, certainly at court, and likely also in the peripheral regions of the Armenian kingdom which changed political appurtenance more frequently.

A completely different reference to the Armenian language is found in Varro's discussion of vocabulary for wild beasts: … *tigris qui est ut leo varius, qui vivus capi adhuc non potuit. vocabulum e lingua armenia: nam ibi et sagitta et quod vehementissimum flumen dicitur Tigris* (Varro, *de lingua latina* V.100). This is of interest only in so far as a word of this form and meaning is not attested in Armenian as such, but only in Parthian and Middle Persian as *tygr* /tigr/ or /tiɣr/. It is unclear whether this wrong attribution and faulty etymology says much about the relationship or perception of the two languages, particularly since similar mistakes do not recur.[508]

The only other explicit mention that the Armenian language receives in Graeco-Roman literature is in the works of the 6th-century historian Procopius of Caesarea. In his *Bellum Vandalicum*, Procopius describes the attempted assassination of Gontharis, who had instigated a rebellion in the province Africa against the Byzantine emperor Justinian in 546 CE. In the passage in question, the Armenian Artasirēs (presumably orig. Arm. *Artašes*), a bodyguard (δορύφορος) of the Byzantine general Artabanēs (Arm. *Artawan*), is prevented from striking the rebel Gontharis by a colleague, Grē-

[507] The Parthian script on coin legends and inscriptions is not used before Vologases I in the 1st century CE, where it features alongside Greek (Curtis and Stewart 2007:21; Schlumberger 1983).

[508] For a discussion of this passage, cf. Traina (2017).

gorios, by 'speaking in the Armenian tongue'.[509] The purpose of speaking Armenian is evidently not to be understood by others present, who would have been conversant in Greek, the main language of communication in the Byzantine military. While this passage attests Armenian-Greek bilingualism in Armenian-born members of the Byzantine military, it postdates the period under question by *c.* 50 years, and neither considers Armenian in its natural geographic context nor makes reference to the speakers' command of other languages, wherefore it is of little value for the present purpose.

The second reference to the Armenian language occurs in Procopius' *Bellum Gothicum*, in which the Armenian general Gilacius, having just been captured by the Goths, is said to 'not know how to speak either Greek or Latin or Gothic or any other language except Armenian alone'.[510] As with the previous passage, this mention is of limited value owing to the time in which it was written. It is noteworthy, however, that by the middle of the 6th century CE, such Armenians existed as could be of sufficient standing and social background to rise to the rank of general and still be monoglot;[511] at the same time, Armenian soldiers formed a significant part of the Roman and Byzantine military, their numbers being drawn from Armenia Minor, which had frequently changed political allegiance until its final conversion into a Roman province under Diocletian in the early 4th century CE (cf. Garsoïan 1991:175–7; Potter 2004:292–3; Bowman 2005:73, 83). While it may be unusual for Gilacius not to have any Greek given his station, the passage does not shed any further light on the question of Irano-Armenian multilingualism.

6.2.3.1 Biblical texts

Explicit mention of Armenia in the Biblical tradition is made five times: 2 Kings 19:37 tells of the assassination of King Sennecherib by his two sons, who flee to the kingdom of Ararat, presumed to be Armenia; this passage is repeated in Isaiah 37:38; the same

[509] εἰπὼν ἐν τῇ Ἀρμενίων φωνῇ; Procopis, *Bellum Vandalicum* IV.xxviii.16.

[510] οὔτε ἑλληνίζειν ἠπίστατο οὔτε Λατίνην ἢ Γοτθικὴν ἢ ἄλλην τινὰ ἢ Ἀρμενίαν μόνην ἀφεῖναι φωνήν; Procopius, *Bellum Gothicum* VII.xxvi.25–27.

[511] This is only valid, of course, as long as Gilacius did not speak any other languages than those mentioned by Procopius, and was not elevated to generalcy from the ranks; unfortunately, nothing further is known of him.

kingdom Ararat is mentioned also in Jeremiah 51:27 as one of the kingdoms in an alliance against Babylon. Mount Ararat is also mentioned in in Tobit 1:24. Mention of the Armenian language is made only in Revelations 9:11, where the name of the angel Abaddon is rendered into Armenian as *korust* 'destruction'.

The only direct mention of the Parthians occurs in Acts 2:9, where they are listed as one of the peoples represented during the descent of the Holy Spirit during Pentecost; thus, they too would have heard their language spoken. Tertullian, however, cites this verse of Acts differently:

> In quem enim alium universae gentes crediderunt nisi in Christum qui iam venit? Cui etenim crediderunt gentes, *Parthi et Medi et Elamitae et qui habitant Mesopotamiam Armeniam Phrygiam Cappadociam,* [...]. (Tertullian, *Adversus Iudaeos* VII.4)

This different reading, substituting *Armeniam* for the received Greek reading Ἰουδαίαν is also adopted by Augustine of Hippo (cf. Bengel 1742); such a reading has not generally been accepted, however, and in either case is unlikely to provide any information not already known from other contemporary sources, e.g. Strabo.

6.2.4 Chinese sources

The Arsacid Parthian Empire (Han Chin. 安息 *Ānxī*)[512] was known to the Chinese Han dynasty through a number of expeditions and embassies in three distinct phases (126–91 BCE; 59 BCE – 9 CE; and 73–77 CE; cf. Posch 1998:357). The importance of these documents for historiography must not be underestimated owing to their politically neutral, if limited, account of the Parthians; yet, little information pertinent to the present enquiry can be found therein.

One pertinent passage from the *Records of the Grand Historian* (Chin. 史記 *Shǐjì*), however, states the following:

> From Da Yuan to the west until Anxi each state has a different language; and although that is the case, their customs are quite similar and their languages mutually intelligible. (Posch 1998:358)

[512] The form *Ānxì* has been explained as relating to either the Parthian capital city of Antiochia in Margiana (Gk. Ἀντιόχεια τῆς Μαργιανῆς; cf. Watson 1983:541–542) or the founder of the ruling Arsacid dynasty, Arsaces I (Wang 2007:90).

Assuming that this observation is correct, it may be tentatively assumed that Middle Persian and Parthian, at least at the time in question, viz. the late 2nd century BCE, were mutually comprehensible. Similar observations have been made above, e.g. in the insults to King Aršak offered by the Persian stable master (see 6.2.2.2.1) and are implicitly corroborated, since both languages frequently co-occur and have influenced one another. Their close linguistic relationship lends further credence to this assumption (cf. e.g. Durkin-Meisterernst 2014:1; Skjærvø 2009:196).

While there is some speculation concerning a possible reference to Armenia in Chinese sources,[513] even if it were accepted, this evidence would have no bearing on the present question.

6.3 A new perspective on Arsacid Parthian and Armenian

The final, relatively brief section of this chapter seeks to bring together the insights gained from the consideration of language contact on a theoretical level, and the social and historical elements presented in the foregoing analysis.

As has become evident, no contemporary literary and epigraphic evidence gives any direct indication as to the linguistic situation obtaining in the Armenian kingdom in and before the 5th century CE. Certain aspects of contact, however, can be gleaned indirectly from the historiographical texts; the story of the discourteous stable-master (see 6.2.2.2.1 above), for instance, suggests that some individuals of rank clearly spoke an Iranian language, in the same way that the story of the priests imprisoned at the Sasanian court (ibid.) demonstrates that this is unlikely to have applied to society as a whole, thus answering in the negative one of the questions posed in 6.2.2.2 above, namely whether all Armenians were bilingual and spoke Parthian or Middle Persian.

Equally, the literary evidence does not allow for any clear pronouncement on the question of diglossia. Owing to the lack of contemporary Parthian documents, and

[513] Kauz and Liu (2008) propose that the Chin. 阿蠻 *Āmàn*, a designation occurring in the *History of the Later Han* (Chin. 後漢書 *Hòu Hàn Shū*,) which covers the period of *c.* 25–220 CE, refer to Armenia.

the absence of code-switching or code-mixing in the Armenian evidence, there is no indication that either language was restricted or favoured in any particular context. Conversely, however, that does not mean that there was no diglossia; it is possible, if not demonstrable, that the ethnic Armenian members of the ruling classes, viz. the *naxarar*s and their kin, would have spoken Armenian themselves and with their respective families, but would have preferred—or been made—to use Parthian as the main means of communication with the Arsacids. Such a situation, with diglossia but very restricted bilingualism, would not be uncommon in societies ruled by extraneous powers (Fishman 1971*b*:544–6). It will be suggested below, however, that diglossia is unlikely to be necessary to explain the Armenian situation.

Instead, it will first be suggested that there are numerous factors in the shared history of Arsacid Parthians and Armenians that suggest a language shift scenario to be more likely, in which the numerically smaller number of Parthian speaking nobility and entourage in Armenia shifted to speaking Armenian after the fall of the Parthian Empire. The benefits of such an approach as opposed to assuming a case of language maintenance will be shown thereafter. To corroborate the plausibility of the language shift scenario, another instance of a superstrate shift, viz. that of post-Conquest Britain, will be discussed as a *comparandum*. Finally, taking into account also the lexical material presented in the chapter 1, and based on the findings of chapters 3–5, a polyphasic model of Armenian interactions with the Iranian languages in general, and Parthian in particular will be suggested.

6.3.1 An Arsacid superstrate shift

As set out in 6.1.2 above, syntactic change of the kind observed here can, in theory, arise in both a contact situation qualified as language maintenance, in which lexical borrowing is the most typical manifestation, or in a language shift scenario, where a group of non-TL speakers acquires TL in addition to their native tongue, often accompanied by import of phonological and syntactic features of the shifting speakers' L1 into the TL. The latter analysis, it will be argued, is more suitable to explain the case of Classical Armenian for both linguistic and socio-historical reasons.

On the linguistic level, both maintenance and shift are, in principle, possible, since sufficient time and intensity of contact allow for lexical, phonological, and syntactic loans into the TL in both cases. In fact, Thomason and Kaufman (1988:122–3) warn that in shift situations where the shifting group constitutes only a very small number of people, the likelihood of adopting their learners' errors into the TL are very low. Is it then more reasonable to assume pattern replication *etc.* under maintenance, without shift?

For a number of reasons, the answer must be: no. The prime linguistic factor that suggests language shift is the kind of syntactic material replicated, namely what Thomason and Kaufman refer to as 'marked' features, or what might more generally be called an element that does not fit the TL's typology, in the Armenian case specifically the originally ergative alignment of the periphrastic perfect. As suggested in 6.1.2.2 above, the replication of patterns in most instances involves bilingual speakers extending the use of a non-TL construction to the TL by pivot-matching; this may, but need not, involve imperfect knowledge of the TL. Following the two options offered by Thomason and Kaufman (1988:51–2), the rise of the periphrastic perfect must either be attributed to Parthian native-speakers employing a native construction in their L2, Armenian, no matter whether by choice or mistake; or, it involves a group of balanced Armenian-Parthian bilinguals who imported the pattern in the same way.

What makes the second scenario less likely is the level of bilingualism required; for to replicate such a pattern from Parthian, the type of individual would have to have either equal proficiency in both languages involved, likely the result of fairly balanced bilingual upbringing; or Parthian would have to be their dominant language, with the acquisition of Armenian commencing later than that of Parthian – that is exactly the setting of the shift scenario. Given that linguistic innovations of this kind are more likely to arise and settle in (pre-)adolescence (see 6.1.3 above), a language maintenance situation would accordingly require a not inconsiderable group of Armenian youths being brought up to speak both languages equally well, and to carry sufficient prestige for their version of the TL to be adopted.

In this case, however, the expectation might be that such replicated patterns would

remain spontaneous cases of code-switching, which a child engages in prior to the full indexing of the construction and relevant language in the mental grammar (cf. Matras 2009).[514] Taking into account contact with non-bilingual speakers, and their likely standardising influence, it appears less likely that complex replicated patterns should have stabilised in and spread from such speakers. Another factor to take into account is the likely number and social standing of such speakers; whilst intermarriage did exist, as described above, it is doubtful that it would have produced balanced bilinguals.[515]

Next to this primarily linguistic observation, the main arguments speaking in favour of a shift of Parthian speakers to Armenian stem from the socio-historical context suggested above. Here, the three main conditioning factors are: the establishment of a hereditary Arsacid dynasty; Christianisation; and enmity with the Sasanians.

Irano-Armenian contact had been established for centuries before the Arsacid rulership of Armenia became truly hereditary, i.e. was passed on from father to son or closest living relative; this tradition only commenced with Xosrov I (*r.* 198–217 CE), who had inherited the throne from his father Vałarš II, and passed it on to his son Trdat II. The establishment of a hereditary dynasty, together with the existence of other Armenian noble families of Parthian origin, and the fall of the Parthian Empire in 224 CE gave rise to the creation of a new centre of life, activity, and identity for the Arsacid rulers of Armenia.[516]

Notably, the use of Parthian as an inscriptional language subsided with the end of the 3rd century; as Durkin-Meisterernst (2014:3) points out, dating the 'death' of Parthian as an active language is difficult. Christensen (1930:4–5) and Ghilain (1939:28) suggest a *terminus post quem non* of the end of the 4th century, whereas Henning (1947:49) and Sundermann (1986:279–280) suggest the 6th century CE; Durkin-

[514] As Meisel (2011) notes, transmission failure, i.e. the imperfect L1 acquisition of children, is rarely the cause of considerable language change. Conversely, weaker L2 bilinguals—whether owing to imperfect acquisition, attrition—are more likely to apply L1 patterns in L2, as the over-usage of overt subjects in less proficient Spanish heritage speakers shows exemplarily (Montrul 2004; 2008:184).

[515] Grosjean (1989, 1998) points out that the number of truly balanced bilinguals is very small. Typically, one or the other of the two languages is stronger, and he suggests that function and knowledge of either language differs on an individual basis; cf. also Montrul (2008:18).

[516] As noted above, the Parthians did not entirely lose their political influence in the Sasanian Empire, but Armenia was and remained a different polity with close ties to the Graeco-Roman world.

Meisterernst opts for the 7th century as the date of last native production. Parthian clearly survived for at least this long as the liturgical language of Manichaeism, as the Turfan documents attest, and may have continued to be spoken locally in the Parthian heartland and to some extent along the Silk Road. On a political level, however, it is evident that it lost its importance soon after the establishment of the Sasanian dynasty.

The fall from power of the Arsacids outside of Armenia and the subsequent establishment of a permanent domain in Armenia resulted in the tightening of ties with the Armenian *naxarar*s, exemplified both in intermarriage and the *dayeak* system (see 6.2.2.2.2 above), but most importantly in the conversion to Christianity of the entire ruling class.[517] Marriage and exchange of wards were, as noted, clearly intended to cement political ties between the noble families, but equally provided ample opportunity for linguistic exchange. Christianisation, on the other hand, not only bound ethnic Armenians and Parthians more closely together, but also created a significant difference between the Arsacids and their Parthian cousins in the Sasanian Empire and elsewhere.

As detailed above, the political and religious ties between Arsacids, Armenians, and the Roman Empire resulted in frequent and often long-lasting hostilities between Armenians and Sasanians. Taken together, these factors present a plausible motivation for the Arsacid Parthians and other families of like origin in Armenia to create, or rather adopt, a new, Armenian identity. The lack of significant epigraphic evidence, the well-established strong influence of Parthian on the Armenian language, and the socio-political situation described all suggest that this new identity was tied to the Armenian language, and in the long run disfavoured Parthian.

Such superstrate shifts are rare, since it is more common for the politically and socially weaker stratum of a society to adopt the language of the more powerful one, no matter their numerical proportions.[518] Nonetheless, such changes are attested, e.g. in post-Conquest Britain (see 6.3.2 below) when Norman speakers shifted to Middle

[517] Notable relapses like that of King Pap may be discounted, as they had little overall effect.

[518] This need not necessarily mean language shift, of course, but may result in bilingual diglossia, e.g. where covert prestige and *Ortsloyalität* lead to the retention of local variations or languages in smaller speech communities; see 6.1.4.2 above.

English owing to the fall of the Angevin Empire, or in the case of Cushitic speakers shifting to Ethiopic Semitic (Leslau 1945:79–81). Next to the phonological and syntactic interference typical of such shifts, they can bring along significant amounts of loan words (Thomason and Kaufman 1988:68–9, 116), which is uncommon for substrate shifts. Given the political and social situation delineated in this chapter, it is entirely plausible that in the case of Parthian–Armenian contact, too, such a shift should have taken place.

At the same time, owing to the lack of linguistic and literary evidence pre-dating the 5th century CE, it remains impossible to determine with any degree of certainty when or how such a shift set in. In view of the momentous changes in Parthian–Armenian–Sasanian relations that stretch throughout the 3rd century CE, however, this period appears to be the most plausible *terminus a quo* for the onset of a shift from Parthian to Armenian. Lexical borrowings, esp. as regards mainly non-basic loans typical also of language maintenance situations, may very well have occurred earlier, whereas basic vocabulary and loans in the closed classes could first have made their way into Armenian in the shifting period.

Like the timing of this shift, it is difficult to determine the process by which it came about. For the reasons given above (see 6.1.2.2), it is inevitable that more than one generation of speakers was involved, that those speakers were, at least to begin with, unbalanced bilinguals with Parthian as a dominant language, and that their integration into and status among the Armenian speaking community was such as warranted assigning their idiolect (TL_2) sufficient prestige for adoption as the general language of court. A possible scenario reflects that summarised in Figure 6.1, 270 above: generation 1 of Parthian speakers, who have to one degree or another acquired Armenian with some, but not perfect proficiency, 'decide' that Armenian will be the main mode of communication henceforth.[519] Their offspring, generation 2, are initially brought up with Parthian as their heritage language, and come into contact with Armenian either in the context of residing with their *dayeak*, acquiring the Partho-Armenian idiolect of their parents, or both; in either case, the onset of bilingualism is likely

[519] This 'decision' may even have arisen out of necessity, since it is unclear whether all *naxarar*s would have spoken Parthian.

to be no earlier than in late childhood or early adolescence, leaving Parthian in the position of dominant language in the formative years.

Generation 2, or a subsequent generation, in their lifetime would have shifted to Armenian entirely, speaking either the idiolect of generation 1, or their own Parthian-influenced version of Armenian. Owing to their socio-political position, their usage —including code-switching into Parthian in Armenian conversation, and the use of Parthian patterns such as the periphrastic perfect—is in time adopted by native Armenian speakers of the ruling classes as well, and crystallises as the Classical Armenian used in 5th-century literature. The shift sequence accordingly is L1 $\rightarrow$ L2 = TL with the subsequent creation of idiolectal, Parthian-influenced TL_2 and, in time, a convergence (through borrowing and further shift) of native Armenian TL_1 and Parthian-influenced TL_2 into Classical Armenian as TL_3 (see Figure 6.1 above).

The crystallisation of Classical Armenian as a result of a Parthian shift does in itself require a borrowing process on the side of native Armenian speakers (cf. Thomason 2003*a*:692), a process aided by at least some bilingualism among ruling class Armenian families (see 6.2.2.2.1 above). Unquestionably, the picture painted here is only a hypothetical and simplified abstraction; the process must inevitably have been more complex. Despite its shortcomings, it remains the most plausible explanation in view of the fact that borrowing alone is unlikely to have led to the replication of such patterns as have been adopted, and is less well-suited to explain the intrusion of Parthian basic lexical entries into Armenian.[520]

With an explanation that relies solely on borrowing discounted for the reasons stated above, and in spite of a clear preference for a shift-based explanation as just detailed, a third, if distinctly less likely explanation for Parthian structural interference in Armenian remains open: that of wide-spread and fairly balanced bilingualism among the ruling class. Contact situations of this kind are prone to spontaneous pattern replication, and in fact to convergence in the narrower sense, namely the forma-

[520] It is well worth remembering that another instance of language shift is likely to have happened in the history of Parthian: with the invasion of the Parnians into Parthia after its secession from the Seleucid Empire in 247 BCE, the East Iranian invaders established a new dynasty in *c.* 238 BCE under Arsaces I (hence Arsacid). The not directly attested Parnian language, however, only left traces in Armenian loan words, and was likely given up in favour of Parthian (Curtis and Stewart 2007; Lecoq 1986).

tion of a strongly mixed language.[521] Problematically, however, there is no definitive extralinguistic evidence suggesting that all, or at least most, members of the ruling class, whether Parthian or Armenian, were balanced bilinguals. As pointed out numerous times, some bilingualism on both sides must have existed, but need not have spread to the majority of speakers. Further, if both languages had spread so widely, at least some remnants of Parthian evidence on Armenian territory might be expected, however fragmentary; as discussed, this is not the case.

In summary, the situation that presents itself as the most likely explanation of the lexical, phonological, morphological, and syntactic influence of Parthian on Classical Armenian is a shift of Parthian speakers to Armenian from, at the latest, the end of the 3rd century CE, accompanied by either unbalanced bilingualism on both sides for an indeterminable period of time. This shift was the result of a number of sociohistorical factors, which above have been acknowledged to be the primary motivators of contact-induced language change: the establishment of a hereditary dynasty of Arsacid Parthian rulers over Armenia under Xosrov I, the fall of the Parthian Empire and relegation of the Iranian Arsacids to second rank, the Christianisation of Armenia, which included the Arsacid ruling class, and the subsequent political and spiritual rift between Armenian Arsacids and Sasanian Iran, all resulted in frequent and long-lasting altercations between the latter two. Together with the marginalisation of the Parthian language in the Sasanian Empire by the end of the 3rd century, the Parthian-speaking Arsacid ruling class, numerically in the minority, in time adopted Armenian as its main language of communication and as its new identity.

It must be emphasised here once more, as a final *caveat*, that these conclusions cannot but represent a merely probable explanation of the developments that led to the form of the Classical Armenian language as extant in 5th-century literature. Lacking prior linguistic sources, and with the evidence concerning language use, child rearing, and communicative practices being what it is, no definitive answer can be reached barring the appearance of new evidence.

[521] See above 6.1.2.3.1 for the issues related to this terminology.

6.3.1.1 Advantages and disadvantages of a language shift approach

Summarising in due brevity the data collected and suggestions made in the previous sections and chapters, the following aspects of Partho-Armenian language contact speak in favour of the language shift scenario just proposed:

1. The sheer number and spread of Iranian, and specifically Parthian lexical items, as well as derivative morphology, in the Armenian lexicon.[522]

2. The depth of lexical intrusion, that is the existence of Parthian lexical material in closed classes such as prepositions, numerals, *etc.*

3. The occurrence of syntactic patterns in Armenian which are likely to have their origin in, or to have been influenced by, Parthian models.[523]

4. The sparsity of documentary evidence of the Parthian language in Greater Armenia, and the lack of multilingual documents, as well as the disappearance of Parthian from the region after the fall of the Parthian Empire.

5. The social dynamics and numerical relation between Parthian ruling class and Armenian nobility and general populace.

6. Potentially the existence of at least two strata of Parthian loans, the latter of which *may* have been borrowed only after the beginning of the Parthian shift.[524]

In and of themselves, neither one of these aspects is sufficient to suggest, never mind prove, the occurrence of language shift. Taken together, however, and viewed in the socio-historic frame of reference presented in 6.2 above, these factors speak in favour of a shift interpretation. This will become more evident in the ensuing comparison with the situation in post-Conquest Britain.

The only two disadvantages that this model presents are methodological. Owing to the relative paucity of data concerning the use of language(s) in the region and time in

[522] For a detailed discussion of this and the following point, see chapter 1.

[523] The reasons for assuming external influence have been discussed at length in 3.2.2, 3.3.3.

[524] As detailed in 1.3.2.2 above, the Parthian vowels /ō/ and /ē/ as well as word-inital /r/, when borrowed into Armenian, are rendered differently depending on the time of borrowing; earlier loans, for instance, render Pth. /ō/ as Arm. *oy* (stressed) or *u* (unstressed), while later loans yield *o* in all instances.

question, or indeed historical accounts detailing the process suggested, the idea that language shift occurred is neither verifiable nor falsifiable, barring the appearance of new, unique documentary evidence. Secondly, it might be admonished that a shift approach does not follow the principle of Occam's Razor in suggesting a sequence and coherence of historical events and linguistic processes that could be coincidental.

The first objection is irrefutable, but unfortunately inherent in linguistic and cultural research in languages and cultures of the distant past. The main rebuttal to the second objection lies in the terms in which it is formulated: the historical events and linguistic processes described in the foregoing sections and chapters do simply not appear to be coincidental, and if viewed together suggest that the simple picture of Partho-Armenian contact painted before is insufficient.

6.3.2 French and English in post-Conquest Britain: a *comparandum*

As has been pointed out before, language shift commonly occurs in the direction of less dominant to more dominant language.[525] There can be little doubt that in terms of political and cultural strengths, the Arsacid Parthians are to be seen as the dominant influence on Armenian. It is decisive, however, that in purely numerical terms, and as regards what above has been referred to as covert prestige, Armenian dominated in certain respects, as well, wherefore a shift of minority Parthian speakers to Armenian is not inconceivable.

It is, however, true that such superstrate shifts, i.e. the persistence of a local, politically and socially less prestigious language in contact with a non-indigenous, more prestigious language and the subsequent insignificance or disappearance of the latter, are less common than their substrate counterparts.[526] The phenomenon is so rare, indeed, that the one example that is cited over and over in the literature is the slow

[525] Dominance here may refer to any number of factors, e.g. population size, overt or covert prestige, economic, political, cultural, or other importance; cf. Matras (2009:23, 61), and see 6.1.2.1 above.

[526] The terminology of sub-, super-, and adstratum is, however, problematic in so far as it requires a fairly rigid definition of dominance, in one form or another. This, as shown above, is unlikely to reflect reality in all instances. Similarly, language contact is rarely entirely unidirectional, with both languages adopting features or material of the other to one extent or another (Thomason and Kaufman 1988:115–9).

shift of Norman French speakers to Middle English in the aftermath of the Norman Conquest of Britain in 1066 CE (Thomason 2010:36; Thomason and Kaufman 1988: 265–9; Myers-Scotton 2002:31, 211).

The case of the 'defeat' of Norman French by Middle English has, in the past, also attracted the attention of scholars dealing with Classical Armenian, who have drawn comparisons between the two situations. Schmitt, for instance, in dealing with the onomastics of Arsacid Parthian, writes that

> [d]ie Forschung hat immer wieder den übermächtigen Einfluß alles Französischen nach der Eroberung Englands durch die Normannen als Analogie namhaft gemacht, und nicht nur deshalb, weil die Wortschätze des Englischen und Armenischen einen vergleichbar hohen Anteil von Fremdelementen aufweisen. (Schmitt 1998:175)[527]

Mancini goes a step further and suggests that

> ciò significa che il contesto storico dei contatti fra mondo armeno e mondo iranico non può limitarsi a un raffronto superficiale con quanto avvenuto nell'Inghilterra medioevale. E' del tutto evidente, infatti, analizando la natura dei dati linguistici, che il processo storico di conservazione dell' armeno si accompagnò con un bilinguismo esteso e duraturo, quindi con un contatto interetnico molto più massiccio di quanto si sia abituati a pensare. (Mancini 2008:18–19)

While Schmitt suggests that the situations are directly comparable, since in both instances the socially more prestigious languages (French, Parthian) were actively imitated by the speakers of the less elevated tongues (English, Armenian), Mancini contrasts the two cases, since the Armenian situation was less superficial. The question arises, then, which of these two interpretations is more accurate.

A direct comparison between the British and Armenian situations is difficult owing to a number of factors: firstly, there is a considerable difference in the timescale of contact. Armenian, by the end of the Arsacid dynasty in 428 CE, had been under direct Arsacid rule for about four centuries, and is likely to have had long-lasting contact with Parthian and other Iranian speakers for centuries before. Contact between the Norman French invaders and the English properly commenced only after

[527] Also cf. Schmitt (1983:74); Belardi (2003*a*:98).

the conquest in 1066 CE, with the first loan words appearing in about 1250;[528] by the end of the 14th century, new loans from French ceased to be added, and most Normans still in residence were either fully bilingual or English monolingual (Thomason and Kaufman 1988:269). This leaves Armenian with at least four centuries of contact with Parthian, as opposed to only about two centuries in the Anglo-Norman case.

A second difference lies in the type of documents available from both contact situations. As has been shown in some detail above, the literary evidence for contact in Armenian is, on an extralinguistic level, restricted to indirect indications. For Norman French and English, however, documents exist which exhibit code-switching and code-mixing, as well as evidence speaking to the attrition of French spoken in Britain (Legge 1980; Schendl 2000, 2013; Steiner 2010).[529] Even more, both languages are attested prior to contact, in the form of Old English and Old French, making it possible to determine with greater accuracy what is a likely 'natural' development, and which changes were introduced by contact.

That being said, there is of course considerable influence of (Norman) French on (Middle) English in the lexicon, particularly in specific semantic fields such as cuisine, art, law, and literature. In a large number of cases, however, French loan words coexist with English (near) synonyms, allowing for fine distinctions (e.g. between *sheep* as an animal vs *mutton* as a foodstuff). To a much lesser degree, there has similarly been some influence on English (non-core) syntax from French, e.g. as regards the usage of prepositions (Hornero Corisco 1997; Iglesias-Rábade 2000), periphrastic comparatives with *more* (González-Díaz 2008), and the position of adjectives (Fischer 2006; Trips 2014). [530]

Similarities continue on the socio-political level as well. French was spoken by the ruling classes (aristocracy, higher clergy, some lower clergy and urban magnates),

[528] This delay in the appearance of loanwords is likely owed to social impermeability. While sources suggest that the level of French spoken in Britain decayed steadily already between the Conquest and the loss of Normandy in 1204, it is only at that time that some members of the French aristocracy settled in Britain permanently. Contact proper was therefore likely established only then, with political marriages and increased commerce resulting in borrowings (Berndt 1965; Crespo 2000).

[529] Giraldus Cambrensis describes the French spoken in Britain in the late 12th and early 13th century as 'rudis Anglorum Gallicus et feculentus' (Short 1980:468; see also Lefèvre 1973.

[530] For a summary, cf. Filppula (2010).

but never became widely spoken. The invasion force of William I in 1066 is likely to have been relatively small (5,000–7,000 men), and the number of French settlers of any rank is likely to never have exceeded 10 per cent of the entire populace, with the lowest estimates suggesting figures closer to 1 per cent (Berndt 1965:147). Whilst no estimations concerning the number of Parthian or Armenina speakers can be made for the period under consideration here, it remains most likely that the Parthian ruling class should have been numerically very small.

Perhaps more important, however, is the similarity of political situations subsequent to the loss of Normandy in 1204 as a result of the war with the French under Philip II. With the loss of the last continental domains, the French language lost its importance in Britain; the French aristocracy, who previously had divided their time between their holdings in Britain and France, gave up one or the other, resulting in at least some of them becoming full-time British residents. With the split from the mainland, and the establishment of a permanent group of (formerly) francophone residents came the self-identification of those residents with their new home and its English language, which by that time had attained an iconic status for the Anglo-Normans (cf. Irvine and Gal 2000), or, as Thomason and Kaufman (1988:268) put it: 'Those nobles retaining fiefs in England came to identify themselves as English by nationality, whatever their language might have been' (also cf. Baugh and Cable 2002:108–9,121-2).

This setting is closely reminiscent of the one obtaining in Armenia: a political (and in Armenia also religious) rift together with a minority ruling class speaking a formerly prestigious language that is slowly depreciating leads to the acquisition of the indigenous majority language in an, at least initially, bilingual setting. Chronologically, bilingualism is likely to have developed slowly; the Norman settlers would have been French-dominant bilinguals to begin with, but in time and under the historic circumstances described, have shifted to English. As with Armenian, this shift progressed slowly, and involved shifting attitudes towards the local majority language, which improved with each successive generation (cf. Bolonyai 2009:258). Bilingualism and progressive shifting towards English are also likely to have contributed to

the decay of 'Anglo-Norman' as compared to continental French.

Coming back to the question posed above, namely whether Schmitt's or Mancini's evaluation of the Armenian situation is more appropriate, it emerges that Schmitt is, of course, correct in emphasising the vast amount of lexical borrowings in both contact situations; Baugh and Cable (2002:161) jocularly suggest that, as regards the English lexicon, 'English retains a controlling interest, but French as a large minority stockholder supplements and rounds out the major organization in almost every department'. Notably, however, the French elements in English are, for the most part, restricted to specific semantic fields as mentioned above, and have not percolated as strongly into the basic vocabulary and closed classes as is the case in Classical Armenian. The latter also shows a much greater amount of productive derivational morphology which arose from contact,[531] as well as the replicated pattern of core-syntax discussed in detail above. In emphasising the greater intensity and duration of contact, and the importance of bilingualism, Mancini therefore seems to be closer to the truth. In any case, however, the influence of Norman French on Middle English makes for a good *comparandum* to the Armenian case, and corroborates the plausibility of the shift scenario suggested above.[532]

6.4 Conclusions: a polyphasic model of Irano-Armenian contact

In lieu of a summary of the foregoing chapter, what follows is meant to paint a new picture of Irano-Armenian language contact across time, taking into account the new findings presented and advocated above.

The first phase comprises all the developments that Armenian underwent after its

[531] As discussed in greater detail in chapter 1, Armenian has borrowed both affixes as well as certain *Kompositionsglieder* from Iranian, e.g. the adjectival suffix *-akan*, the negative prefix *dž-/tʿš-*, or the *Hinterglied -kert*, referring to a built or created place or entity.

[532] A different kind of *comparandum* is provided by Imperial Aramaic, Syriac, and other Aramaic varieties which have replicated the Old Persian *manā kṛtam* construction in the form of a collocation of the type *qṭil l-* (passive participle + non-canonical agent marked by *l-*). This creates a split-alignment pattern not dissimilar to that of the Armenian periphrastic perfect; cf. Ciancaglini (2008:31–37); Gzella (2004:183–93); Gzella (2008:92–3); Meyer (fthc.*b*).

separation from the other Indo-European languages, particularly Greek, but prior to the first influence from Iranian. No absolute dating of this pure Proto-Armenian phase is possible owing to the lack of data; logically, however, it cannot have ended before the first contact with the Old Iranian languages, viz. the conquest of Armenia under Darius I at the end of the 6th century BCE. In terms of chronology of sound change, this phase cannot have ended before the rise of secondary[533] prothetic vowels (stage 14 in the reckoning of Kortlandt 1980:103),[534] which the oldest layer of Iranian loan words exhibit. Kortlandt clearly indicates that certain Iranian words have undergone Armenian-internal sound changes (his stage 21); he neglects to mention certain other phonological changes exhibited by Iranian loans, however, which indicate that contact may have set in earlier than suggested.[535]

Yet, contact with Old Iranian yielded only a very limited amount of lexical borrowings, which occurred sporadically and possibly at different stages in the phonological development of Proto-Armenian. As indicated in the brief historical account in 1.1 above, commencing with this contact phase of Proto-Armenian, Iranian influence waxed and waned over the centuries, but never did completely subside. In all likelihood, there were two distinct stages in this phase: the first involved contact with speakers of Old Iranian, the second contact with speakers of Parthian. The transition between these stages is likely to have been gradual.[536] The rise of the Artaxiad dynasty in 189 BCE is not unlikely to have brought with it a potential for further lin-

[533] The term 'secondary' here refers to prothetic vowels that did not arise from laryngeals as in, e.g., Arm. *anun* 'name', cp. Gk. ὄνομα, Lat. *nōmen*, or Arm. *erek* 'evening', cp. Gk. ἔρεβος 'darkness', Skt. *rájas* 'id.', ON *røkkr* 'twilight'. Secondary prothetic vowels occur before word-initial consonant clusters and *r-*, for instance in Arm. *erek‘* 'three', cp. Gk. τρεῖς, Lat. *trēs*, or Arm. *ełbayr* 'brother', cp. Gk. φράτηρ, Lat. *frāter*.

[534] Kortlandt's account of the relative chronology of Armenian sound changes is here used as one potential sequence without further discussion; its use is only meant to illustrate timescales and issues of contact times.

[535] It cannot be excluded, for instance that contact with Iranian had begun somewhat before this stage already, since loans like Arm. *partēz* 'paradise' must have occurred after the development of PArm. p > Arm. *p‘ / h / Ø* (Kortlandt's stage 10), but before PArm. *-d- > Arm. *-t-*; similarly, the older stratum of Parthian loans words, which preserve Armenian-internal ablaut in tonic *oy*, pretonic *u*, *etc.*, must have occurred before these diphthongs would have yielded just *u* (Kortlandt's stage 13b). It is further of note that both Armenian and the West Middle Iranian languages underwent a stage of word-final apocope, which may or may not be be coincidental.

[536] The fact that late Old Persian inscriptions show deviations from 'standard' Old Persian syntax and morphology hints at the fact that it was no longer spoken as such by the 4th century BCE (cf. Schmitt 1999:59–118; Skjærvø 1999:158–61), but was replaced by one of the Middle Iranian languages.

guistic influence from outside; owing to the indeterminate linguistic heritage which this dynasty would have brought with it, however, nothing can be stated for certain. Consequently, the end of this first contact phase of Proto-Armenian can only be a *terminus post quem non*, coinciding with the establishment of Arsacid rule over Armenia in 62 CE.

It is in this Arsacid phase of Proto-Armenian that the vast majority of lexical, morphological, and syntactic loans occurred. As suggested above, the fall of the Parthian Arsacid Empire, together with the establishment of a hereditary dynasty in Armenia and their subsequent Christianisation splits this phase in two; more intense borrowing, specifically of core vocabulary and derivational morphology, but also pattern replication must have taken place in the second half of this period, once the Armenian Arsacids had been politically separated from the Sasanians.[537] If suggestions made in this chapter are correct, then the Parthian influence on Armenian must have ended at some point between the establishment of the hereditary dynasty under Xosrov I, and the definite end of the Arsacid period in 428 CE, when Armenia was established as a Sasanian *marz*. By this time at least, the Arsacid ruling class would have been speaking Armenian, whilst Parthian remained only as a heritage language.

Since all these changes, developments, and indeed shifts in dominant languages occurred during a long period of time in which Armenian was not written and thus left no trace, and owing to the distinct lack of interest in the linguistic practices of the region in all foreign sources and most native sources, much if not most of the periodisation, and indeed of the judgements concerning contact-related developments must remain hypothetical. Nevertheless, in view of all the material presented here—linguistic, historical, and otherwise—the developments as postulated above give the most plausible explanation to date of a number of issues in Armenian and Iranian linguistics: the lack of Parthian documents from Armenia; the intrusion of Parthian

[537] It is tempting to suggest that the stratification of Parthian loan words postulated in 1.3.2.2 above should coincide with the split of the Arsacid period in two parts. Since the loss of productivity of Armenian-internal ablaut cannot be dated even relatively, there seem to be no formal restrictions preventing such a hypothesis. Equally, however, it is difficult to find any arguments that speak distinctly in its favour other than the coincidence of closer social and political relations with an increase in new loan-words. Supposing that Parthian influence began already with the Artaxiads, an earlier division is just as likely, but similarly unprovable.

lexical matter into the Armenian core lexicon; and the development and variability of the periphrastic perfect and certain other patterns in Classical Armenian on the model of Parthian.

7 Conclusions

This study set out to add to the general understanding of the relationship between West Middle Iranian, specifically Parthian, and Classical Armenian. For the most part, it has focused on the linguistic interactions between these two languages, but as chapter 6 illustrates, it was also necessary to provide a socio-historical perspective in order to paint a fuller picture of the linguistic situation.

Chapter 1 laid out in brief the most important data available to date concerning the linguistic interactions between Armenian and the Iranian languages with respect to their lexicon, morphology, and phraseology. On this basis alone, it is evident that next to a select number of loans from Old Iranian and later Middle Persian, which are limited both in number and as regards the lexical fields influenced, Parthian is the main contact language; this is confirmed on a linguistic level by the degree of permeation of Parthian material into the Armenian lexicon and by its influence on derivational morphology.

As was pointed out at the end of that chapter, however, two aspects of the interaction between Armenian and Parthian have not been given attention in the almost 150 years of scholarship on this topic: the potential syntactic influence of Parthian on Armenian, which owing to its pervasive influence on other aspects of the language is a distinct possibility; and the precise nature of the linguistic interaction between Armenians and Parthians, viz. under what kind of social circumstances material, and potentially patterns, were replicated. One particular pattern with potential for Iranian influence was spotted in the Armenian periphrastic perfect, the construction of which scholarship had not yet explained to full satisfaction in all respects. Answering the question whether this construction might have been influenced by the ergative construction of the West Middle Iranian past tense constitutes the central core of this

study.

Three other patterns—*ezāfe-like* nominal relative clauses, the subject resuming and switch-function use of Arm. *ink'n*, and the quotative use of the complementiser Arm. *(e)t'ē*—also showed promise for potential interference from Iranian, and would corroborate or complicate the hypothesis of Iranian syntactic influence on Armenian.

Before discussing the construction of the Armenian periphrastic perfect itself, an excursus into historical morphology proved useful to establish the precise nature of the *-eal* participle, which forms the core of the perfect. In chapter 2, the formation of this participle was discussed with a view both to its relationship with the aorist tense, and its voice. The discussion concluded in suggesting that, irrespective of the precise historical morphology of the participle, it was in all likelihood originally passive-intransitive. Concerning its morphological make-up, the proposal was advanced that *-eal* is a combination of a thematic intransitive suffix *-i̯e/o-, the athematic form of which is also found in the Armenian passive, and the suffix *-lo- used for verbal adjectives also in Slavonic and Tokharian.

Given that one of the main questions concerning the Armenian perfect concerns its argument marking, chapter 3 discussed argument marking and morphosyntactic alignment in some detail. After presenting various types of alignment and considering the Armenian situation, it emerged that the alignment of the Armenian perfect was tripartite, showing different marking for each core constituent: nominative for intransitive subjects, genitive for transitive agents, and accusative for the objects of transitive verbs.

After a thorough consideration of all previous explanations of this construction, which were all rejected owing to flaws in the argument or unlikeliness of explanation, the Armenian pattern was compared to the morphosyntactic alignment of the West Middle Iranian past tense, which construes along ergative-absolutive lines. It was observed that the two patterns shared certain commonalities: the use of a participle as the meaning-carrying unit, the usage of a case for the agent that otherwise can also express appurtenance and possession, and a tendency for prepositional object marking. Similarly, it emerged that both patterns were in active use in the same time

period, but over time were lost in favour of nominative-accusative alignment.

Next to these commonalities, the two patterns also exhibit differences. The Armenian perfect can be accompanied by an optional but invariable 3.SG form of the copula, while a 3.SG copula never occurs in Parthian. Furthermore, Parthian uses the direct case for both subject and object, while Armenian differentiates the two morphologically. The latter was explained as the result of an Armenian-internal process of analogy, by which the original nominative object of the transitive perfect was reanalysed as accusative owing to its use as the object case in the rest of the verbal system, and the fact that nominative and accusative are not morphologically differentiable in the singular. Concerning the copula, it was proposed that its use and form may be the result of an Armenian-internal development, as suggested by its optional nature.

In order to determine whether an Iranian origin of the perfect is plausible, a study of the use of the participle, and thus the perfect, in 5th-century CE Armenian historiographical texts was conducted with a view to providing answers to the following questions: is it possible that the use of the invariable 3.SG copula is an Armenian-internal development? Is there any indication that the Armenian perfect is undergoing alignment change which may explain both the attestation of nominative-accusative alignment in the perfect by the 8th century CE and the occurrence of non-standard subject and agent marking in the perfect already in the 5th century CE, with genitive subjects and nominative agents?

The results of this corpus study were reported in chapter 4 and did indeed provide statistical evidence that the use of the copula in the perfect was a minor, nascent pattern at the beginning of the 5th century, but over its course developed into the dominant pattern. Similarly, the rise in incidence of nominative agents with transitive perfects suggested the early beginnings of a process of alignment change, away from tripartite and towards nominative-accusative alignment. It was also observed that the participle, when used adjectivally, was restricted to intransitive active and passive readings, which corroborates the suggestion of a secondary development of the transitive perfect construction. These results spoke in favour of a potential origin

for the syntax of the Armenian periphrastic perfect in the Parthian past tense. Owing to its frequency, the converbial use of the participle was deemed most likely to have been developed in contact with Parthian; from it, it is thought, sprang the 'true' perfect.

In order to discover whether the perfect is the only borrowed Iranian pattern in Armenian, three further smaller constructions were considered in chapter 5. Armenian nominal relative clauses were compared to the West Middle Iranian *ezāfe* construction; the use of the Armenian pronoun *ink'n* 'self' as an intensifier, subject resuming anaphor, and switch-function marker was compared to the same distribution of uses in MP *xwd* /xwad/, Pth. *wxd* /wxad/; and the use of the Armenian complementiser *(e)t'ē* as a quotative marker was compared to that of Pth. *kw* /kū/, which has similar functions. In each case, it became clear that the parallels between the Armenian and Iranian patterns are such as might be the result of language contact and borrowing on the Armenian part, but that evidence was insufficient, or the patterns too typologically common, to be certain of a necessary relationship between these constructions; it was deemed plausible, however, that at the very least, the development of these Armenian patterns could have been catalytically assisted by the Iranian parallels.

As it was established at the end of chapter 4 that a derivation of the Armenian perfect construction from the Iranian past tense was a plausible scenario, chapter 6 had to explore whether the Partho-Armenian contact situation met the necessary requirements for syntactic influence of this kind. After a discussion of some of the principles and mechanisms of language contact, it was suggested that the constellation that would best explain a syntactic influence such as this was a superstrate shift: the Parthian-speaking ruling class of Armenia shifted to Armenian as their main language of communication. After a thorough analysis of Armenian, Iranian, Graeco-Roman, and other non-linguistic sources, this superstrate shift was deemed to be the result of numerous historical developments, specifically the fall of the Parthian Empire in 224 CE and the rise of the Sasanians; the Christianisation of Armenia and its Parthian rulers; the establishment of a hereditary dynasty of Parthian kings in Armenia; and the frequent wars between Armenia and Sasanian Iran. To adapt

to their new Armenian identity, and to set themselves apart from the Sasanians, the Parthians began to use the Armenian language; this situation, it was argued, is not unlike that of speakers of French in Britain after the Norman Conquest in 1066 CE. This shift may also explain the absence of Parthian language documents in the area after the end of the 3rd century CE.

As part of this superstrate shift, the Parthian use of the Armenian language would have resulted in the replication of the Parthian past tense alignment pattern in Armenian through pivot matching, that is the extension of the use of a particular construction from one language to another on the basis that elements used in the original construction have other, similar functions in both languages already. Specifically, this meant that the use of the Armenian participle as a perfect was likely owed to the fact that both Parthian and Armenian participles could be used adjectivally; on this basis, Parthian speakers used the Armenian participle as they would use Parthian participles too, namely as a periphrastic past tense. This use was adopted by Armenian speakers, quite possibly owing to the prestige of the Parthian ruling class, frequent intermarriage between Armenian and Parthian families, and the tutelage system.

In conclusion, it has been shown that, as the result of a superstrate shift of the Parthian-speaking ruling class of Armenia to Armenian as their main means of communication, the Armenian language has undergone not only the known lexical, morphological, and phraseological influence from Iranian, but may also have acquired Iranian syntactic patterns. By way of pattern replication, the Parthian past tense, which shows ergative alignment, was adapted in pre-literary Armenian to yield the construction of the periphrastic perfect attested in the earliest texts, showing tripartite alignment. This tripartite pattern does show variations already in the course of the 5th century, which are indicative of further alignment change. Next to the perfect, there are three other syntactic patterns which show possible Iranian interference.

With all this in mind, it must be noted once more that this study cannot, by nature, provide evidence beyond doubt that the development of the Armenian periphrastic perfect as outlined here corresponds exactly to historical reality. The fact that most of the developments proposed here would have taken place prior to the literary attesta-

tion of Classical Armenian is a clear indication of this fact. Equally, certain questions have been left unanswered: what is the role of the converbial use of the participle in the development of the perfect, and how did it arise? Does the usage of different copulas in the Armenian perfect reflect a similar distribution in Parthian, or is this just coincidence? Was the the oblique case still morphologically realised in Parthian by the beginning of the 5th century CE, or is the use of the Armenian genitive reliant largely on the parallel use of enclitics in Parthian to mark possession and to function as the agent of transitive verbs in the past? Could a more fine-grained analysis of the corpus data yield further information? How do the trends discussed in chapter 4 pan out in the 6th and 7th centuries?

Despite these shortcomings and open questions, the conclusions arrived at represent a plausible answer to the question how the construction of the Armenian periphrastic perfect may have arisen. In contradistinction to the alternative suggestions presented in chapter 3, this explanation can account for all the variations that occur, and has provided statistical evidence to corroborate at least some of the trends and developments argued for.

It is hoped that this study has made a worthwhile contribution to the better understanding of the linguistic history of Classical Armenian and its contact with West Middle Iranian in particular, and to studies in language contact and language change in general. It has also highlighted fields in the linguistic study of Classical Armenian which require further attention: the enquiry into further possible cases of pattern replication, or syntactic borrowing, from Iranian into Armenian; and the need for a consistent, usable, and modern parsed digital corpus of Classical Armenian to facilitate corpus-based research and the appropriate use of quantitative data in historical linguistics. Although it is difficult to spot potential patterns which may be the result of language contact, future research of this kind will not only benefit the understanding of the history and linguistic behaviour of Classical Armenian, but also the typology of language contact in general.

Appendix A: Python scripts

The following pieces of code are written in Python 3.4, a general-purpose high-level programming language (cf. Pilgrim 2010). Versions of the following three scripts have been written and run to obtain, clean, and format digital copies of the Armenian texts surveyed in chapter 4 for data analysis. Some scripts had to be adapted for different texts owing to differences in formatting; only one version is illustrated here. The process by which each script completes its task is documented by means of comments signalled by the # symbol.

Accessing and saving texts

```
from bs4 import BeautifulSoup    #load library for extracting data
    from HTML documents
import urllib.request            #load library to open URLs
import datetime                  #load library to specify time
import os, sys                   #load library for saving files into
    sub-directory

#create interactive function to determine, change, and create
    current file directory
def create_dir(path):
        current = os.getcwd()
        print('Your current CWD is: \%s' \% (current))
        if os.path.exists (current + '/' + path):
                print('Path already exists.')
        if not os.path.exists(current + '/' + path):
                os.makedirs(path)
        print('Directory created: \%s' \% (path))
        os.chdir(path)
        print('New CWD: ' + os.getcwd())

#create function to access specific website containing texts
    required
def clean():
        #define variables: websites on which text occurs; entered as
            such since file name may occur in middle of URL
        site = input('Enter fixed web address: ')
        ind_1 = int(input('Beginning of range: '))
        ind_2 = int(input('End of range: '))
        suffix = input('Any fixed suffix? ')

        #specify filename for sequence of downloaded texts
        filename = input('Enter desired directory and file name
            excluding extension (always .txt): ')
```

```
        #create directory
        create_dir(filename)

        #counting variable for for-loop
        fileno = 1

        #iterate over the following processes for the range entered
            above  (ind_1 to ind_2 inclusive):
        for num in range(ind_1,ind_2 + 1):

            #open URL in read mode
            with urllib.request.urlopen(site + str(num) + suffix) as
                precursor:
                presoup = precursor.read()
                soup = BeautifulSoup(presoup)

                #select HTML container tag in which desired text
                    occurs
                prestring = soup.select('div.work-reader-body-panel'
                    )

                #container variable (empty, populated by next for-
                    loop)
                final = ''

                #iterate over the text, strip all HTML tags and non-
                    essential information
                for text in prestring:
                    for utext in text.stripped_strings:
                        final+=utext + '␣'

                #write complete, stripped text to file(s)
                with open(fileout, 'w') as f:
                    f.write(final)

            #increase file number counter
            fileno+= 1
clean();
```

Cleaning texts

```
import time, datetime   #load library to access current date and
    time for saving files
import os, os.path              #load library to read and create
    directory paths

#library defining replacement patterns: the first value will below
    be replaced by the second
detrit = {'*': '',
          '  ': ' ',
          '␣␣': '␣',
          '␣.␣': '.␣',
          '␣.\n': '.\n',
          ' ' : '' ,
          '␣ ': '␣',
          ' ␣': ' ␣',
          '␣␣': '␣',
          '␣:␣': ':␣',
```

```
        '\n\n': '\n'}

#function to determine and if necessary create a (new) current
    directory
def select_cwd():
    global path
    path = input('Select CWD: ')
    try:
        os.chdir(path)
    except:
        print('Dir does not exist.')
        select_cwd()
    else:
        print('New CWD: ' + os.getcwd())

#function to select a single file or all files in a directory for
    cleaning
def batch():
    global filenum
    filenum = len([name for name in os.listdir('.') if os.path.
        isfile(name) and name.startswith(path)])
    fileq = input('Current DIR contains \%d files. Clean all: y/n? '
        \% (filenum))
    create_dir('\%s_cleaned' \% (path))
    if fileq == 'y':
        return True
    elif fileq == 'n':
        filenum = input('Specify file no. to clean: ')
        return False

#function to create new directory for cleaned files
def create_dir(newdir):
        current = os.getcwd()
        if os.path.exists (current + '/' + newdir):
                os.makedirs(newdir + '_' + datetime.datetime.now().
                    strftime('\%d\%m\%Y-\%H\%M\%S'))
        if not os.path.exists(current + '/' + newdir):
                os.makedirs(newdir)
        print('Writing to: ' + os.getcwd())

#main function that cleans the files specified above
def clean(number):
    filename = path + '_' + str(number)
    suffix = '.txt'

    #open individual file
    with open(filename + suffix, 'r') as f:
        os.chdir('\%s_cleaned' \% (path))

        #create new file for output of cleaned text
        with open(filename + '_cleaned' + suffix, 'a') as fout:
            for line in f:

                #ensure that numbers and letters in each line are
                    separated by a space (this will be relevant for
                    the final script)
                for p, c in enumerate(line):
                    if line[p].isdigit() and line[p+1].isalpha():
```

```
                        line = line[:p+1] + ' ' + line[p+1:]

                #replace the first items in the detrit library above
                    with the second values
                for key, value in detrit.items():
                    if key in line:
                        line = line.replace(key, value)

                #insert line break between numbered lines/sections
                sections = [int(x) for x in line.split() if x.
                   isdigit()]
                for i in sections:
                    line = line[:line.index(str(i))-1] + '\n' + line
                       [line.index(str(i)):]
                fout.write(line)
                os.chdir('..')

select_cwd()
if batch():
    for instance in range(1, filenum+1):
        clean(instance)
else:
    clean(filenum)
```

Dividing texts

```
import os, os.path      #load library to read and create directory
   paths
import csv              #load library to produce .csv files for
   later use

#function to determine and if necessary create a (new) current
   directory
def select_cwd():
    global path
    global short_path
    path = input('Select CWD: ')
    short_path = path[:-8]
    try:
        os.chdir(path)
    except:
        print('Dir does not exist.')
        select_cwd()
    else:
        print('New CWD: ' + os.getcwd())
        further = input('Change DIR further: y/n?')
        if further == 'y':
            select_cwd()

#function to select a single file or all files in a directory for
   cleaning
def batch():
    global filenum
    filenum = len([name for name in os.listdir('.') if os.path.
       isfile(name) and name.startswith(short_path)])
```

```
    fileq = input('Current␣DIR␣contains␣\%d␣files.␣Process␣all:␣y/n?
        ␣' \% (filenum))
    if fileq == 'y':
        return True
    elif fileq == 'n':
        filenum = input('Specify␣file␣no.␣to␣clean:␣')
        return False

#variable to count the number of occurrences of the -eal participle
eal = 0

#define a class of objects with specific properties
class Sentence:
    def __init__(self,file_name,line,PrimSentNumber=1,SecSentNumber
        =1):
        self.file_name = file_name
        self.line = line                            #line in chapter
        self.PrimSentNumber = PrimSentNumber        #main sentence in
            line (ended by :)
        self.SecSentNumber = SecSentNumber          #secondary sentence
            in line (ended by .)

    def call(self):
        return('File:␣\%s.␣Line:␣\%s␣Sentence:␣\%s.␣Clause:␣\%s.␣'
            \% (self.file_name,self.line,self.PrimSentNumber,self.
            SecSentNumber))

    def list(self):
        this_list = [self.file_name,self.line,self.PrimSentNumber,
            self.SecSentNumber]
        return this_list

#function to split every line of the file into its main sentences
def split_line(fileinstance):
    filename = short_path + '_' + str(fileinstance) + '_cleaned.txt'
    global fileal
    fileal = 0
    with open(filename, 'r') as f:
        for i, line in enumerate(f):
            global cur_sent
            cur_sent = Sentence(short_path + '_' + str(fileinstance)
                ,i+1)
            fsentence = line.split(':')

            fextent = len(fsentence)
            if fsentence[fextent-1] == '␣' or fsentence[fextent-1]
                == '\n' or fsentence[fextent-1] == '':

                #If the line only has one full sentence, treat line
                    as sentence
                sentence = fsentence[0]
                split_sentence(sentence)

            else:
                for a, sentence in enumerate(fsentence):
                    cur_sent.PrimSentNumber = a+1
                    split_sentence(sentence)
```

```
#function to separate main sentence into secondary sentences
def split_sentence(sentence):
    if type(sentence) is str:                    #If there is only one
        full sentence in ...line
        fsubunit = sentence.split('.')           #...check that line for
            subsentences
        if len(fsubunit) == 1:                   #If there is only one
            subsentence in the ...sentence
            fsubunit = fsubunit[0]                #...only treat it once
            word_split(fsubunit)

        else:
            for b, subunit in enumerate(fsubunit):
                cur_sent.SecSentNumber = b+1
                word_split(subunit)

#main function to determine occurrences of -eal participle, print
   them to a .csv file with place, context, and form
def word_split(sent):
    global eal
    global fileal
    words = sent.split('␣')
    for word in words:
        if 'ɦɯl' in word:
            eal += 1
            fileal += 1
            write_csv(word,sent)

#function to encode the .csv file
def write_csv(word,sentence):
    with open(short_path + '.csv', 'a', newline='') as csvfile:
        writer = csv.writer(csvfile, delimiter='$', quotechar='|',
            quoting=csv.QUOTE_MINIMAL)
        to_write = cur_sent.list()
        to_write.append(sentence)
        to_write.append(word)
        writer.writerow(to_write)

select_cwd()
if batch():
    for instance in range(1, filenum+1):
        split_line(instance)
else:
    split_line(filenum)
```

Appendix B: Corpus data

The positions given for each token correspond to those used in: Mahé (2005–7) for Koriwn; Ter-Mkrtč‘ean and Kanayeanc‘ (1909) for Agat‘angełos; Garsoïan (1989) for P‘awstos Buzand; Thomson (1991) for Łazar P‘arpeci‘i; and Thomson (1982) for Ełišē.

The data begins with Koriwn. Entries for Agat‘angełos start on p. 358, those for P‘awstos Buzand on p. 374, for Łazar P‘arpec‘i on p. 398, and for Ełišē on p. 436.

In the table below, most rubrics are self-explanatory; subj refers to the existence of an overt subject or agent; Cop. indicates whether a copula occurs; Pol. refers to the polarity of the expression.

Place	ptcp	Category	Voice	Valency	subj	S/A	O	Cop.	agr	Order	Pol.
Kor. 1	*ekeal*	cvb	act	itr	+	nom		-		VS	+
Kor. 1	*aṙeal*	V	act	tr	+	gen	+	-		AOV	+
Kor. 1	*graweal*	V	act	tr	+	gen	+	-		OVA	+
Kor. 1	*edealn*	adj	pass	itr							
Kor. 1	*ałač‘eal*	cvb	act	tr	+	gen	+	-		OAV	+
Kor. 2	*aṙeal*	cvb	act	tr	-			-		V	+
Kor. 2	*aruestaxawseal*	V	act	itr	-			-		V	+
Kor. 2	*barexorheal*	V	act	itr	+	gen		-		SV	+
Kor. 2	*paycaṙac‘uc‘eal*	cvb	act	tr	-	gen		-		V	+
Kor. 2	*kač‘ec‘eal*	V	pass	itr	+	nom		-		SV	+
Kor. 2	*ereweal*	V	act	itr	+	nom		-		SV	+
Kor. 2	*paheal*	V	pass	itr	+	nom		-		SV	+
Kor. 2	*ardarac‘eal*	V	act	itr	+	gen		-		SV	+
Kor. 2	*katareal*	V	pass	itr	+	gen		-		SV	+
Kor. 2	*žaṙangeal*	V	act	tr	-	gen	+	-		OV	+
Kor. 2	*gtealk‘*	V	pass	itr	+	nom		-		SV	+
Kor. 2	*kargeal*	cvb	act	tr	+	gen	+	-		AVO	+
Kor. 2	*hayec‘eal*	V	act	itr	-			-		V	+
Kor. 2	*yarjakeals*	adj	act	itr							
Kor. 2	*nšanakeal*	adj	pass	itr							
Kor. 2	*goveal*	V	act	tr	-		+	-		OV	+
Kor. 2	*goveal*	cvb	act	tr	+	gen	+	-		AVO	+
Kor. 2	*awrhneal*	adj	pass	itr							
Kor. 2	*patueal*	adj	pass	itr							
Kor. 2	*arareal*	V	act	tr	-		+	-		OV	+
Kor. 2	*orošeal*	adj	pass	itr							
Kor. 2	*hnč‘ec‘uc‘eal*	V	act	tr	-		+	-		OV	+
Kor. 2	*arareal*	V	act	tr	-		+	-		OV	+
Kor. 2	*č‘anc‘uc‘eal*	V	act	tr	-		+	-		OV	+
Kor. 2	*edeal*	V	act	itr	+	nom		+	S	SV	+
Kor. 2	*anuaneal*	cvb	pass	itr	-			-		V	+
Kor. 2	*hayec‘eal*	cvb	act	itr	+	nom		-		VS	+
Kor. 2	*ənkaleal*	V	act	tr	+	gen	+	-		OVA	+
Kor. 2	*matenagreal*	adj	pass	itr							
Kor. 2	*katareal*	cvb	act	itr	-	nom		-		V	+
Kor. 2	*matuc‘eal*	cvb	act	itr	-			-		V	+
Kor. 2	*awetaraneal*	V	act	tr	-		+	-		OV	+
Kor. 2	*patmeal*	cvb	act	tr	+	gen	+	-		AOV	+
Kor. 2	*naxanjec‘uc‘eals*	adj	pass	itr							
Kor. 2	*darjeal*	adv									
Kor. 2	*darjeal*	adv									
Kor. 2	*hayec‘eal*	adv									
Kor. 2	*aṙeal*	cvb	act	tr	+	nom	+	-		AOV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Kor. 2	*kʻajalerealkʻ*	CVB	ACT	ITR	-			-		V	+
Kor. 2	*nšanakeal*	ADJ	PASS	ITR							
Kor. 2	*yajordeal*	ADJ	ACT	ITR							
Kor. 2	*grealsn*	ADJ	PASS	ITR							
Kor. 2	*mecarealkʻ*	CVB	PASS	ITR	-			-		V	+
Kor. 2	*govealkʻ*	CVB	PASS	ITR	-			-		V	+
Kor. 2	*arel*	CVB	ACT	TR	-		+	-		VO	+
Kor. 2	*xostacʻealn*	ADJ	PASS	ITR							
Kor. 2	*mecareal*	ADJ	PASS	ITR							
Kor. 2	*hatucʻeal*	CVB	ACT	TR	+	NOM		-		AV	+
Kor. 3	*arareal*	V	ACT	TR	+	GEN	+	-		OVA	+
Kor. 3	*varžeal*	V	PASS	ITR	-			-		V	+
Kor. 3	*ekeal*	CVB	ACT	ITR	-			-		V	+
Kor. 3	*haseal*	V	ACT	ITR	-			-		V	+
Kor. 3	*kacʻeal*	V	ACT	ITR	-			-		V	+
Kor. 3	*tełekacʻeal*	V	ACT	ITR	-			-		V	+
Kor. 3	*ełeal*	V	ACT	ITR	-			-		V	+
Kor. 3	*ełeal*	V	ACT	ITR	-			-		V	+
Kor. 3	*edeal*	V	ACT	TR	-		+	-		OV	+
Kor. 3	*lusaworeal*	V	PASS	ITR	-			-		V	+
Kor. 3	*ełeal*	V	ACT	ITR	-			-		V	+
Kor. 3	*zardareal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 4	*darjeal*	CVB	ACT	ITR	-			-		V	+
Kor. 4	*arel*	CVB	ACT	TR	-		+	-		VO	+
Kor. 4	*hačeal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 4	*tueal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 4	*gteal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 4	*ašakerteal*	CVB	ACT	TR	-			-		V	+
Kor. 4	*tareal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 4	*lusaworeal*	CVB	PASS	ITR	-			-		V	+
Kor. 4	*paycarac'eal*	CVB	PASS	ITR	-			-		V	+
Kor. 5	*arel*	CVB	ACT	TR	+	GEN	+	-		VAO	+
Kor. 5	*zhawatacʻeals*	ADJ	ACT	ITR							
Kor. 5	*dimeal*	CVB	ACT	ITR	+	GEN		-		SV	+
Kor. 5	*gteal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 5	*arel*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 5	*gereal*	ADJ	PASS	ITR							
Kor. 5	*arel*	CVB	ACT	TR	-		+	-		VO	+
Kor. 5	*arel*	V	ACT	TR	-		+	-		VO	+
Kor. 5	*pašareal*	V	PASS	ITR	-			-		V	+
Kor. 5	*tʻakardapateal*	V	PASS	ITR	-			-		V	+
Kor. 5	*ankeal*	V	ACT	ITR	-			-		V	+
Kor. 6	*yarucʻeal*	CVB	ACT	ITR	-			-		V	+
Kor. 6	*hawaneal*	ADJ	ACT	ITR							
Kor. 6	*miabaneal*	V	ACT	ITR	+	NOM		-		SV	+
Kor. 6	*gumareal*	V	ACT	ITR	-	NOM		-		V	+
Kor. 6	*parapecʻucʻeal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 6	*hambereal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 6	*gteal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
Kor. 6	*lueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 6	*arel*	CVB	ACT	TR	-	NOM		-		V	+
Kor. 6	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Kor. 6	*kʻałealkʻ*	CVB	PASS	ITR	+	NOM		-		SV	+
Kor. 6	*muracʻealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Kor. 6	*darjeal*	ADV									
Kor. 7	*arel*	CVB	ACT	TR	+	GEN	+	-		VAO	+
Kor. 7	*hražarealkʻ*	CVB	ACT	ITR	-			-		V	+
Kor. 7	*ertʻeal*	V	ACT	ITR	-			-		V	+
Kor. 7	*pataheal*	V	ACT	ITR	-			-		V	+
Kor. 7	*cʻucʻeal*	V	ACT	TR	-		+	-		OV	+
Kor. 7	*ztarealsn*	ADJ	PASS	ITR							
Kor. 7	*bažaneal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 7	*edeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 7	*zasacʻealsn*	ADJ	PASS	ITR							
Kor. 7	*hambereal*	V	ACT	TR	-		+	-		OV	+
Kor. 7	*nšanakeal*	CVB	ACT	TR	-			-		V	+
Kor. 7	*anuaneal*	CVB	ACT	TR	-			-		V	+
Kor. 7	*kargeal*	CVB	ACT	TR	-			-		V	+
Kor. 7	*hražareal*	CVB	ACT	ITR	-			-		V	+
Kor. 7	*mecareal*	V	PASS	ITR	-			+	S	V	+
Kor. 7	*gteal*	CVB	ACT	TR	-		+	-		OV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Kor. 7	*yawrineal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 7	*yankucʻeal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 7	*edeal*	V	ACT	TR	-		+	-		VO	+
Kor. 8	*hražareal*	CVB	ACT	ITR	-			-		V	+
Kor. 8	*arkeal*	V	ACT	TR	-		+	-		VO	+
Kor. 8	*hražarealkʻ*	CVB	ACT	ITR	-			-		V	+
Kor. 8	*arʹeal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 8	*ełeal*	CVB	ACT	ITR	-			-		V	+
Kor. 8	*ancʻeal*	CVB	ACT	ITR	-			-		V	+
Kor. 8	*ekeal*	CVB	ACT	ITR	-			-		V	+
Kor. 8	*arʹeal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
Kor. 8	*čarʹealkʻs*	ADJ	PASS	ITR							
Kor. 8	*lcʻeal*	V	PASS	ITR	+	NOM		-		SV	+
Kor. 8	*karceal*	V	ACT	TR	-	NOM	+	-		VO	+
Kor. 8	*nmanecʻucʻeal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 9	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Kor. 9	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Kor. 9	*eleal*	CVB	ACT	ITR	-	GEN		-		V	+
Kor. 9	*tueal*	CVB	ACT	TR	-	GEN	+	-		OV	+
Kor. 10	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
Kor. 10	*kargeal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 10	*arʹeal*	V	ACT	TR	-		+	-		OV	+
Kor. 10	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 10	*krtʻeals*	ADJ	PASS	ITR							
Kor. 10	*ełeal*	V	ACT	ITR	-			-		V	+
Kor. 11	*arʹeal*	V	ACT	TR	+	GEN	+	-		VAO	+
Kor. 11	*hayecʻeal*	V	ACT	ITR	-	GEN		-		V	+
Kor. 11	*ekeal*	V	ACT	ITR	+	NOM		-		SV	+
Kor. 11	*hramayealkʻ*	ADJ	PASS	ITR							
Kor. 11	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Kor. 11	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 11	*ekealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Kor. 11	*hasealkʻ*	V	ACT	ITR	+	NOM		-		SV	+
Kor. 11	*erewealkʻ*	V	ACT	ITR	+	NOM		-		SV	+
Kor. 12	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 12	*yordealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Kor. 12	*drdealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Kor. 12	*bacʻeal*	ADJ	PASS	ITR							
Kor. 12	*błxeal*	ADJ	ACT	ITR							
Kor. 12	*edeal*	V	ACT	TR	+	GEN	+	-		AOV	+
Kor. 12	*patuireal*	V	ACT	TR	+	GEN	+	-		AOV	+
Kor. 12	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
Kor. 12	*parapecʻucʻeal*	V	ACT	TR	+	GEN	+	-		AOV	+
Kor. 13	*hražareal*	V	ACT	ITR	-			-		V	+
Kor. 13	*ełeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Kor. 13	*ertʻeal*	CVB	ACT	ITR	-	NOM		-		SV	+
Kor. 13	*arkeal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 13	*haseal*	CVB	ACT	ITR	+	GEN		-		VS	+
Kor. 13	*žamaneal*	CVB	ACT	ITR	+	GEN		-		VS	+
Kor. 14	*ənkaleal*	V	ACT	TR	+	GEN	+	-		VOA	+
Kor. 14	*gteal*	V	ACT	TR	-		+	-		OV	+
Kor. 14	*žołoveal*	V	ACT	TR	-		+	-		VO	+
Kor. 14	*pargeweal*	ADJ	PASS	ITR							
Kor. 14	*carʹayeal*	V	ACT	ITR	-			-		V	+
Kor. 14	*zhramayealsn*	ADJ	PASS	ITR							
Kor. 15	*darjeal*	ADV									
Kor. 15	*kargeal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Kor. 15	*yarucʻeal*	CVB	ACT	ITR	-			-		V	+
Kor. 15	*ertʻeal*	CVB	ACT	ITR	-			-		V	+
Kor. 15	*hnazandeal*	CVB	ACT	ITR	+	GEN		-		VS	+
Kor. 15	*arkeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 15	*arareal*	V	ACT	TR	-			-		V	+
Kor. 15	*gteal*	V	ACT	TR	-		+	-		VO	+
Kor. 15	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
Kor. 15	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 15	*anǰateal*	V	ACT	TR	-			-		V	+
Kor. 15	*bažaneal*	ADJ	PASS	ITR							
Kor. 15	*katareal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 15	*ełeal*	V	ACT	ITR	+	GEN		-		SV	+
Kor. 15	*kacʻeal*	V	ACT	ITR	+	NOM		-		SV	+
Kor. 15	*kargeal*	V	ACT	TR	-		+	-		VO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Kor. 15	*hražareal*	CVB	ACT	ITR	-			-		V	+
Kor. 15	*pataheal*	CVB	ACT	ITR	-			-		V	+
Kor. 16	*darjeal*	CVB	ACT	ITR	-			-		V	+
Kor. 16	*zgušac'uc'eal*	CVB	ACT	ITR	-			-		V	+
Kor. 16	*p'ut'ac'eal*	CVB	ACT	ITR	-			-		V	+
Kor. 16	*patueal*	V	PASS	ITR	-			+	S	V	+
Kor. 16	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
Kor. 16	*edeals*	ADJ	PASS	ITR							
Kor. 16	*tareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 16	*arřeal*	V	ACT	TR	+	GEN	+	-		VAO	+
Kor. 16	*eleal*	V	ACT	ITR	-	GEN		-		V	+
Kor. 16	*gteal*	CVB	ACT	TR	-	GEN	+	-		OV	+
Kor. 16	*mteal*	CVB	ACT	ITR	-			-		V	+
Kor. 16	*gteal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 16	*hramayeal*	V	IMPRS	ITR	-			+	Ø	V	+
Kor. 16	*c'uc'eal*	V	ACT	TR	-		+	-		VO	+
Kor. 16	*arřeal*	V	ACT	TR	-		+	-		VO	+
Kor. 16	*hawanec'uc'eal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 16	*erkrpageal*	CVB	ACT	ITR	-			-		V	+
Kor. 16	*ənkaleal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 16	*yajołealk'*	ADJ	ACT	ITR							
Kor. 16	*gteal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 16	*pataheal*	CVB	ACT	ITR	-			-		V	+
Kor. 16	*arřeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Kor. 16	*arjakeal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 16	*arkeal*	V	ACT	TR	+	NOM	+	-		AOV	+
Kor. 16	*arřeal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 16	*pakasealk'*	ADJ	ACT	ITR							
Kor. 16	*xortakeals*	ADJ	PASS	ITR							
Kor. 16	*xanjeals*	ADJ	PASS	ITR							
Kor. 16	*mreals*	ADJ	PASS	ITR							
Kor. 16	*xaytařakeals*	ADJ	PASS	ITR							
Kor. 16	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 16	*skseal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 16	*včareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 16	*stac'eal*	CVB	ACT	TR	-	GEN	+	-		OV	+
Kor. 16	*lc'eal*	CVB	PASS	ITR	-			-		V	+
Kor. 16	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Kor. 16	*harc'eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Kor. 16	*k'nneal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Kor. 16	*kargeal*	CVB	ACT	TR	-			-		V	+
Kor. 16	*hastateal*	CVB	ACT	TR	-			-		V	+
Kor. 16	*hražareal*	CVB	ACT	ITR	-			-		V	+
Kor. 16	*t'ołeal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 16	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 16	*haseal*	CVB	ACT	TR	-	NOM		-		V	+
Kor. 16	*patmeal*	CVB	ACT	ITR	-			-		V	+
Kor. 16	*mxit'areal*	CVB	ACT	ITR	-			-		V	+
Kor. 17	*hražareal*	CVB	ACT	ITR	-			-		V	+
Kor. 17	*ert'eal*	CVB	ACT	ITR	-			-		V	+
Kor. 17	*haseal*	CVB	ACT	ITR	-			-		V	+
Kor. 17	*ənkaleal*	V	ACT	TR	+	GEN		-		AV	+
Kor. 17	*harc'eal*	CVB	PASS	ITR	-			-		V	+
Kor. 17	*edeal*	CVB	ACT	TR	-			-		V	+
Kor. 17	*ekealn*	V	ACT	ITR	-			+	S	V	+
Kor. 17	*arřeal*	CVB	ACT	TR	+	GEN		-		AV	+
Kor. 17	*arřeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Kor. 17	*darjeal*	ADV									
Kor. 17	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 17	*lc'eal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 17	*ełeal*	CVB	ACT	ITR	+	GEN		-		VS	+
Kor. 17	*gteal*	V	PASS	ITR	+	NOM		-		SV	+
Kor. 17	*xałac'eal*	CVB	ACT	ITR	-			-		V	+
Kor. 18	*haseal*	CVB	ACT	ITR	-			-		V	+
Kor. 18	*ełeal*	CVB	ACT	ITR	-			-		V	+
Kor. 18	*vayeleal*	CVB	ACT	ITR	-			-		V	+
Kor. 18	*anc'eal*	CVB	ACT	ITR	+	GEN		-		SV	+
Kor. 18	*dimeal*	V	ACT	ITR	+	GEN		-		SV	+
Kor. 18	*t'agaworeal*	V	ACT	ITR	+	NOM		-		SV	+
Kor. 18	*paycařac'uc'eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Kor. 18	*šrjeal*	CVB	ACT	ITR	+	GEN		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Kor. 18	*patuireal*	V	ACT	TR	+	GEN		-		AV	+
Kor. 18	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
Kor. 18	*cʻucʻeal*	V	ACT	TR	+	GEN	+	-		AOV	+
Kor. 18	*arareal*	CVB	ACT	TR	-	GEN	+	-		VO	+
Kor. 18	*ekeal*	CVB	ACT	ITR	-			-		V	+
Kor. 18	*tueal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 19	*edeal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
Kor. 19	*darjeal*	ADV									
Kor. 19	*greals*	ADJ	PASS	ITR							
Kor. 19	*haseal*	CVB	ACT	TR	+	GEN		-		AV	+
Kor. 19	*katareal*	CVB	ACT	TR	-	GEN	+	-		VO	+
Kor. 19	*arʹakʻeal*	CVB	ACT	TR	-	GEN		-		V	+
Kor. 19	*ancʻeal*	CVB	ACT	ITR	-	GEN		-		V	+
Kor. 19	*usealkʻ*	CVB	ACT	ITR	-			-		V	+
Kor. 19	*tełekacʻealkʻ*	CVB	ACT	ITR	-			-		V	+
Kor. 19	*zbereal*	ADJ	PASS	ITR							
Kor. 19	*darjucʻeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 19	*darjeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 19	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 19	*całkealkʻ*	ADJ	ACT	ITR							
Kor. 19	*šahawētealkʻ*	ADJ	ACT	ITR							
Kor. 20	*darjeal*	ADV									
Kor. 20	*skseal*	V	ACT	ITR	+	GEN		-		VS	+
Kor. 20	*handerjealsn*	ADJ	ACT	ITR							
Kor. 20	*yeriwreal*	V	ACT	TR	-		+	-		OV	+
Kor. 20	*kazmeal*	V	ACT	TR	-		+	-		OV	+
Kor. 20	*xostacʻeal*	ADJ	PASS	ITR							
Kor. 21	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 22	*darjeal*	ADV									
Kor. 22	*bnakecʻucʻeal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 22	*cʻucʻeal*	V	ACT	TR	-		+	-		OV	+
Kor. 22	*arʹeal*	V	ACT	TR	-		+	-		VO	+
Kor. 22	*ertʻeal*	CVB	ACT	ITR	-			-		V	+
Kor. 22	*ełeal*	CVB	ACT	ITR	-			-		V	+
Kor. 22	*nayecʻeal*	V	ACT	ITR	+	GEN		-		SV	+
Kor. 22	*zawracʻeal*	V	ACT	ITR	-			+	S	V	+
Kor. 22	*ijeal*	CVB	ACT	ITR	+	GEN		-		SV	+
Kor. 22	*vareal*	CVB	ACT	ITR	-	GEN		-		V	+
Kor. 22	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Kor. 22	*darjeal*	ADV									
Kor. 22	*ənkaleal*	CVB	ACT	TR	+	GEN		-		AV	+
Kor. 22	*barjeal*	CVB	ACT	TR	-	GEN		-		V	+
Kor. 22	*kreal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Kor. 22	*barjeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Kor. 22	*patuireal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Kor. 22	*lcʻealkʻ*	CVB	PASS	ITR	-			-		V	+
Kor. 22	*parartacʻealkʻ*	CVB	PASS	ITR	-			-		V	+
Kor. 22	*xałacʻealkʻ*	CVB	ACT	ITR	-			-		V	+
Kor. 22	*kanxealkʻ*	CVB	ACT	ITR	-			-		V	+
Kor. 22	*hanapazordealkʻ*	CVB	ACT	ITR	-			-		V	+
Kor. 23	*bereal*	CVB	PASS	ITR	+	NOM		-		VS	+
Kor. 23	*nšanakeal*	CVB	ACT	TR	+	GEN		-		AV	+
Kor. 23	*barjeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 24	*lcʻeal*	ADJ	PASS	ITR							
Kor. 24	*vayeleal*	CVB	ACT	ITR	+	GEN		-		SV	+
Kor. 24	*awandeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 24	*hayecʻeal*	CVB	ACT	ITR	+	GEN		-		SV	+
Kor. 24	*apspreal*	V	ACT	TR	+	GEN	+	-		AVO	+
Kor. 24	*zmnacʻealsn*	ADJ	ACT	ITR							
Kor. 24	*arʹeal*	V	ACT	TR	+	GEN	+	-		OVA	+
Kor. 24	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
Kor. 24	*barjeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Kor. 24	*edeal*	CVB	ACT	TR	-			-		V	+
Kor. 24	*knkʻeal*	CVB	ACT	TR	-			-		V	+
Kor. 24	*katareal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 25	*lueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Kor. 25	*pašareal*	V	PASS	ITR	-	GEN		+	S	V	+
Kor. 25	*arʹakʻealn*	ADJ	PASS	ITR							
Kor. 25	*gteal*	V	ACT	TR	+	NOM	+	-		AVO	-
Kor. 25	*hamareal*	V	IMPRS	TR	-		+	+	Ø	OV	+
Kor. 25	*edeal*	CVB	ACT	TR	-		+	-		OV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Kor. 25	*hamareal*	V	ACT	TR	+	GEN	+	-		VO	+
Kor. 26	*orošeal*	CVB	PASS	ITR	-			-		V	+
Kor. 26	*xaŕneal*	CVB	PASS	ITR	-			-		V	+
Kor. 26	*t'et'ewac'eal*	CVB	PASS	ITR	-			-		V	+
Kor. 26	*st'ap'eal*	CVB	ACT	ITR	-			-		V	+
Kor. 26	*kangneal*	CVB	ACT	ITR	-			-		V	+
Kor. 26	*hambarjeal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 26	*mnac'eals*	ADJ	ACT	ITR							
Kor. 26	*karkaŕeal*	V	PASS	ITR	+	NOM		+	S	SV	+
Kor. 26	*ełeal*	V	ACT	ITR	+	GEN	+	-		OAV	+
Kor. 26	*patmeal*	V	PASS	ITR	-	GEN		-		V	-
Kor. 26	*awandeal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 26	*hatuc'eal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 26	*aŕeal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
Kor. 26	*matuc'eal*	CVB	ACT	TR	-			-		V	+
Kor. 26	*katareal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 26	*kangneal*	V	PASS	ITR	+	NOM		-		SV	+
Kor. 26	*yawrineal*	V	ACT	TR	-		+	-		OV	+
Kor. 27	*tareal*	CVB	ACT	TR	-			-		V	+
Kor. 27	*žaŕangeal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 27	*gteal*	V	PASS	ITR	+	NOM		-		SV	+
Kor. 28	*tełekac'eal*	CVB	PASS	ITR	-			-		V	-
Kor. 28	*matenagreal*	CVB	ACT	TR	-		+	-		VO	-
Kor. 28	*ełeal*	CVB	ACT	ITR	-			-		V	+
Kor. 28	*ełeal*	CVB	ACT	ITR	-			-		V	+
Kor. 28	*t'ołeal*	CVB	ACT	TR	-		+	-		OV	+
Kor. 28	*ararealsn*	ADJ	PASS	ITR							
Kor. 28	*anc'eal*	CVB	ACT	TR	-		+	-		VO	+
Kor. 28	*canuc'ealk'*	CVB	PASS	ITR	+	NOM		-		SV	+
Kor. 29	*t'agaworeal*	CVB	ACT	ITR	+	GEN		-		VS	+
Kor. 29	*aŕeal*	V	PASS	ITR	+	NOM		-		VS	+
Ag. 1.1	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 1.1	*lueal*	V	ACT	TR	-	NOM	+	-		AVO	+
Ag. 1.2	*darjeal*	V	ACT	ITR	-			+	S	V	+
Ag. 1.2	*darjeal*	CVB	ACT	ITR	-					V	+
Ag. 1.2	*anc'eal*	CVB	ACT	ITR	-					V	+
Ag. 1.2	*ekeal*	V	ACT	ITR	-			+	S	V	+
Ag. 1.4	*aŕeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 1.5	*edeal*	CVB	ACT	ITR	-					V	+
Ag. 1.5	*ełeal*	CVB	ACT	ITR	-			-		V	+
Ag. 1.5	*yusac'eal*	V	ACT	ITR	-			-		V	+
Ag. 1.7	*arareal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
Ag. 1.7	*tueal*	CVB	ACT	ITR	-					V	+
Ag. 1.7	*miamteal*	V	ACT	ITR	-			+	S	V	+
Ag. 1.7	*hawaneal*	V	ACT	ITR	-			+	S	V	+
Ag. 1.7	*nuačeal*	V	ACT	ITR	-			+	S	V	+
Ag. 1.8	*aŕeal*	V	ACT	TR	+	GEN	+	-		VAO	+
Ag. 1.8	*ekeal*	CVB	ACT	ITR	+	NOM		+	S	SV	+
Ag. 1.8	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 1.9	*dimeal*	CVB	ACT	ITR	-			+	S	V	+
Ag. 1.9	*ekeal*	CVB	ACT	ITR	-			+	S	V	+
Ag. 1.9	*haseal*	V	ACT	ITR	-			+	S	V	+
Ag. 1.10	*mteal*	CVB	ACT	ITR	-			-		V	+
Ag. 1.13	*p'ołp'ołeals*	ADJ	PASS	ITR				-			
Ag. 2.1	*sp'ŕeal*	V	ACT	TR	-		+	-		OV	+
Ag. 2.1	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 2.1	*aŕeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 2.2	*aŕeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 2.3	*arkeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 2.4	*kac'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 2.4	*anc'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 2.5	*edeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 2.7	*arareal*	CVB	ACT	ITR	-			-		V	+
Ag. 2.7	*ankeal*	CVB	ACT	ITR	-			-		V	+
Ag. 2.7	*kaleal*	CVB	ACT	ITR	-			-		V	+
Ag. 2.7	*eleal*	CVB	ACT	ITR	-			-		V	+
Ag. 2.7	*apstambeal*	V	ACT	ITR	-			+	S	V	+
Ag. 2.8	*ekeal*	CVB	ACT	ITR	-			-		V	+
Ag. 2.9	*c'ncac'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 2.11	*dimeal*	CVB	ACT	ITR	-			-		V	+
Ag. 2.11	*ekeal*	V	ACT	ITR	-			+	S	V	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 2.12	*hanguc‘eal*	V	ACT	ITR	-			+	S	V	+
Ag. 2.12	*arkeal*	CVB	ACT	ITR	+	GEN		-		VS	+
Ag. 2.13	*uxteal*	V	ACT	TR	-		+	+	Ø	OV	+
Ag. 2.14	*t‘erak‘ameals*	ADJ	PASS	ITR							
Ag. 2.14	*verac‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 2.14	*kac‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 2.15	*ełeal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 2.15	*heceal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 2.16	*ačapareal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 2.17	*yaruc‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 2.18	*anc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 2.19	*arareal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 2.20	*darjeal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 2.20	*žołoveal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 2.21	*t‘ap‘eal*	V	PASS	ITR	+	NOM		+	S	SV	-
Ag. 2.21	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	-
Ag. 2.23	*prceal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
Ag. 2.23	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 3.3	*prceal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 3.3	*arʹeal*	CVB	ACT	TR	+	GEN		-		VA	+
Ag. 3.3	*p‘axuc‘eal*	V	ACT	ITR	+	GEN		-		SV	+
Ag. 3.4	*ekeal*	CVB	ACT	ITR	+	GEN		-		VS	+
Ag. 3.4	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 3.5	*p‘osac‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 3.5	*edeal*	V	ACT	TR	-		+	-		VO	+
Ag. 3.7	*ert‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 3.7	*sneal*	V	PASS	ITR	+	NOM		-		VS	+
Ag. 3.7	*useal*	V	PASS	ITR	+	NOM		-		VS	+
Ag. 3.8	*merjaworeal*	ADJ	ACT	ITR							
Ag. 3.8	*useal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 3.8	*ełeal*	V	ACT	ITR	-			-		V	+
Ag. 3.8	*merjeal*	V	ACT	ITR	-			-		V	+
Ag. 3.9	*ełealn*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 3.10	*tueal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 3.12	*zgac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 3.12	*skseal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 4.1	*žołoveal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 4.3	*ełeal*	CVB	ACT	ITR	-			-		V	+
Ag. 4.6	*arʹeal*	CVB	ACT	TR	+	NOM	+	-		VAO	+
Ag. 4.7	*alxeal*	V	ACT	TR	-		+	+	Ø	OV	+
Ag. 4.8	*hayec‘eal*	CVB	ACT	ITR	-			-		V	+
Ag. 4.8	*mt‘ereal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 4.9	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 4.9	*ijeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 4.10	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 4.11	*teseal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
Ag. 4.18	*arkeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 4.19	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Ag. 4.20	*arareal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 4.20	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 4.20	*aceal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 4.21	*zardareal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 4.21	*šk‘ełac‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 4.22	*darjeal*	V	ACT	ITR	+	NOM		+	S	VS	+
Ag. 4.23	*graweal*	V	ACT	TR	-		+	+	A	OV	+
Ag. 4.23	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 5.8	*«hramayeal*	V	PASS	ITR				+	S	V	+
Ag. 5.9	*stełceal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 5.12	*greal*	V	PASS	ITR				+	S	V	+
Ag. 5.13	*zpatrasteal*	ADJ	PASS	ITR							
Ag. 5.17	*kočʹec‘ealk‘n*	ADJ	PASS	ITR							
Ag. 5.17	*arʹak‘ealk‘n*	ADJ	PASS	ITR							
Ag. 5.17	*ənt‘realk‘n*	ADJ	PASS	ITR							
Ag. 5.18	*hateal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 5.18	*zawrac‘eal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 5.20	*leal*	V	ACT	ITR	+	NOM		+	S	VS	+
Ag. 5.22	*cʹnoreal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 5.23	*kargeal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
Ag. 5.24	*darjeal*	ADV									
Ag. 5.26	*pahanjeal*	V	ACT	TR	-		+	-		OV	+
Ag. 5.33	*zgec‘eal*	CVB	PASS	ITR	-	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 5.33	*zkapeals*	ADJ	PASS	ITR							
Ag. 5.33	*kapeal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 5.34	*zyusacʻeals*	ADJ	ACT	ITR							
Ag. 5.35	*sirecʻealsn*	ADJ	PASS	ITR							
Ag. 5.35	*zkočʻecʻealsn*	ADJ	PASS	ITR							
Ag. 5.35	*zhrawirealsn*	ADJ	PASS	ITR							
Ag. 5.38	*kaleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 5.40	*stełcealkʻ*	V	PASS	ITR	-			+	S	V	+
Ag. 5.40	*hastealkʻ*	V	PASS	ITR	-			+	S	V	+
Ag. 5.40	*ełealkʻ*	V	PASS	ITR	-			+	S	V	+
Ag. 5.41	*kuracʻealkʻ*	CVB	PASS	ITR	-			-		V	+
Ag. 5.43	*yusacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 6.1	*tueal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 6.1	*yawdeal*	V	ACT	TR	-		+	+	A	OV	+
Ag. 6.1	*useald*	V	ACT	TR	-		+	+	A	OV	+
Ag. 6.2	*arʹeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 6.6	*prkeal*	CVB	PASS	ITR	-			-		V	+
Ag. 6.6	*kapeal*	CVB	PASS	ITR	-			-		V	+
Ag. 6.9	*ɔstanjneal*	CVB	ACT	TR	+	NOM	+	-		VAO	+
Ag. 6.12	*hastealkʻ*	V	PASS	ITR	-			+	S	V	+
Ag. 6.12	*ełealkʻ*	V	PASS	ITR	-			+	S	V	+
Ag. 6.12	*xawseal*	V	ACT	TR	+	GEN	+	-		VAO	+
Ag. 6.12	*imacʻeal*	V	ACT	TR	+	GEN	+	-		AVO	+
Ag. 6.12	*aceal*	V	ACT	TR	+	GEN	+	-		AOV	+
Ag. 6.13	*asacʻeal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	-
Ag. 6.17	*kʻandakealsn*	ADJ	PASS	ITR							
Ag. 7.2	*kaxeal*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 7.3	*kaxeal*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 7.3	*kacʻeal*	V	ACT	ITR	-			+	S	V	+
Ag. 7.3	*anuaneal*	ADJ	PASS	ITR							
Ag. 7.4	*kacʻeal*	V	ACT	ITR	-			+	S	V	+
Ag. 7.4	*paheal*	V	ACT	TR	-		+	+	Ø	VO	+
Ag. 7.4	*šnorheal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
Ag. 7.5	*keal*	ADV									
Ag. 7.5	*zgecʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 7.5	*kacʻeal*	V	ACT	ITR	-			+	S	V	+
Ag. 7.5	*pʻoxeal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
Ag. 7.5	*aceal*	V	ACT	TR	-		+	+	Ø	VO	+
Ag. 7.6	*patueals*	ADJ	PASS	ITR							
Ag. 7.6	*naxanjeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 7.7	*atecʻealkʻ*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 7.9	*yarucʻeal*	ADJ	PASS	ITR							
Ag. 7.9	*yarucʻeal*	ADJ	PASS	ITR							
Ag. 7.9	*yusacʻeal*	V	ACT	ITR	-			+	S	V	+
Ag. 7.15	*merʹeal*	ADJ	ACT	ITR							
Ag. 7.15	*erewecʻucʻeal*	V	ACT	TR	-		+	-		OV	+
Ag. 7.17	*nšanakeal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
Ag. 7.18	*haseal*	V	ACT	ITR	+	NOM		+	S	VS	-
Ag. 7.19	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 7.19	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 7.19	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 7.20	*zeneal*	V	IMPRS	TR	-		+	+		OV	+
Ag. 7.20	*patrasteal*	V	IMPRS	TR	-		+	+		OV	+
Ag. 7.22	*drawšeal*	ADJ	PASS	ITR							
Ag. 7.23	*pʻrkealkʻ*	ADJ	PASS	ITR							
Ag. 7.23	*azatealkʻ*	ADJ	PASS	ITR							
Ag. 7.24	*hramayeal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 7.27	*yusacʻealkʻn*	ADJ	ACT	ITR							
Ag. 7.27	*parcecʻeal*	V	ACT	ITR	+	GEN		+	S	SV	+
Ag. 7.32	*darjeal*	ADV									
Ag. 7.32	*darjeal*	ADV									
Ag. 7.32	*darjeal*	ADV									
Ag. 7.34	*handerjeal*	ADJ	ACT	ITR							
Ag. 7.36	*barjeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 7.37	*darjeal*	ADV									
Ag. 7.37	*ceracʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 7.37	*darjeal*	ADV									
Ag. 7.39	*zyusacʻeals*	ADJ	ACT	ITR							
Ag. 7.39	*ambarštealsn*	ADJ	ACT	ITR							
Ag. 7.40	*pʻarʹaworeal*	V	ACT	ITR	+	NOM		+	S	VS	+
Ag. 7.40	*zanjkacʻealsn*	ADJ	ACT	ITR							

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 7.45	*teseal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 7.47	*darjeal*	ADV									
Ag. 7.47	*zgecʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 7.48	*ənt‘acʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 7.50	*mnacʻealkʻs*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 7.51	*pʻrkealk‘*	V	PASS	ITR	-			+	S	V	+
Ag. 7.51	*azatealk‘*	V	PASS	ITR	-			+	S	V	+
Ag. 7.53	*pʻaraworeal*	ADJ	PASS	ITR							
Ag. 8.1	*kaxeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 8.1	*hamareal*	V	ACT	TR	-		+	-		VO	+
Ag. 8.1	*ǰardeal*	V	IMPRS	TR	-		+	+	Ø	VO	+
Ag. 8.2	*kaxeal*	CVB	ACT	ITR	-			-		V	+
Ag. 8.2	*kaxeal*	V	ACT	ITR	-			+	S	V	+
Ag. 8.10	*arʻeal*	CVB	ACT	TR	-			-		V	+
Ag. 8.11	*darjeal*	ADV									
Ag. 8.13	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 9.1	*sastkacʻeal*	CVB	ACT	ITR	+	GEN		-		VS	+
Ag. 9.4	*křeals*	ADJ	PASS	ITR							
Ag. 9.4	*kopʻeals*	ADJ	PASS	ITR							
Ag. 9.4	*kʻereals*	ADJ	PASS	ITR							
Ag. 9.4	*arareals*	ADJ	PASS	ITR							
Ag. 9.5	*křeals*	ADJ	PASS	ITR							
Ag. 9.5	*kʻereals*	ADJ	PASS	ITR							
Ag. 9.8	*darjeal*	ADV									
Ag. 9.10	*cakoteal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 9.12	*«zarmacʻeal*	V	ACT	ITR	-			+	S	V	+
Ag. 9.12	*zarmacʻeal*	V	ACT	ITR	-			+	S	V	+
Ag. 9.12	*vaxčaneal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 9.13	*zyusacʻeals*	ADJ	ACT	ITR							
Ag. 10.2	*kaxeal*	CVB	ACT	ITR	-			-		V	+
Ag. 10.6	*marteal*	CVB	ACT	ITR	-			-		V	+
Ag. 10.6	*hnacʻeal*	V	ACT	ITR	+	NOM		-		VS	+
Ag. 10.6	*gteal*	CVB	ACT	TR	+	NOM	+	-		SV	+
Ag. 10.6	*hnacʻealn*	ADJ	ACT	ITR							
Ag. 10.7	*kecʻeal*	ADJ	ACT	ITR							
Ag. 10.8	*kecʻeal*	ADJ	ACT	ITR							
Ag. 10.13	*zarmacʻeal*	V	ACT	ITR	+	NOM		-		VS	+
Ag. 11.1	*matucʻeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 11.1	*keal*	ADV									
Ag. 11.2	*bnakeal*	V	ACT	ITR	-			+	S	V	+
Ag. 11.2	*keal*	ADV									
Ag. 11.3	*tareal*	V	ACT	TR	-		+	-		OV	+
Ag. 11.3	*kapeal*	ADJ	PASS	ITR							
Ag. 11.3	*kapeal*	ADJ	PASS	ITR							
Ag. 11.3	*kapeal*	ADJ	PASS	ITR							
Ag. 11.8	*paterazmeal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 11.11	*arʻeal*	V	ACT	TR	+	NOM	+	-		AOV	+
Ag. 11.11	*arareal*	CVB	ACT	TR	-		+				
Ag. 11.11	*kerakreal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 11.12	*paheal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 11.13	*iǰucʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 11.13	*meřeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 11.14	*šineal*	V	IMPRS	TR	-		+	+	Ø	VO	+
Ag. 12.1	*haneal*	ADJ	PASS	ITR							+
Ag. 12.2	*haseal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 12.3	*hogacʻealk‘*	V	ACT	ITR	-			+	S	V	+
Ag. 12.4	*šnorheal*	V	ACT	TR	+	GEN	+	-		AOV	+
Ag. 12.4	*mecacʻealk‘*	CVB	ACT	ITR	-			-		V	+
Ag. 12.4	*xałałacʻealk‘*	CVB	ACT	ITR	-			-		V	+
Ag. 12.5	*tueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
Ag. 12.5	*arareal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
Ag. 12.5	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 12.5	*zawracʻeal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 12.7	*kamecʻeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 12.7	*hogacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 12.8	*yanjanjealsd*	V	IMPRS	TR	-		+	+	Ø	OV	+
Ag. 12.8	*snucʻealsd*	V	IMPRS	TR	-		+	+	Ø	OV	+
Ag. 12.8	*anxayealsd*	V	IMPRS	TR	-		+	-		OV	+
Ag. 12.8	*yařajealsd*	V	IMPRS	TR	-		+	-		OV	+
Ag. 12.8	*hogacʻeal*	V	ACT	ITR	-			-		V	+
Ag. 12.9	*kapeal*	ADJ	PASS	ITR							

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 12.9	*kapeal*	ADJ	PASS	ITR							
Ag. 12.9	*kapeal*	ADJ	PASS	ITR							
Ag. 12.11	*gořac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 12.14	*šnorheal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 12.14	*nuačeal*	V	IMPRS	TR	-		+	+	Ø	VO	+
Ag. 12.16	*patuireal*	V	ACT	ITR	-			-		V	+
Ag. 12.16	*šnorheal*	V	PASS	ITR	-			+	S	V	+
Ag. 12.17	*hamareal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 12.17	*ekeal*	CVB	ACT	ITR	-			-		V	+
Ag. 13.1	*arjakealk'*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 13.2	*ekeal*	CVB	ACT	ITR	-			-		V	+
Ag. 13.2	*zgastac'eals*	ADJ	ACT	ITR							
Ag. 13.2	*zkatareal*	ADJ	PASS	ITR							
Ag. 13.4	*mteal*	CVB	ACT	ITR	-			-		V	+
Ag. 13.4	*teseal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 13.4	*zarmac'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 13.4	*sxrac'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 13.5	*zełxeal*	V	ACT	ITR	-	NOM		-		V	+
Ag. 13.5	*tueal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 13.6	*arjakeal*	V	ACT	TR	-		+	-		OV	+
Ag. 13.6	*haneal*	V	ACT	TR	-		+	-		OV	+
Ag. 13.7	*gteal*	V	ACT	TR	-	NOM	+	-		VO	+
Ag. 13.7	*arareal*	V	ACT	TR	-		+	-		OV	+
Ag. 13.7	*mteal*	CVB	ACT	ITR	-			-		V	+
Ag. 13.7	*gteal*	V	ACT	TR	-		+	-		OV	+
Ag. 13.7	*martuc'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 13.8	*hpartac'uc'eal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
Ag. 13.8	*xelac'norec'uc'eal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Ag. 13.9	*edeal*	CVB	ACT	ITR	-			-		V	+
Ag. 13.9	*karac'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 13.10	*vstahac'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 13.11	*yišeal*	CVB	ACT	TR	+	NOM	+	-		VO	+
Ag. 13.11	*mteal*	V	ACT	ITR	-	NOM		+	S	V	+
Ag. 13.11	*matuc'eal*	V	ACT	ITR	-			-		V	+
Ag. 13.11	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 13.13	*barjrac'eal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 13.19	*šineal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 13.21	*edeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 13.21	*gnac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 13.21	*apreal*	CVB	PASS	ITR	-			-		V	+
Ag. 13.21	*handerjeal*	ADJ	PASS	ITR							
Ag. 13.21	*mteal*	V	ACT	ITR	-			-		V	+
Ag. 13.21	*zardareal*	CVB	PASS	ITR	-			-		V	+
Ag. 13.21	*lusaworealk'*	CVB	PASS	ITR	-			-		V	+
Ag. 13.23	*p'axuc'ealk'*	ADJ	PASS	ITR							
Ag. 13.23	*čołoprealk'*	ADJ	ACT	ITR							
Ag. 13.24	*patrasteal*	V	ACT	TR	-		+	-		OV	+
Ag. 13.25	*t'ołeal*	V	ACT	TR	-		+	-		VO	+
Ag. 13.25	*lusaworeal*	V	ACT	TR	-		+	-		OV	+
Ag. 13.27	*ekeal*	CVB	ACT	ITR	-			-		V	+
Ag. 13.27	*šineal*	ADJ	PASS	ITR							
Ag. 14.5	*dsroveal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 14.5	*arhamarheal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 14.6	*zmeřeal*	ADJ	ACT	ITR							
Ag. 14.6	*zxač'eal*	ADJ	PASS	ITR							
Ag. 14.7	*dataparteal*	V	PASS	ITR	-			+	S	V	+
Ag. 14.7	*dařnac'uc'eals*	ADJ	PASS	ITR							
Ag. 14.8	*moloreal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 14.10	*mekneals*	ADJ	PASS	ITR							
Ag. 14.11	*toč'oreal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 14.14	*p'axuc'eals*	CVB	ACT	ITR	-	NOM		-		SV	+
Ag. 14.15	*zhrapurealn*	ADJ	PASS	ITR							
Ag. 15.3	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 15.3	*ławłeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 15.4	*ekeal*	V	ACT	ITR	-			-		V	+
Ag. 15.5	*vařeal*	ADV	ACT	TR	-		+	-		VO	+
Ag. 15.7	*gteal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 15.7	*gneal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 15.7	*zgušac'eal*	V	ACT	ITR	-	NOM		+	S	V	+
Ag. 15.7	*ařeal*	V	ACT	TR	-	NOM	+	-		VO	+
Ag. 15.8	*ereweal*	V	ACT	ITR	+	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 15.9	*gteal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 15.10	*eleal*	CVB	ACT	ITR	-			-		V	+
Ag. 15.11	*teseal*	CVB	ACT	TR	+	GEN		-		AV	+
Ag. 15.12	*arareal*	CVB	IMPRS	ITR	-			-		V	+
Ag. 15.12	*tueal*	V	IMPRS	ITR	-			-		V	+
Ag. 15.12	*hřč'akeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 15.13	*kuteal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 15.13	*yełeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 15.13	*zełeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 15.13	*ənt'ac'ealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 15.15	*pateal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 15.15	*ankeal*	CVB	ACT	ITR	-			-		V	+
Ag. 15.15	*žołovealn*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 15.16	*zarmac'uc'eal*	V	ACT	TR	+	GEN	+	-		VOA	+
Ag. 15.16	*ekealn*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 15.16	*patmeal*	V	ACT	ITR	-	GEN		-		V	+
Ag. 15.17	*eleal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 15.19	*teseal*	V	ACT	TR	-		+	+	Ø	VO	-
Ag. 15.20	*xostac'eal*	ADJ	PASS	ITR							
Ag. 15.22	*haseal*	ADJ	ACT	ITR							
Ag. 15.23	*zgec'eal*	V	ACT	TR	-		+	+	Ø	VO	+
Ag. 15.26	*kač'ec'eal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 15.26	*žołovealk'*	ADJ	ACT	ITR							
Ag. 15.27	*kac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 15.27	*paheal*	V	ACT	TR	-	NOM	+	+	A	VO	+
Ag. 15.28	*pateal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 16.1	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 16.1	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 16.2	*hambarjeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 16.3	*barjeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 16.4	*hastateal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 16.6	*c'ankac'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 16.7	*edeal*	V	PASS	ITR	+	NOM		-		VS	+
Ag. 16.7	*ahabekeal*	V	ACT	TR	-	NOM	+	-		VO	+
Ag. 16.7	*paheals*	ADJ	PASS	ITR							
Ag. 16.8	*ənkec'eal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 16.9	*orotac'eal*	V	IMPRS	ITR	-			-		V	+
Ag. 16.9	*t'mbreal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 16.9	*əndostuc'eal*	CVB	ACT	ITR	+	GEN		-		SV	+
Ag. 16.9	*angušeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 16.9	*ənkec'eal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 16.9	*hareal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 16.10	*amboxeal*	CVB	ACT	ITR	+	GEN		-		SV	+
Ag. 16.10	*koxeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 16.10	*hełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 16.13	*ařeal*	V	ACT	TR	+	GEN	+	-		VOA	+
Ag. 16.13	*p'ołeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 16.17	*caraweal*	ADJ	ACT	ITR							
Ag. 16.18	*šaržeal*	V	PASS	ITR	+	NOM		+	S	SV	-
Ag. 16.19	*arkeal*	ADJ	PASS	ITR							
Ag. 16.19	*zzrpartealn*	ADJ	PASS	ITR							
Ag. 16.20	*arkeal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 16.21	*p'oxeal*	V	ACT	TR	-		+	-		VO	+
Ag. 16.22	*p'rkeal*	CVB	ACT	TR	+	NOM	+	-		OV	+
Ag. 16.25	*p'arąworeald*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 17.1	*argeleal*	V	ACT	TR	-	NOM	+	+	Ø	OV	+
Ag. 17.2	*ařeal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 17.2	*barjreal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
Ag. 17.3	*paheal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 17.3	*zgušac'eal*	V	ACT	TR	-		+	+	Ø	OV	+
Ag. 17.4	*mteal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 17.5	*zawrac'eal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 17.5	*ogoreal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 17.5	*skseal*	V	ACT	TR	-			-		V	+
Ag. 17.5	*parteal*	V	ACT	TR	-		+	+	Ø	VO	+
Ag. 17.5	*hamareal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 17.5	*c'uc'eal*	V	ACT	TR	-	NOM	+	+	Ø	OV	+
Ag. 17.5	*zarmac'uc'eal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Ag. 17.5	*darjeal*	V	ACT	ITR	-			+	S	V	+
Ag. 17.5	*c'uc'eal*	V	ACT	TR	-		+	-		OV	+
Ag. 17.5	*hřč'akeal*	V	ACT	ITR	+	NOM		+	S	SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 17.5	*parteal*	CVB	PASS	ITR	-	NOM		-		V	+
Ag. 17.7	*kaleal*	CVB	ACT	TR	+	NOM		-		SV	+
Ag. 17.7	*matucʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 17.8	*bereal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 17.9	*anjkacʻealn*	V	ACT	ITR	-			+	S	V	+
Ag. 17.17	*patrasteal*	V	ACT	TR	-		+	+	Ø	OV	+
Ag. 17.19	*zyusacʻeals*	ADJ	ACT	ITR							
Ag. 17.20	*paheal*	V	ACT	TR	+	GEN	+	+	Ø	VOA	+
Ag. 17.23	*haseal*	V	ACT	ITR	-			+	S	V	+
Ag. 17.23	*čełkʻeal*	CVB	ACT	TR	+	NOM	+	-			
Ag. 17.25	*sneal*	ADJ	PASS	ITR							
Ag. 17.25	*pʻarǻworeal*	ADJ	PASS	ITR							
Ag. 17.29	*arareal*	V	ACT	TR	-		+	+	Ø	OV	+
Ag. 17.29	*yačaxeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 17.31	*zawracʻeal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 17.31	*hareal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Ag. 17.31	*vaneal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Ag. 17.31	*parteal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Ag. 17.31	*mełkeal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 17.32	*patarǻeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 17.32	*cʻrueal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 17.32	*kołopteal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 17.33	*kʻčkʻčeal*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 17.34	*bacʻeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 17.34	*herjeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 17.34	*karacʻeal*	V	ACT	ITR	+	GEN		-		AV	-
Ag. 17.35	*əntʻacʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 17.36	*ertʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 17.37	*edeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 18.1	*lucʻealkʻ*	ADJ	PASS	ITR							
Ag. 18.3	*bacʻeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 18.3	*haneal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 18.4	*hareal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 18.7	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 18.7	*edeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 18.8	*asacʻeal*	V	ACT	TR	+	GEN	+	-		VAO	+
Ag. 18.9	*pʻarǻworeal*	ADJ	PASS	ITR							
Ag. 18.10	*asacʻeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 18.12	*xawseal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 18.13	*kʻaršeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 19.1	*tʻołeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Ag. 19.1	*ełeal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 19.1	*ereweal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 19.1	*cʻucʻeal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 19.1	*młeal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Ag. 19.1	*xocʻeal*	CVB	PASS	ITR	-	NOM		-		V	+
Ag. 19.1	*arǻeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Ag. 19.1	*arǻeal*	CVB	ACT	TR	-	GEN	+	-		OV	+
Ag. 19.1	*kapeal*	CVB	ACT	TR	-	GEN	+	-		OV	+
Ag. 19.1	*yałtʻahareal*	V	PASS	ITR	-			+	S	V	+
Ag. 19.2	*edeal*	V	ACT	TR	-		+	+	Ø	OV	+
Ag. 19.2	*jerǻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 19.2	*trtmeal*	CVB	ACT	ITR	-			-		V	+
Ag. 19.2	*txracʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 19.3	*haneal*	CVB	ACT	TR	-			-		V	+
Ag. 19.4	*hateal*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 19.6	*haseal*	V	ACT	ITR	+	GEN		+	Ø	SV	+
Ag. 19.6	*aspatakeal*	V	ACT	TR	-	GEN	+	-		V	+
Ag. 19.7	*teseal*	V	ACT	TR	-		+	+	Ø	VO	-
Ag. 19.7	*koruseal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
Ag. 19.8	*matucʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 19.9	*yełeal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 19.9	*zełeal*	CVB	PASS	ITR	-	NOM		-		V	+
Ag. 19.9	*yimareal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 19.9	*apšeal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 19.9	*yišeal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 19.11	*apakaneal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 19.12	*darjeal*	ADV									
Ag. 19.12	*ijeal*	CVB	ACT	ITR	-			-		V	+
Ag. 19.13	*darjeal*	ADV									
Ag. 19.14	*šnorheal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 19.15	*eleal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 19.18	*anjkacʻeal*	ADJ	ACT	ITR							
Ag. 19.21	*cakeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 19.22	*cʻrueal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 19.23	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 19.24	*spanealsn*	ADJ	PASS	ITR							
Ag. 19.25	*paterazmealkʻ*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 20.1	*kacʻeal*	V	ACT	ITR	+	NOM		-		VS	+
Ag. 20.1	*tueal*	V	ACT	TR	-		+	-		OV	+
Ag. 20.1	*spʻŕeal*	V	ACT	TR	-	GEN	+	-		OV	+
Ag. 20.1	*tueal*	V	ACT	TR	-	GEN	+	-		OV	+
Ag. 20.1	*jgeal*	V	ACT	TR	-	GEN	+	-		OV	+
Ag. 20.1	*kamecʻeal*	V	ACT	ITR	-			-		V	+
Ag. 20.1	*ertʻeal*	V	ACT	ITR	-			-		V	+
Ag. 20.2	*eleal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 20.2	*hareal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
Ag. 20.3	*eleal*	CVB	ACT	ITR	-			-		V	+
Ag. 20.3	*ertʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 20.4	*mteal*	CVB	ACT	ITR	-			-		V	+
Ag. 20.4	*leal*	CVB	ACT	ITR	-			-		V	+
Ag. 20.5	*hareal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 20.7	*harealkʻ*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 20.8	*ereweal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 20.9	*ekeal*	CVB	ACT	ITR	-			-		V	+
Ag. 20.9	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 20.9	*zkapealn*	ADJ	PASS	ITR							
Ag. 20.9	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 20.11	*satakeal*	V	PASS	ITR	-			+	S	V	+
Ag. 20.12	*darjeal*	ADV									
Ag. 20.13	*mteal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 20.17	*ekeal*	V	ACT	ITR	-			+	S	V	+
Ag. 20.18	*zarmacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 20.22	*kacʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 20.22	*hareal*	CVB	ACT	TR	-			-		V	+
Ag. 20.23	*gitacʻeal*	CVB	ACT	TR	+	GEN		-		AV	+
Ag. 20.23	*jgeal*	CVB	ACT	TR	-	GEN	+	-		VO	+
Ag. 20.23	*tʻxacʻeal*	V	ACT	ITR	+	NOM		+	S	VS	+
Ag. 20.23	*sewacʻeal*	ADJ	PASS	ITR							
Ag. 20.23	*matucʻeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 20.24	*eleal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 20.24	*aŕeal*	CVB	ACT	TR	+	GEN		-		AV	+
Ag. 20.26	*xałacʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 20.27	*edeal*	CVB	ACT	TR	+	NOM	+	-		OV	+
Ag. 20.29	*matucʻeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 20.29	*hareal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 20.30	*matucʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 20.30	*arareal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
Ag. 20.31	*edeal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 20.34	*cʻucʻeal*	V	ACT	TR	+	GEN	+	-		AVO	+
Ag. 20.35	*ənt‘acʻeal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 20.36	*paheal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
Ag. 20.36	*ənkecʻeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 20.36	*matucʻeal*	V	ACT	ITR	+	GEN		+	S	SV	-
Ag. 20.36	*vnaseal*	V	ACT	ITR	+	GEN		+	Ø	VS	-
Ag. 20.36	*hoteal*	V	ACT	ITR	+	NOM		+	S	VS	-
Ag. 20.37	*bereals*	ADJ	PASS	ITR							
Ag. 20.38	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 20.38	*kaleal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 20.40	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 20.40	*ijeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 21.1	*kapealn*	ADJ	PASS	ITR							
Ag. 21.14	*aŕakʻealn*	ADJ	PASS	ITR							
Ag. 21.14	*awrhneal*	ADJ	PASS	ITR							
Ag. 21.18	*tkaracʻeal*	ADJ	ACT	ITR							
Ag. 21.19	*yusacʻeal*	V	ACT	ITR	-			+	S	V	+
Ag. 21.21	*zspaneal*	ADJ	PASS	ITR							
Ag. 21.21	*meŕealkʻ*	ADJ	ACT	ITR							
Ag. 21.22	*nsteal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 21.22	*karacʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 21.27	*skseal*	V	ACT	TR	-			+	Ø	V	+
Ag. 21.34	*paheal*	V	ACT	TR	-		+	-		OV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 21.34	*tanǰeal*	ADJ	PASS	ITR							
Ag. 21.35	*tʻałealn*	ADJ	PASS	ITR							
Ag. 21.35	*pateal*	ADJ	ACT	ITR							
Ag. 21.37	*pʻrkealkʻ*	V	PASS	ITR	-			+	S	V	+
Ag. 21.37	*srbealkʻ*	V	PASS	ITR	-			+	S	V	+
Ag. 21.38	*srbeal*	V	PASS	ITR	-			+	S	V	+
Ag. 21.38	*handerjeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 21.39	*hareal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 21.39	*haneal*	CVB	ACT	ITR	-			-		V	+
Ag. 22.1	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 22.1	*iǰeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 22.1	*tʻawaleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 22.1	*koruseal*	V	PASS	ITR	-			+	S	V	+
Ag. 22.3	*darjeal*	CVB	ACT	ITR	-			-		V	+
Ag. 22.3	*hateal*	V	ACT	TR	-		+	+	Ø	VO	-
Ag. 22.4	*kaleal*	V	ACT	TR	-		+	-		VO	-
Ag. 22.5	*barjeal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
Ag. 22.5	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 22.6	*mekneal*	V	PASS	ITR	-			+	S	V	+
Ag. 22.6	*haseal*	CVB	ACT	ITR	+	GEN		-		SV	+
Ag. 22.7	*hareal*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 22.9	*paheal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 22.9	*paheal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 22.9	*aceal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 22.9	*ekeal*	CVB	ACT	ITR	-			-		V	+
Ag. 22.9	*bereal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 22.10	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
Ag. 22.11	*hełeal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 22.11	*ełeal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 22.13	*arʻeal*	V	ACT	TR	-		+	-		OV	+
Ag. 22.14	*teseal*	V	ACT	TR	+	NOM	+	-		AOV	+
Ag. 22.14	*mteal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 22.15	*arkeal*	V	ACT	TR	+	GEN	+	-		AVO	+
Ag. 22.15	*eleal*	V	ACT	ITR	-			-		V	+
Ag. 22.17	*merʻeal*	ADJ	ACT	ITR							
Ag. 22.17	*hamareal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 22.17	*merʻeal*	V	ACT	ITR	-	NOM		+	S	SV	+
Ag. 22.17	*merʻealkʻd*	ADJ	ACT	ITR							
Ag. 22.19	*darjeal*	ADJ	ACT	ITR							
Ag. 22.19	*handerjeal*	ADJ	PASS	ITR							
Ag. 22.19	*zmełucʻealsn*	ADJ	ACT	ITR							
Ag. 22.21	*arareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 22.25	*pʻarʻaworeal*	V	PASS	ITR	-			-		V	+
Ag. 22.26	*hnazandeal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 22.26	*əntreal*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 22.26	*anuaneal*	V	ACT	TR	+	GEN	+	-		OAV	+
Ag. 22.26	*eleal*	CVB	ACT	ITR	-			-		V	+
Ag. 22.26	*anuaneal*	V	PASS	ITR	-			-		V	+
Ag. 22.26	*serealkʻ*	ADJ	PASS	ITR							
Ag. 22.26	*anuaneal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 22.27	*ənt'acʻeal*	V	ACT	ITR	-			-		V	+
Ag. 22.27	*arareal*	V	ACT	TR	-		+	-		VO	+
Ag. 22.27	*yawrineal*	ADJ	PASS	ITR							
Ag. 22.28	*yarucʻeal*	V	ACT	ITR	+	NOM		-		VS	+
Ag. 22.28	*kardacʻeal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 22.28	*ełeal*	V	ACT	ITR	-	NOM		-		V	+
Ag. 22.28	*arareal*	V	ACT	TR	+	GEN	+	-		AOV	+
Ag. 22.29	*arareal*	V	ACT	TR	+	GEN	+	-		AOV	+
Ag. 22.29	*kaleal*	V	ACT	TR	-	GEN	+	-		OV	+
Ag. 99.1	*gereal*	ADJ	ACT	ITR							
Ag. 99.2	*tʻakʻucʻeal*	CVB	ACT	TR	+	NOM	+	-		AVO	-
Ag. 99.5	*bnakealn*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 99.5	*krawnaworeal*	CVB	ACT	ITR	-			-		V	+
Ag. 99.6	*hałordealkʻ*	ADJ	ACT	ITR							
Ag. 99.7	*luacʻeal*	V	PASS	ITR	-			+	S	V	+
Ag. 99.8	*mtealkʻ*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 99.8	*hałordealkʻ*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 99.10	*kʻajacʻealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 99.10	*arʻeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 99.10	*šahealkʻ*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 100.1	*asacʻeal*	CVB	ACT	TR	-		+	-		OV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 100.1	*haruacealk‘*	V	PASS	ITR	-	NOM		+	S	V	+
Ag. 100.1	*ahabekealk‘*	V	ACT	ITR	-	NOM		-		V	+
Ag. 100.1	*zgec‘eal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Ag. 100.1	*nsteal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 100.1	*paheal*	V	ACT	TR	-	NOM	+	+	A	VO	+
Ag. 100.3	*zhiwandac‘eals*	ADJ	ACT	ITR							
Ag. 100.4	*tełekac‘uc‘eal*	CVB	ACT	ITR	-			-		V	+
Ag. 100.4	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 100.4	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 100.4	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 100.5	*kargeals*	ADJ	PASS	ITR							
Ag. 100.5	*yarmareals*	ADJ	PASS	ITR							
Ag. 100.5	*asac‘eal*	ADJ	PASS	ITR							
Ag. 100.5	*handerjeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 100.6	*žołovealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 100.6	*kutealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 100.6	*hasealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 100.6	*dřut‘eal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Ag. 100.6	*žołovealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 100.7	*žołovealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 100.7	*ahabekealk‘*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 100.7	*hnazandealk‘*	V	ACT	ITR	-	NOM		+	S	V	+
Ag. 100.8	*hasealk‘*	V	ACT	ITR	-			+	S	V	+
Ag. 100.9	*ařeal*	CVB	ACT	TR	-	NOM		-		V	+
Ag. 101.1	*matuc‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 101.1	*žołoveal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 101.1	*dasadasealk‘*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 101.1	*harealk‘*	V	PASS	ITR	-			+	S	V	+
Ag. 101.2	*p’oxeal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 101.2	*t‘awac‘eal*	V	ACT	ITR	+	NOM		+	S	VS	+
Ag. 101.2	*buseal*	V	ACT	ITR	+	NOM		+	S	VS	+
Ag. 101.2	*kčłakac‘ealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 101.3	*šrjeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 101.3	*ankeal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 101.3	*šrjeal*	V	ACT	ITR	-	NOM		-		V	+
Ag. 101.3	*koruseal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 101.4	*xozac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 101.4	*p‘rp‘rac‘eal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 101.4	*dizac‘eal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 101.4	*leal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 101.4	*ənt‘ac‘eal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 101.5	*kac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 101.5	*zasac‘ealsn*	ADJ	PASS	ITR							
Ag. 101.6	*leal*	V	ACT	ITR	+	NOM		-		VS	+
Ag. 101.7	*jorjapateal*	CVB	PASS	ITR	-			-		V	+
Ag. 101.7	*patateal*	CVB	PASS	ITR	-			-		V	+
Ag. 101.8	*patrasteal*	ADJ	PASS	ITR							
Ag. 101.8	*handerjeal*	ADJ	PASS	ITR							
Ag. 101.8	*xostac‘eal*	ADJ	PASS	ITR							
Ag. 101.9	*xndreal*	V	ACT	ITR	+	GEN		-		SV	+
Ag. 101.10	*patmeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Ag. 102.1	*xonarheal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 102.1	*verac‘uc‘eal*	CVB	ACT	TR	-	NOM		-		OV	+
Ag. 102.2	*ereweal*	V	ACT	ITR	+	NOM		-		VS	+
Ag. 102.3	*xonjeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 102.3	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 102.3	*hareal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 102.4	*sirec‘eal*	ADJ	PASS	ITR							
Ag. 102.4	*patrasteals*	ADJ	PASS	ITR							
Ag. 102.6	*ijeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 102.6	*nayec‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Ag. 102.6	*zarhureal*	CVB	ACT	ITR	-	GEN		-		V	+
Ag. 102.6	*dołac‘eal*	CVB	ACT	ITR	-	GEN		-		V	+
Ag. 102.8	*nayec‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Ag. 102.8	*bac‘eal*	ADJ	PASS	ITR							
Ag. 102.8	*bažaneal*	CVB	PASS	ITR	+	NOM		-		VS	+
Ag. 102.8	*dizeal*	CVB	PASS	ITR	+	NOM		-		VS	+
Ag. 102.9	*hoseal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 102.10	*c‘řkeal*	CVB	ACT	ITR	+	GEN		-		VS	+
Ag. 102.11	*yařajeal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 102.11	*xałac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 102.12	*slacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 102.12	*xoyacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 102.18	*pʻareal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 102.18	*maceal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 102.18	*šołacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 102.21	*erewealkʻ*	V	ACT	ITR	-	NOM		-		V	+
Ag. 102.21	*pʻaylealkʻ*	V	ACT	ITR	-	NOM		-		V	+
Ag. 102.22	*ancʻealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 102.23	*cneal*	ADJ	PASS	ITR							
Ag. 102.24	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 102.27	*arkeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 102.28	*nayecʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 102.28	*zarmacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 102.29	*zarmacʻeal*	ADJ	ACT	ITR							
Ag. 102.32	*bacʻeal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 102.32	*bacʻeal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 102.34	*bacʻeal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 102.37	*cʻankacʻeal*	CVB	ACT	ITR	+	NOM				SV	+
Ag. 102.50	*pancacʻeal*	ADJ	ACT	ITR							
Ag. 102.55	*pʻaraworeal*	ADJ	PASS	ITR							
Ag. 102.55	*tpaworeal*	V	ACT	TR	+	GEN	+	-		OVA	+
Ag. 102.56	*hastateal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 102.56	*kazmeala*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 102.67	*darjeal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 102.68	*pʻayleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 102.68	*paycaracʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 102.68	*mkrtealkʻn*	ADJ	PASS	ITR							
Ag. 102.70	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 102.70	*eleal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 102.70	*ancʻealn*	V	ACT	ITR	-	NOM		+	S	V	+
Ag. 102.70	*ankealkʻ*	ADJ	ACT	ITR							
Ag. 102.75	*haruacealkʻd*	ADJ	PASS	ITR							
Ag. 102.76	*asacʻeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 102.76	*ełeal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 103.2	*cʻucʻeal*	V	ACT	TR	-		+	-		VO	+
Ag. 103.3	*zasacʻealsn*	ADJ	PASS	ITR							
Ag. 103.5	*asacʻeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 103.6	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Ag. 103.7	*hramayeal*	ADJ	PASS	ITR							
Ag. 103.8	*arʻeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 103.9	*arʻeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 103.10	*arkeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 103.10	*satareal*	CVB	ACT	ITR	+	GEN		-		SV	+
Ag. 103.10	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 103.11	*kangneal*	V	ACT	TR	-		+	-		VO	+
Ag. 104.2	*arareal*	CVB	ACT	TR	+	NOM		-		AV	+
Ag. 104.2	*handerjeal*	CVB	ACT	TR	+	NOM		-		AV	+
Ag. 104.2	*kazmeal*	CVB	ACT	TR	+	NOM		-		AV	+
Ag. 104.2	*edeal*	ADJ	PASS	ITR							
Ag. 104.2	*arareal*	ADJ	PASS	ITR							
Ag. 104.3	*arʻeal*	CVB	ACT	TR	+	NOM		-		AV	+
Ag. 104.3	*bžškeal*	V	PASS	ITR	+	NOM		+	S	SV	-
Ag. 104.3	*srbeal*	V	PASS	ITR	+	NOM		+	S	SV	-
Ag. 104.4	*arʻanjnacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 104.4	*arʻeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 104.8	*eleal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 104.8	*kuteal*	CVB	PASS	ITR	+	NOM		+	S	SV	+
Ag. 104.9	*srbeal*	V	PASS	ITR	-			+	S	V	+
Ag. 104.10	*paheal*	ADJ	PASS	ITR							
Ag. 105.1	*knčtʻacʻeal*	ADJ	ACT	ITR							
Ag. 105.1	*tʻawacʻeal*	ADJ	ACT	ITR							
Ag. 105.2	*pateal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 105.2	*arkeal*	ADJ	PASS	ITR							
Ag. 105.3	*matucʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 105.4	*krkneal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 105.4	*ertʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 105.4	*hambarjeal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Ag. 105.5	*hałordeal*	V	ACT	ITR	-			+	S	V	+
Ag. 105.6	*ałačʻeal*	V	ACT	TR	+	GEN	+	-		AVO	+
Ag. 105.7	*tueal*	V	ACT	TR	+	GEN	+	-		AVO	+
Ag. 105.7	*ertʻeal*	V	ACT	ITR	+	GEN		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 105.8	*ařeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 106.1	*ařeal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
Ag. 106.2	*ənkaleal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 106.6	*kaleal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 106.7	*ařeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 106.7	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 106.7	*əstanjneal*	CVB	ACT	TR	-			-		V	+
Ag. 106.8	*paterazmeal*	V	ACT	TR	-		+	-		OV	+
Ag. 106.8	*yałtʻeal*	V	ACT	ITR	-			-		V	+
Ag. 106.10	*arareal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 106.10	*šineal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 106.10	*kazmeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 106.10	*ařeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 106.14	*gumareal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 106.18	*znkateal*	ADJ	PASS	ITR							
Ag. 106.18	*hramayealn*	ADJ	PASS	ITR							
Ag. 106.18	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 106.19	*lusaworeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 106.19	*yałeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 106.19	*hamemeal*	V	ACT	TR	-		+	-		OV	+
Ag. 106.19	*tʻołeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 106.19	*darjeal*	V	ACT	ITR	-			-		V	+
Ag. 107.1	*žołovealkʻ*	ADJ	ACT	ITR							
Ag. 107.2	*edeal*	V	ACT	TR	+	GEN	+	-		VOA	+
Ag. 107.2	*xndreal*	V	ACT	ITR	+	GEN		-		SV	+
Ag. 107.3	*hareal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Ag. 107.3	*xozanacʻeal*	ADJ	ACT	ITR							
Ag. 107.3	*zxorxacʻeal*	ADJ	PASS	ITR							
Ag. 107.4	*pʻapʻkacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 107.4	*matałacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 107.5	*kutealkʻ*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 107.5	*tʻawtʻapʻealkʻ*	V	PASS	ITR	+	NOM		-		V	+
Ag. 107.5	*gawsacʻealkʻ*	ADJ	ACT	ITR							
Ag. 107.5	*jrgołealkʻ*	ADJ	ACT	ITR							
Ag. 107.5	*gončacʻealkʻ*	ADJ	ACT	ITR							
Ag. 107.6	*bacʻeal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
Ag. 107.6	*axtacʻealkʻn*	ADJ	ACT	ITR							
Ag. 107.7	*bacʻeal*	V	PASS	ITR	+	NOM		+	S	VS	+
Ag. 107.9	*yordealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 107.9	*drdealkʻ*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 107.9	*bacʻeal*	ADJ	PASS	ITR							
Ag. 108.2	*kʻajalerealkʻ*	ADJ	ACT	ITR							
Ag. 108.2	*nšanakeal*	ADJ	PASS	ITR							
Ag. 108.3	*anuaneal*	ADJ	PASS	ITR							
Ag. 108.4	*dipeal*	CVB	ACT	ITR	-			-		V	+
Ag. 108.4	*anuaneal*	ADJ	PASS	ITR							
Ag. 108.4	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 108.4	*kʻakeal*	CVB	ACT	TR	-			-		V	+
Ag. 108.4	*ayreal*	CVB	ACT	TR	-			-		V	+
Ag. 108.4	*awereal*	CVB	ACT	TR	-			-		V	+
Ag. 108.5	*ereweal*	CVB	ACT	ITR	+	GEN		-		VS	+
Ag. 108.5	*kerparaneal*	V	ACT	ITR	+	GEN		-		VS	+
Ag. 108.5	*ənt'acʻealkʻ*	ADJ	ACT	ITR							
Ag. 108.5	*vařealkʻ*	ADJ	ACT	ITR							
Ag. 108.5	*hareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 108.5	*hasealsn*	ADJ	ACT	ITR							
Ag. 108.5	*edeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 108.5	*zarhurecʻucʻeal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 108.6	*teseal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 108.6	*dłrdeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 108.6	*lucʻeal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 108.6	*cařacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 108.7	*darjeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 108.7	*arkeal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 108.7	*hareal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 108.7	*barjeal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 108.8	*dimeal*	CVB	ACT	ITR	-			-		V	+
Ag. 108.10	*koceal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 108.11	*asacʻeal*	V	ACT	TR	-		+	-		OV	+
Ag. 108.11	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 108.11	*čʻkʻotealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 108.12	*kʻandeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Ag. 108.12	*mnacʻeals*	ADJ	ACT	ITR							
Ag. 108.12	*mtʻereals*	ADJ	PASS	ITR							
Ag. 108.14	*sermaneal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 108.16	*ułłeal*	V	ACT	TR	-		+	-		OV	-
Ag. 108.17	*zerkrpagealn*	ADJ	PASS	ITR							
Ag. 108.18	*parapecʻucʻeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 108.20	*zgušacʻucʻeal*	V	ACT	ITR	-			-		V	+
Ag. 109.1	*arareal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 109.1	*arʹeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 109.1	*gnacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 109.2	*anuaneal*	ADJ	PASS	ITR							
Ag. 109.2	*bažaneal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 109.4	*sermaneal*	V	ACT	TR	-		+	-		OV	+
Ag. 109.4	*krtʻeal*	V	ACT	TR	-		+	-		OV	+
Ag. 109.4	*ereweal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 109.4	*ertʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 109.4	*anuaneal*	ADJ	PASS	ITR							
Ag. 109.5	*anuaneal*	ADJ	PASS	ITR							
Ag. 109.6	*kangneal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 109.7	*ereweal*	V	ACT	ITR	+	GEN		-		VS	+
Ag. 109.7	*žołoveal*	CVB	ACT	ITR	+	GEN		-		VS	+
Ag. 109.8	*ełealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 109.8	*korcaneal*	CVB	PASS	ITR	+	NOM		-		VS	+
Ag. 109.9	*dimeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 109.9	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 109.9	*zgastacʻeal*	ADJ	ACT	ITR							
Ag. 109.9	*kʻandeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 109.9	*arʹeal*	V	ACT	TR	-	NOM	+	-		OV	+
Ag. 109.11	*awareal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 109.11	*žołoveal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 110.1	*zjulealsn*	ADJ	PASS	ITR							
Ag. 110.1	*křealsn*	ADJ	PASS	ITR							
Ag. 110.1	*kopʻealsn*	ADJ	PASS	ITR							
Ag. 110.1	*kʻandakealsn*	ADJ	PASS	ITR							
Ag. 110.1	*ararealsn*	ADJ	PASS	ITR							
Ag. 110.1	*darjeal*	CVB	PASS	ITR	+	NOM		-		VS	+
Ag. 110.1	*hastatealkʻ*	ADJ	PASS	ITR							
Ag. 110.4	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 110.4	*ararealsn*	ADJ	PASS	ITR							
Ag. 110.5	*breal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 110.5	*mtʻereals*	ADJ	PASS	ITR							
Ag. 111.3	*arareal*	CVB	ACT	TR	+	NOM	+	-		OV	+
Ag. 111.4	*haseal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 111.5	*tueal*	ADJ	PASS	ITR							
Ag. 111.6	*xndreal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 111.7	*ereweal*	V	ACT	ITR	+	NOM		-		VS	+
Ag. 111.7	*hramayeal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 111.8	*hawaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 111.8	*barbařeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 112.1	*hogacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 112.1	*anuaneal*	ADJ	PASS	ITR							
Ag. 112.2	*tareal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Ag. 112.3	*korusealkʻ*	CVB	PASS	ITR	-			-		V	+
Ag. 112.3	*pašarealkʻ*	CVB	PASS	ITR	-			-		V	+
Ag. 112.3	*apʻšealkʻ*	CVB	ACT	ITR	-			-		V	+
Ag. 112.3	*karacʻeal*	V	ACT	ITR	-			-		V	+
Ag. 112.3	*xawarealkʻ*	V	PASS	ITR	-			+	S	V	+
Ag. 112.5	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 112.7	*ołormeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 112.8	*ołormeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 112.9	*nahatakeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 112.9	*tueal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 112.11	*ełeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
Ag. 112.14	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 113.1	*arʹakʻealkʻn*	V	PASS	ITR	-			+	S	V	+
Ag. 113.3	*gumarealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 113.3	*haseal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 113.4	*arareal*	ADJ	PASS	ITR							
Ag. 113.5	*patueal*	V	PASS	ITR	-			-		V	+
Ag. 113.6	*tueal*	V	ACT	TR	-		+	-		VO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 113.6	*patmeal*	V	ACT	TR	-			-		V	+
Ag. 113.6	*eɬeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 113.6	*ənkaleal*	V	ACT	TR	+	GEN		-		AV	+
Ag. 113.7	*patueal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 113.8	*cʻucʻeal*	V	ACT	TR	+	GEN	+	-		AVO	+
Ag. 113.8	*ənkaleal*	V	ACT	TR	-	GEN		-		V	+
Ag. 113.9	*mecareal*	V	PASS	ITR	-			-		V	+
Ag. 113.11	*ankeal*	CVB	ACT	ITR	-			-		V	+
Ag. 113.12	*yačaxeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 113.12	*mecareal*	V	PASS	ITR	-			-		V	+
Ag. 113.13	*hražareal*	CVB	ACT	ITR	-			-		V	+
Ag. 113.13	*eɬeal*	CVB	ACT	ITR	-			-		V	+
Ag. 113.13	*ancʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 113.13	*ekeal*	CVB	ACT	ITR	-			-		V	+
Ag. 114.1	*mnacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 114.1	*jawneal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 114.1	*anuanealn*	ADJ	PASS	ITR							
Ag. 114.1	*anuaneal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 114.2	*anuaneal*	ADJ	PASS	ITR							
Ag. 114.2	*anuaneal*	ADJ	PASS	ITR							
Ag. 114.2	*kardacʻeal*	ADJ	PASS	ITR							
Ag. 114.3	*mnacʻeals*	ADJ	ACT	ITR							
Ag. 114.5	*yaytneal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 114.6	*satareal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 115.2	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 115.3	*eleal*	CVB	ACT	ITR	-	NOM		-		SV	+
Ag. 115.5	*uŕucʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 115.6	*leal*	V	ACT	ITR	+	NOM		+	S	VS	+
Ag. 115.10	*uɬɬeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 115.10	*kazmeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 115.10	*ertʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 115.12	*žołoveal*	CVB	ACT	ITR	+	GEN		-		VS	+
Ag. 115.12	*žołoveal*	CVB	ACT	ITR	-			-		V	+
Ag. 115.14	*arareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Ag. 116.1	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 116.1	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 116.2	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 116.2	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 116.2	*spaseal*	CVB	ACT	ITR	-			-		V	+
Ag. 116.5	*eɬeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 116.7	*matucʻeal*	V	ACT	TR	+	NOM	+	-		VAO	+
Ag. 116.7	*ekealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 116.7	*zbereal*	ADJ	PASS	ITR							
Ag. 116.7	*greal*	V	PASS	ITR	-			+	S	V	+
Ag. 116.9	*nayecʻealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 116.9	*leal*	ADJ	PASS	ITR							
Ag. 116.11	*anargeal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 116.12	*kapʻucʻeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 116.12	*zzgecʻeal*	ADJ	PASS	ITR							
Ag. 116.13	*hamareal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 116.14	*hamareal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 116.14	*pargeweal*	ADJ	PASS	ITR							
Ag. 116.15	*hastateal*	ADJ	PASS	ITR							
Ag. 116.15	*patrasteal*	CVB	PASS	ITR	+	NOM		-		VS	+
Ag. 116.16	*vkayacʻeal*	ADJ	PASS	ITR							
Ag. 116.16	*veracʻealkʻ*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 116.16	*xaŕnealkʻ*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 117.1	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 117.1	*haseal*	V	ACT	ITR	+	NOM		+	S	VS	+
Ag. 117.1	*ereweal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 117.2	*arkeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 117.2	*aŕeal*	V	ACT	TR	+	GEN	+	-		AVO	+
Ag. 117.2	*zhramayealsn*	ADJ	PASS	ITR							
Ag. 117.3	*tueal*	V	ACT	TR	+	GEN	+	-		AVO	+
Ag. 117.4	*zasacʻealsn*	ADJ	PASS	ITR							
Ag. 117.7	*darjeal*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 118.1	*aŕeal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
Ag. 118.2	*ereweal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 118.2	*aŕeal*	V	ACT	TR	+	NOM	+	-		OVA	+
Ag. 118.3	*ereweal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 118.4	*aŕeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 118.5	*zarmacʻealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 118.8	*eleal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 118.8	*lusaworealkʻ*	ADJ	PASS	ITR							
Ag. 118.8	*hreštakacʻealkʻ*	ADJ	PASS	ITR							
Ag. 118.8	*arʹeal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Ag. 118.8	*mteal*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 118.8	*xarʹnealkʻ*	ADJ	PASS	ITR							
Ag. 118.8	*całkealkʻ*	ADJ	ACT	ITR							
Ag. 118.8	*elealkʻ*	ADJ	ACT	ITR							
Ag. 119.4	*žołoveal*	CVB	ACT	ITR	-			-		V	+
Ag. 119.4	*xmbeal*	CVB	ACT	ITR	-			-		V	+
Ag. 119.5	*haseal*	V	ACT	ITR	-			-		V	+
Ag. 120.1	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 120.3	*bažaneal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 120.3	*kargeal*	V	ACT	TR	-		+	-		OV	+
Ag. 120.5	*nšanakeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 120.5	*znkateal*	ADJ	PASS	ITR							
Ag. 120.5	*zcʻucʻealn*	ADJ	PASS	ITR							
Ag. 120.5	*drošmealn*	ADJ	PASS	ITR							
Ag. 121.1	*darjeal*	ADV									
Ag. 121.2	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 121.3	*arʹeal*	V	ACT	TR	-		+	-		V	+
Ag. 121.3	*kacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 121.8	*arʹeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 121.8	*ertʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 121.8	*ełeal*	V	ACT	ITR	-			-		V	+
Ag. 121.8	*včareal*	V	ACT	TR	-		+	-		OV	+
Ag. 121.9	*tueal*	V	ACT	TR	-		+	-		OV	+
Ag. 121.9	*hayecʻeal*	V	ACT	ITR	+	GEN		-		SV	+
Ag. 121.9	*zawracʻeal*	V	ACT	ITR	-			+	S	V	+
Ag. 121.15	*haneal*	CVB	ACT	TR	-		+	-		V	+
Ag. 121.15	*bnakeal*	V	ACT	ITR	-			+	S	V	+
Ag. 121.15	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 121.15	*zeraneal*	ADJ	PASS	ITR							
Ag. 121.15	*ełeal*	CVB	ACT	ITR	-			-		V	+
Ag. 122.1	*zašakertealsn*	ADJ	PASS	ITR							
Ag. 122.1	*haseal*	CVB	ACT	ITR	-			-		V	+
Ag. 122.2	*sermaneal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 122.2	*arareal*	V	ACT	TR	-		+	-		OV	+
Ag. 122.4	*arʹeal*	V	ACT	TR	+	GEN	+	-		AVO	+
Ag. 122.5	*darjeal*	ADV									
Ag. 122.8	*ənkaleal*	CVB	ACT	TR	+	GEN		-		AV	+
Ag. 122.8	*barjeal*	CVB	ACT	TR	-	GEN	+	-		OV	+
Ag. 122.11	*kreal*	CVB	PASS	ITR	+	NOM		-		SV	+
Ag. 122.12	*barjeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 122.12	*patuireal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 122.13	*lcʻeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 122.13	*parartacʻucʻeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 122.13	*xałacʻeal*	CVB	ACT	ITR	-			-		V	+
Ag. 122.13	*kanxeal*	V	ACT	ITR	-			-		V	+
Ag. 122.13	*hanapazordeal»*	V	ACT	ITR	-			-		V	+
Ag. 123.1	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 123.1	*haseal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 123.1	*ereweal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 123.4	*hawaneal*	CVB	ACT	ITR	+	GEN		-		SV	+
Ag. 123.5	*hawaneal*	CVB	ACT	ITR	-			-		V	-
Ag. 123.5	*hačeal*	CVB	ACT	ITR	-			-		V	+
Ag. 123.5	*koxeal*	V	ACT	TR	-		+	-		VO	+
Ag. 123.5	*edeal*	V	ACT	TR	-		+	-		OV	+
Ag. 123.6	*karawteal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 123.6	*karawtealkʻ*	CVB	ACT	ITR	-	NOM		-		V	+
Ag. 123.6	*amusnacʻeal*	V	ACT	ITR	-	NOM		-		V	+
Ag. 123.6	*stacʻeal*	V	ACT	TR	-	NOM	+	-		OV	+
Ag. 123.6	*sneal*	V	PASS	ITR	+	NOM		+	S	SV	+
Ag. 123.6	*mteal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 123.6	*kreal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 123.6	*tueal*	CVB	ACT	TR	-	NOM	+	-		OV	+
Ag. 123.6	*arareal*	V	ACT	TR	-	NOM	+	-		OV	+
Ag. 123.7	*gteal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 123.7	*yarecʻucʻeal*	V	ACT	TR	-			-		V	+
Ag. 123.7	*ašakerteal*	V	ACT	TR	-			-		V	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 123.8	*tareal*	V	ACT	TR	-		+	-		OV	+
Ag. 123.8	*lusaworeal*	V	PASS	ITR	-			-		V	+
Ag. 123.8	*paycařac'eal*	V	ACT	ITR	-			-		V	+
Ag. 123.8	*ełeal*	V	ACT	ITR	-			-		V	+
Ag. 124.1	*bnakeal*	ADJ	ACT	ITR							
Ag. 124.3	*zacealsn*	ADJ	PASS	ITR							
Ag. 124.3	*ařeal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
Ag. 124.4	*ekeal*	CVB	ACT	ITR	-			-		V	+
Ag. 124.9	*edeal*	V	PASS	ITR	+	NOM		-		SV	+
Ag. 124.10	*useal*	V	ACT	TR	-		+	+	Ø	VO	+
Ag. 124.11	*merkac'eal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 124.11	*ařeal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 124.11	*ert'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 124.11	*heteweal*	V	ACT	ITR	-			-		V	+
Ag. 124.12	*edeal*	V	ACT	TR	-		+	-		VO	+
Ag. 125.2	*katareal*	ADJ	PASS	ITR							
Ag. 125.3	*xraxuseal*	CVB	ACT	ITR	-			-		V	+
Ag. 125.4	*darjuc'eal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 125.5	*kac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
Ag. 125.5	*t'ołeal*	V	ACT	TR	-	NOM	+	-		OV	+
Ag. 125.7	*spařnac'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 125.8	*hawanealk'*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 125.8	*barekameal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 125.8	*merjeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 125.8	*patueal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 125.9	*ereweal*	CVB	ACT	ITR	-			-		V	+
Ag. 125.9	*anuaneal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 125.9	*hzawrac'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 125.9	*paycařac'eal*	V	PASS	ITR	-			+	S	V	+
Ag. 126.7	*p'ut'ac'eal*	CVB	ACT	ITR	-			-		V	+
Ag. 126.8	*patmeal*	CVB	PASS	ITR	-			-		V	+
Ag. 126.8	*arareal*	CVB	ACT	TR	+	NOM	+	-		OV	+
Ag. 126.8	*tueal*	CVB	ACT	TR	-	NOM	+	-		VO	+
Ag. 126.9	*ełeal*	CVB	ACT	ITR	-			-		V	+
Ag. 126.9	*zarmac'eal*	ADJ	ACT	ITR							
Ag. 126.10	*ararealsn*	ADJ	PASS	ITR							
Ag. 126.12	*nahatakeal*	ADJ	PASS	ITR							
Ag. 126.13	*ztarealn*	ADJ	PASS	ITR							
Ag. 126.14	*zarmac'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 126.14	*xonarhec'uc'eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Ag. 126.14	*arareal*	V	ACT	TR	-	NOM	+	-		OV	+
Ag. 126.15	*c'uc'eal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 126.15	*kaleal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 126.17	*tueal*	ADJ	PASS	ITR							
Ag. 126.17	*ereweal*	CVB	ACT	ITR	-			-		V	+
Ag. 126.19	*patueal*	V	PASS	ITR	-			-		V	+
Ag. 126.20	*tueals*	ADJ	PASS	ITR							
Ag. 126.20	*ztueal*	ADJ	PASS	ITR							
Ag. 126.21	*šineal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 126.22	*ašakertealsn*	ADJ	PASS	ITR							
Ag. 127.2	*ert'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Ag. 127.3	*psakeal*	CVB	PASS	ITR	-	NOM		-		V	+
Ag. 127.4	*cageal*	ADJ	ACT	ITR							
Ag. 127.4	*zbereal*	ADJ	PASS	ITR							
Ag. 127.5	*yaweleal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Ag. 127.5	*paycařac'uc'eal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Ag. 127.6	*handerjealsn*	ADJ	ACT	ITR							
Ag. 127.6	*yeriwreal*	V	ACT	TR	-		+	-		OV	+
Ag. 127.6	*xostac'eal*	ADJ	PASS	ITR							
Ag. 127.8	*całkealk'*	CVB	ACT	ITR	-			-		V	+
Ag. 127.8	*šahawetealk'*	CVB	ACT	ITR	-			-		V	+
Ag. 127.10	*ekeal*	V	ACT	ITR	+	NOM		-		SV	+
Ag. 127.12	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Ag. 127.12	*ařeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Ag. 127.13	*tełekac'eal*	CVB	PASS	ITR	-			-		V	-
Ag. 127.13	*matenagreal*	CVB	ACT	TR	-		+	-		VO	+
Ag. 127.13	*ełeal*	V	ACT	ITR	-			-		V	+
Ag. 127.14	*ełeal*	CVB	ACT	ITR	-			-		V	-
Ag. 127.14	*t'ołeal*	CVB	ACT	TR	-		+	-		OV	+
Ag. 127.15	*ařeal*	CVB	ACT	TR	+	GEN		-		AV	+
Ag. 127.15	*canuc'ealk'*	CVB	PASS	ITR	+	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Ag. 127.16	*arjakeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B III.1	*zanc'eal*	ADJ	ACT	ITR							
P'B III.1	*arareal*	CVB	ACT	TR	-	NOM	+	-		OV	+
P'B III.2	*ełeal*	ADJ	ACT	ITR							
P'B III.2	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P'B III.3	*całkeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B III.3	*ert'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B III.3	*ert'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.3	*žołovealk'*	CVB	ACT	ITR	-			-		V	+
P'B III.3	*xmbeal*	CVB	ACT	TR	-		+	-		OV	+
P'B III.3	*ert'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.3	*žołovealk'*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B III.3	*edeal*	CVB	ACT	TR	-	NOM	+	-		OV	+
P'B III.3	*haseal*	CVB	ACT	ITR	-			-		V	+
P'B III.3	*mteal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.3	*p'akeal*	CVB	ACT	TR	-			-		V	+
P'B III.3	*darjeal*	CVB	PASS	ITR	+	NOM		-		SV	+
P'B III.3	*kapeal*	V	PASS	ITR	+	NOM		+	S	SV	+
P'B III.3	*pašarealk'*	ADJ	PASS	ITR							
P'B III.3	*ənkapčealk'*	ADJ	PASS	ITR							
P'B III.3	*gerealk'*	ADJ	PASS	ITR							
P'B III.3	*vanealk'*	ADJ	PASS	ITR							
P'B III.3	*kckealk'*	ADJ	PASS	ITR							
P'B III.3	*angealk'*	ADJ	ACT	ITR							
P'B III.3	*pašarealk'*	ADJ	PASS	ITR							
P'B III.3	*dizeal*	CVB	PASS	ITR	+	NOM		-		SV	+
P'B III.3	*eleal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B III.3	*matuc'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.3	*skseal*	CVB	ACT	TR	+	GEN		-		AV	+
P'B III.3	*hamarjakeal*	CVB	PASS	ITR	-			-		V	+
P'B III.3	*kckealk'*	ADJ	PASS	ITR							
P'B III.3	*sahmaneal*	ADJ	PASS	ITR							
P'B III.3	*usealk'*	V	ACT	TR	-		+	-		VO	+
P'B III.3	*srbeals*	ADJ	PASS	ITR							
P'B III.3	*hawatac'eals*	ADJ	PASS	ITR							
P'B III.4	*ert'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B III.4	*zayrac'ealk'*	CVB	ACT	ITR	-			-		V	+
P'B III.4	*ert'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B III.5	*amusnac'eal*	ADJ	PASS	ITR							
P'B III.5	*ert'eal*	CVB	ACT	ITR	-			-		V	+
P'B III.5	*nmaneal*	CVB	ACT	ITR	-			-		OV	+
P'B III.5	*c'ankac'eal*	V	ACT	ITR	-			+	S	V	-
P'B III.5	*hamareal*	CVB	ACT	TR	-		+	-		OV	+
P'B III.5	*c'ankac'eal*	CVB	ACT	ITR	-			-		OV	+
P'B III.5	*zpatuealn*	ADJ	PASS	ITR							
P'B III.5	*urac'eal*	CVB	ACT	ITR	-			-		V	+
P'B III.5	*stac'eal*	V	ACT	TR	-		+	-		OV	+
P'B III.5	*ənd̆real*	CVB	ACT	TR	-		+	-		OV	+
P'B III.5	*nmaneal*	V	ACT	ITR	+	NOM		-		AOV	+
P'B III.5	*t'šnamanac'eal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B III.5	*azateal*	V	PASS	ITR	+	NOM		+	S	VS	+
P'B III.5	*hogac'eal*	V	ACT	ITR	+	NOM		-		SV	+
P'B III.5	*molorealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.5	*merjealk'*	CVB	ACT	ITR	-	NOM		-		V	+
P'B III.5	*lueal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
P'B III.6	*edeal*	CVB	ACT	TR	-		+	-		OV	+
P'B III.6	*ert'eal*	CVB	ACT	ITR	-			-		V	+
P'B III.6	*ekeal*	CVB	ACT	ITR	-			-		V	+
P'B III.6	*ert'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B III.6	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P'B III.6	*šineal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P'B III.6	*žołoveal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.7	*cackeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P'B III.7	*br̆nac'eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P'B III.7	*ert'eal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B III.7	*banakeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B III.7	*ar̆eal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
P'B III.7	*yarjakeal*	ADJ	ACT	ITR							
P'B III.7	*yaruc'eal*	CVB	PASS	ITR	+	NOM		-		VS	+
P'B III.7	*zmnac'ealsn*	ADJ	ACT	ITR							
P'B III.7	*ekeal*	V	ACT	ITR	+	GEN		+	S	VS	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B III.8	*ařeal*	CVB	ACT	TR	-			-		V	+
P‘B III.8	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B III.8	*parspeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B III.8	*zasac‘ealsn*	ADJ	PASS	ITR							
P‘B III.8	*patrasteal*	V	PASS	ITR	+	NOM		+	S	VS	+
P‘B III.8	*ekeal*	V	ACT	ITR	-			+	S	V	+
P‘B III.8	*yusac‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.8	*arareal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
P‘B III.8	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B III.8	*yanuanealn*	ADJ	PASS	ITR							
P‘B III.8	*eleal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B III.8	*anc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.9	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B III.9	*mnac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	-
P‘B III.9	*t‘aguc‘eal*	ADJ	PASS	ITR							
P‘B III.10	*əntreal*	ADJ	PASS	ITR							
P‘B III.10	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.10	*c‘ankac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.10	*p‘ap‘ak‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.10	*edeal*	V	ACT	TR	-		+	+	Ø	VO	+
P‘B III.10	*ašxateal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.10	*xončeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B III.10	*vastakeal*	V	ACT	ITR	-	NOM		+	S	V	+
P‘B III.10	*kac‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B III.10	*hateal*	CVB	PASS	ITR	-			-		V	+
P‘B III.10	*haneal*	CVB	PASS	ITR	-			-		V	+
P‘B III.10	*čełk‘eal*	CVB	PASS	ITR	-			-		V	+
P‘B III.10	*ařeal*	CVB	ACT	TR	-			-		V	+
P‘B III.10	*ert‘ealk‘*	V	ACT	ITR	+	NOM		-		SV	+
P‘B III.10	*ařeal*	ADJ	PASS	ITR							
P‘B III.10	*čařealk‘s*	ADJ	PASS	ITR							
P‘B III.10	*lc‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B III.10	*karceal*	CVB	ACT	TR	-	NOM		-		VO	+
P‘B III.10	*zařak‘eal*	ADJ	PASS	ITR							
P‘B III.10	*teseal*	CVB	ACT	TR	-		+	-		VO	+
P‘B III.10	*p‘arealk‘*	CVB	ACT	ITR	-			-		V	+
P‘B III.10	*zbereal*	ADJ	PASS	ITR							
P‘B III.10	*paheal*	ADJ	PASS	ITR							
P‘B III.10	*lueal*	V	ACT	TR	-			+	Ø	V	+
P‘B III.10	*erkuc‘eal*	CVB	PASS	ITR	-			-		V	+
P‘B III.10	*gnac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.10	*čašakeal*	V	ACT	TR	-		+	+	Ø	OV	-
P‘B III.10	*cakoteal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B III.10	*aniceal*	ADJ	PASS	ITR							
P‘B III.10	*cackeal*	ADJ	PASS	ITR							
P‘B III.10	*zgec‘eal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B III.10	*zarmac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B III.10	*pndeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.10	*cackeals*	ADJ	PASS	ITR							
P‘B III.10	*zgec‘ealn*	V	ACT	TR	+	NOM	+	+	Ø	OVA	+
P‘B III.10	*kac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.10	*znneal*	CVB	ACT	ITR	-			-		V	+
P‘B III.10	*zgec‘eal*	V	ACT	TR	-		+	+	Ø	OV	+
P‘B III.11	*tueal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B III.11	*pašarealk‘*	CVB	PASS	ITR	+	NOM		-		V	+
P‘B III.11	*hamareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B III.11	*matuc‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B III.11	*gereal*	CVB	PASS	ITR	+	NOM		-		VS	+
P‘B III.11	*čgneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B III.11	*paheal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B III.11	*heřac‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B III.11	*halaceal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B III.11	*mteal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.11	*k‘akteal*	CVB	ACT	TR	-	NOM	+	-		OV	+
P‘B III.11	*p‘oxeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B III.11	*žołoveal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B III.11	*edeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
P‘B III.11	*katareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B III.12	*ekealk‘*	CVB	ACT	ITR	-			-		V	+
P‘B III.12	*yajołealk‘*	CVB	ACT	ITR	-			-		V	+
P‘B III.12	*tuealk‘*	CVB	ACT	TR	-		+	-		VO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P'B III.12	*anc'eal*	CVB	ACT	ITR	-			-		V	+
P'B III.12	*mteal*	CVB	ACT	ITR	-			-		V	+
P'B III.12	*nmaneal*	CVB	ACT	ITR	+	NOM		-		V	+
P'B III.12	*zbałeal*	V	ACT	ITR	-			-		V	+
P'B III.12	*spařnac'eal*	V	ACT	ITR	-			-		V	+
P'B III.12	*aceal*	CVB	ACT	TR	-		+	-		OV	+
P'B III.12	*lc'eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
P'B III.12	*ałbiwrac'eal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
P'B III.12	*ařeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B III.12	*gnac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B III.12	*xratealk'*	CVB	PASS	ITR	-			-		V	-
P'B III.12	*ənddimac'eal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B III.12	*nmaneal*	CVB	ACT	ITR	-			-		V	+
P'B III.12	*haseal*	CVB	ACT	ITR	-			-		V	+
P'B III.12	*eleal*	CVB	ACT	ITR	-			-		V	+
P'B III.12	*hamareal*	CVB	PASS	ITR	+	NOM		-		SV	+
P'B III.12	*xoc'oteal*	V	PASS	ITR	-	GEN		+	S	V	+
P'B III.12	*barbařeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.12	*ełeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B III.12	*ǰałǰaxeal*	CVB	PASS	ITR	+	NOM		-		VS	+
P'B III.12	*koškočeal*	CVB	PASS	ITR	+	NOM		-		SV	+
P'B III.12	*ənkec'eal*	V	PASS	ITR	+	NOM		+	S	SV	+
P'B III.12	*barjeal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
P'B III.13	*anc'eal*	CVB	ACT	ITR	+	GEN		-		VS	+
P'B III.13	*ełeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B III.13	*gteal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
P'B III.13	*hareal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
P'B III.13	*ankealk'*	CVB	ACT	ITR	+	GEN		-		SV	+
P'B III.13	*gnac'ealk'*	CVB	ACT	ITR	-			-		V	+
P'B III.13	*lealk'*	CVB	ACT	ITR	-			-		V	+
P'B III.13	*nmanealk'*	V	ACT	ITR	-			+	S	V	+
P'B III.13	*nsteal*	V	ACT	ITR	+	GEN		-		VS	+
P'B III.13	*zbōseal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B III.13	*xankarealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.13	*arareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B III.13	*degereal*	CVB	ACT	ITR	-			-		V	+
P'B III.13	*sirec'ealk'*	V	ACT	TR	-		+	-		OV	+
P'B III.13	*hawatac'ealk'*	V	ACT	ITR	-			-		V	+
P'B III.13	*hanapazordealk'*	V	ACT	ITR	-			-		V	+
P'B III.13	*carawealk'*	ADJ	ACT	ITR							
P'B III.13	*ansac'ealk'*	CVB	ACT	TR	-		+	-		OV	+
P'B III.13	*darjeal*	ADV									
P'B III.13	*lk'ealk'*	V	PASS	ITR	+	NOM		-		VS	+
P'B III.13	*nayec'ealk'*	CVB	ACT	ITR	-			-		V	+
P'B III.13	*barjeal*	CVB	PASS	ITR	+	NOM		-		VS	+
P'B III.13	*t'ołeal*	V	PASS	ITR	+	NOM		+	S	VS	+
P'B III.13	*ert'ealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.13	*arareal*	V	ACT	TR	+	GEN	+	-		OVA	+
P'B III.13	*mnac'ealk'*	ADJ	ACT	ITR							
P'B III.13	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.13	*nmanealk'*	CVB	ACT	ITR	-			-		V	+
P'B III.13	*panjac'ealk'*	CVB	ACT	ITR	-			-		V	+
P'B III.13	*ełealk'*	CVB	ACT	ITR	-			-		V	+
P'B III.13	*gnac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.13	*katareal*	CVB	ACT	TR	+	NOM		-		AOV	+
P'B III.14	*patuhaseal*	CVB	PASS	ITR	-			-		V	+
P'B III.14	*ełeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B III.14	*šineal*	V	PASS	ITR	+	NOM		+	S	VS	+
P'B III.14	*ułłeal*	CVB	PASS	ITR	+	NOM		-		VS	+
P'B III.14	*patuealk'*	V	PASS	ITR	+	NOM		+	S	SV	+
P'B III.14	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B III.14	*edealn*	V	PASS	ITR	+	NOM		+	S	SV	+
P'B III.14	*ənkaleal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
P'B III.14	*kardac'eal*	ADJ	PASS	ITR							
P'B III.14	*kuteal*	CVB	IMPRS	TR	-		+	-		VO	+
P'B III.14	*dizeal*	V	IMPRS	TR	-		+	-		VO	+
P'B III.14	*kutakeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B III.14	*slac'eal*	V	ACT	ITR	-			+	S	V	+
P'B III.14	*t'řuc'eal*	V	PASS	ITR	-			-		V	+
P'B III.14	*zmeřeals*	ADJ	PASS	ITR							
P'B III.14	*anuaneal*	ADJ	PASS	ITR							

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B III.14	*arareal*	V	ACT	TR	-	GEN	+	+	Ø	OV	+
P‘B III.14	*ełeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B III.14	*ekealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.14	*skseal*	CVB	ACT	TR	-			-		V	+
P‘B III.14	*matuc‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B III.14	*arareal*	V	ACT	TR	+	NOM	+	+	A	AOV	+
P‘B III.14	*zařak‘eal*	ADJ	PASS	ITR							
P‘B III.14	*ekealn*	ADJ	ACT	ITR							
P‘B III.14	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.14	*ařak‘ealsn*	ADJ	PASS	ITR							
P‘B III.14	*čgnealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B III.14	*pndealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.14	*nmanealk‘*	CVB	ACT	ITR	-			-		V	+
P‘B III.14	*darjeal*	CVB	ACT	ITR	-			-		V	+
P‘B III.14	*darjeal*	ADV									
P‘B III.14	*t‘ołeal*	V	ACT	TR	+	GEN	+	-		AVO	+
P‘B III.14	*hawaneal*	V	ACT	ITR	+	NOM		-		SV	+
P‘B III.14	*zařak‘ealsn*	ADJ	PASS	ITR							
P‘B III.14	*šałaxeal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B III.14	*p‘axuc‘ealn*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B III.14	*hiac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B III.14	*zarmac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B III.14	*borbok‘eal*	V	ACT	ITR	-			-		V	+
P‘B III.14	*lueal*	V	ACT	TR	+	GEN	+	-		OVA	+
P‘B III.14	*edeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B III.14	*yaytneal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.14	*yaytneal*	CVB	ACT	ITR	-			-		V	+
P‘B III.14	*tueal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B III.14	*vardapeteal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B III.14	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B III.14	*tueal*	ADJ	PASS	ITR							
P‘B III.15	*ənt‘adreal*	CVB	ACT	TR	-		+	-		VO	+
P‘B III.15	*kalealk‘*	CVB	PASS	ITR	+	NOM		-		VS	+
P‘B III.15	*ařealk‘*	CVB	ACT	TR	+	NOM	+	-		VOA	+
P‘B III.15	*harealk‘*	V	ACT	TR	+	GEN	+	-		AVO	+
P‘B III.16	*šineal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B III.16	*hawatac‘eal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B III.16	*darjeal*	CVB	ACT	ITR	-			-		V	+
P‘B III.16	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B III.16	*hnazandeal*	V	ACT	ITR	-			-		V	+
P‘B III.16	*ařeal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
P‘B III.16	*gnac‘ealk‘*	CVB	ACT	ITR	-	GEN		-		V	+
P‘B III.16	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B III.16	*gorceal*	CVB	ACT	TR	-		+	-		OV	+
P‘B III.17	*t‘ołealk‘*	V	ACT	TR	+	NOM	+	-		AVO	+
P‘B III.17	*č‘edealk‘*	V	ACT	TR	-		+	-		VO	-
P‘B III.17	*yandimanealk‘*	CVB	PASS	ITR	+	NOM		-		VS	+
P‘B III.17	*holaneal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
P‘B III.17	*darjealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B III.17	*t‘ołealk‘*	CVB	ACT	TR	+	NOM	+	-		VOA	+
P‘B III.17	*ambaršealk‘*	ADJ	ACT	ITR							
P‘B III.17	*darjealk‘*	ADJ	ACT	ITR							
P‘B III.17	*harealk‘*	ADJ	PASS	ITR							
P‘B III.17	*kanxealk‘*	ADJ	ACT	ITR							
P‘B III.17	*barkac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B III.17	*bnakealk‘*	V	ACT	ITR	-			+	S	V	+
P‘B III.18	*k‘andealk‘*	CVB	ACT	ITR	-			-		V	+
P‘B III.18	*mnac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B III.18	*dipeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B III.18	*yaruc‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.18	*harealk‘*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B III.18	*ařealk‘*	CVB	ACT	TR	-		+	-		OV	+
P‘B III.18	*zč‘arealk‘*	CVB	ACT	ITR	-	NOM		-		V	+
P‘B III.18	*darjeal*	ADV									
P‘B III.19	*arhamarheal*	CVB	ACT	TR	-		+	-		OV	+
P‘B III.19	*šineal*	V	IMPRS	TR	-		+	+	Ø	OVA	+
P‘B III.19	*ert‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.19	*hateal*	CVB	ACT	ITR	-			-		V	+
P‘B III.19	*ert‘ealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B III.19	*znuireal*	ADJ	PASS	ITR							
P‘B III.19	*k‘amaheal*	CVB	ACT	ITR	+	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P'B III.19	*bazmealk'*	V	ACT	ITR	-			+	S	V	+
P'B III.19	*hareal*	CVB	ACT	TR	-	NOM		-		VO	+
P'B III.19	*ankeal*	CVB	ACT	ITR	-			-		V	+
P'B III.19	*c'amak'eal*	ADJ	PASS	ITR							
P'B III.19	*zkčłac'eal*	ADJ	PASS	ITR							
P'B III.20	*despanagnac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B III.20	*t'ołealn*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P'B III.20	*barekamac'eal*	V	ACT	ITR	-			+	S	V	+
P'B III.20	*arřeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B III.20	*bereal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B III.20	*č'hawaneal*	CVB	ACT	ITR	-			-		V	+
P'B III.20	*gteal*	CVB	ACT	TR	-		+	-		OV	+
P'B III.20	*haseal*	V	ACT	ITR	+	NOM		-		SV	+
P'B III.20	*janac'eal*	CVB	ACT	ITR	-	NOM		-		V	+
P'B III.20	*sreal*	V	ACT	TR	-		+	-		VO	+
P'B III.20	*arareal*	CVB	ACT	ITR	-			-		V	+
P'B III.20	*arareal*	CVB	ACT	TR	-		+	-		OV	+
P'B III.20	*yusac'eal*	CVB	ACT	ITR	-			-		V	+
P'B III.20	*leal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B III.20	*greal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
P'B III.20	*patčařeal*	CVB	ACT	TR	-			-		OV	+
P'B III.20	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B III.20	*kotoreal*	CVB	ACT	TR	-		+	-		OV	+
P'B III.20	*xoramangeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.20	*cackeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B III.20	*mek'enayeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B III.20	*arřagasteal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B III.20	*sartuc'eal*	V	ACT	ITR	-	NOM		+	S	V	+
P'B III.20	*dadareal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B III.20	*mnac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B III.20	*dipeal*	V	ACT	ITR	+	NOM		-		SV	+
P'B III.20	*teseal*	CVB	ACT	TR	-		+	-		VO	+
P'B III.20	*ekeal*	ADJ	ACT	ITR							
P'B III.20	*vařealk'*	ADJ	PASS	ITR							
P'B III.20	*xit'ac'eal*	CVB	ACT	ITR	-			-		V	-
P'B III.20	*ekeal*	ADJ	ACT	ITR							
P'B III.20	*hrawireal*	CVB	ACT	TR	-		+	-		VO	+
P'B III.20	*arbeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B III.20	*hasealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.20	*kaleal*	CVB	ACT	TR	-		+	-		VO	+
P'B III.20	*kapeal*	CVB	ACT	TR	-		+	-		VO	+
P'B III.20	*kapeal*	ADJ	PASS	ITR							
P'B III.20	*t'agaworeal*	V	ACT	ITR	-			+	S	V	+
P'B III.20	*edeal*	CVB	ACT	TR	-	NOM	+	-		OV	+
P'B III.21	*čołopreal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.21	*mteal*	V	ACT	ITR	-			+	S	V	+
P'B III.21	*tueal*	CVB	ACT	TR	-		+	-		OV	+
P'B III.21	*ert'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.21	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B III.21	*bereal*	ADJ	PASS	ITR							
P'B III.21	*yišeal*	V	ACT	TR	-		+	-		OV	+
P'B III.21	*ełeal*	V	ACT	ITR	-			+	S	V	+
P'B III.21	*ert'ealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.21	*darjeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B III.21	*arřeal*	CVB	ACT	TR	-		+	-		VO	+
P'B III.21	*arřealk'*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P'B III.21	*araeal*	CVB	ACT	TR	-		+	-		OV	+
P'B III.21	*banakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B III.21	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P'B III.21	*banakeal*	ADJ	PASS	ITR							
P'B III.21	*haseal*	CVB	ACT	ITR	-			-		V	+
P'B III.21	*prceal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.21	*prceal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.21	*perčac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B III.21	*ereweal*	V	ACT	ITR	+	NOM		-		SV	+
P'B III.21	*haseal*	ADJ	ACT	ITR							
P'B III.21	*arareal*	V	ACT	TR	-		+	-		VO	+
P'B III.21	*arareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B III.21	*gnac'eal*	V	ACT	ITR	+	NOM		-		SV	+
P'B III.21	*mnac'eals*	ADJ	ACT	ITR							
P'B III.21	*ełeals*	ADJ	ACT	ITR							

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B III.21	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B III.21	*ařeal*	ADJ	PASS	ITR							
P‘B III.21	*ařeal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B III.21	*ařeal*	V	ACT	TR	-		+	+	A	OV	+
P‘B III.21	*zkapealn*	ADJ	PASS	ITR							
P‘B III.21	*tueal*	V	ACT	TR	+	GEN	+	-		VOA	+
P‘B III.21	*katareal*	CVB	ACT	TR	-		+	-		VO	+
P‘B III.21	*zasac‘ealsn*	ADJ	PASS	ITR							
P‘B III.21	*ekealsn*	ADJ	ACT	ITR							
P‘B III.21	*ařeal*	V	ACT	TR	-		+	-		OV	+
P‘B III.21	*ztueal*	ADJ	PASS	ITR							
P‘B IV.1	*zc‘rueals*	ADJ	ACT	ITR							
P‘B IV.1	*t‘aguc‘ealk‘n*	ADJ	ACT	ITR							
P‘B IV.1	*p‘axuc‘ealk‘*	ADJ	ACT	ITR							
P‘B IV.1	*korusealk‘*	ADJ	PASS	ITR							
P‘B IV.1	*bnakeal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.1	*bnakealk‘*	ADJ	ACT	ITR							
P‘B IV.1	*vayelealk‘*	V	ACT	ITR	+	NOM		-		SV	+
P‘B IV.2	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.2	*pařaktealk‘*	V	ACT	ITR	-			-		V	+
P‘B IV.2	*k‘aktealk‘*	V	ACT	ITR	-			+	S	V	+
P‘B IV.2	*nuačealk‘*	V	ACT	TR	+	NOM	+	-		OAV	+
P‘B IV.2	*bažaneal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.2	*pargeweal*	ADJ	PASS	ITR							
P‘B IV.3	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.3	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.3	*sneal*	V	PASS	ITR	-			-		V	+
P‘B IV.3	*useal*	V	PASS	ITR	-			-		V	+
P‘B IV.3	*ełeal*	V	ACT	ITR	-			-		V	+
P‘B IV.3	*katareal*	ADJ	PASS	ITR							
P‘B IV.3	*katareal*	V	PASS	ITR	-			+	S	V	+
P‘B IV.3	*katareal*	V	PASS	ITR	-			+	S	V	+
P‘B IV.3	*ztařapeals*	ADJ	PASS	ITR							
P‘B IV.3	*zardareal*	V	PASS	ITR	-			+	S	V	+
P‘B IV.3	*barjeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.3	*barjeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.3	*lueal*	V	ACT	TR	-		+	-		OV	+
P‘B IV.3	*hamareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.3	*pndeal*	ADJ	ACT	ITR							
P‘B IV.3	*gorceal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	-
P‘B IV.3	*gitac‘eal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
P‘B IV.3	*t‘alac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.3	*handerjeal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.3	*pndeal*	ADJ	PASS	ITR							
P‘B IV.3	*jgteal*	CVB	ACT	TR	+	NOM		-		AVO	+
P‘B IV.3	*barjeal*	CVB	ACT	TR	+	NOM		-		OAV	+
P‘B IV.3	*xzeal*	ADJ	PASS	ITR							
P‘B IV.3	*patařeal*	ADJ	PASS	ITR							
P‘B IV.3	*awełkeal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.3	*zardareal*	ADJ	PASS	ITR							
P‘B IV.3	*zgec‘eal*	V	ACT	TR	-		+	+	Ø	OV	+
P‘B IV.3	*kerparaneal*	V	ACT	TR	-		+	+	Ø	OV	+
P‘B IV.3	*xač‘eal*	V	PASS	ITR	-			+	S	V	+
P‘B IV.3	*ełeal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.3	*meřeal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.3	*hamareal*	V	ACT	TR	+	NOM	+	-		AOV	+
P‘B IV.3	*jgeal*	V	ACT	TR	-		+	+	A	VO	+
P‘B IV.3	*asac‘eal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B IV.4	*bereals*	ADJ	PASS	ITR							
P‘B IV.4	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
P‘B IV.4	*mteal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.4	*zamac‘ealk‘*	ADJ	ACT	ITR							
P‘B IV.4	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.4	*pataheal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.4	*lc‘ealk‘*	CVB	ACT	ITR	-			-		V	+
P‘B IV.4	*ereweal*	V	ACT	TR	-		+	-		OV	+
P‘B IV.4	*nmaneal*	V	ACT	ITR	+	NOM		-		SV	+
P‘B IV.4	*bereal*	V	ACT	TR	+	NOM	+	-		AOV	+
P‘B IV.4	*skseal*	ADJ	PASS	ITR							
P‘B IV.4	*yamařeal*	ADJ	ACT	ITR							
P‘B IV.4	*bac‘eal*	V	PASS	ITR	+	NOM		+	S	SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P'B IV.4	*zawereal*	ADJ	PASS	ITR							
P'B IV.4	*korcaneals*	ADJ	PASS	ITR							
P'B IV.4	*hawatac'ealk'*	ADJ	ACT	ITR							
P'B IV.4	*zhawatac'eals*	ADJ	ACT	ITR							
P'B IV.4	*nmaneal*	ADJ	ACT	ITR							
P'B IV.4	*ənddimac'eal*	CVB	ACT	ITR	-			-		V	+
P'B IV.4	*k'ajalereal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.4	*sermaneal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
P'B IV.4	*ełeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.4	*ełeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.4	*barjeal*	CVB	ACT	TR	+	NOM	+	-		OV	+
P'B IV.4	*arareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B IV.4	*zp'akeal*	ADJ	PASS	ITR							
P'B IV.4	*xostac'eal*	ADJ	PASS	ITR							
P'B IV.4	*erkec'uc'eal*	V	ACT	TR	-			-		V	+
P'B IV.4	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.4	*hawatac'ealk'*	ADJ	ACT	ITR							
P'B IV.4	*matakarareal*	V	ACT	TR	+	NOM	+	-		AOV	+
P'B IV.4	*ert'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.4	*šineal*	V	IMPRS	TR	-		+	+	Ø	OV	+
P'B IV.4	*leal*	V	ACT	ITR	+	NOM		-		SV	+
P'B IV.4	*ekeal*	V	ACT	ITR	+	GEN		-		VS	+
P'B IV.4	*arareal*	CVB	ACT	TR	-		+	-		VO	+
P'B IV.4	*nsteal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.4	*tareal*	V	ACT	TR	+	NOM	+	-		AVO	+
P'B IV.4	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.4	*zmeřeals*	ADJ	ACT	ITR							
P'B IV.4	*hašmealk'*	ADJ	ACT	ITR							
P'B IV.4	*c'ankanealk'*	ADJ	ACT	ITR							
P'B IV.4	*karōtealk'*	ADJ	ACT	ITR							
P'B IV.4	*bazmealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.4	*hanguc'ealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.4	*zařak'ealsn*	ADJ	PASS	ITR							
P'B IV.4	*zhražarealn*	ADJ	ACT	ITR							
P'B IV.4	*zgnac'ealn*	ADJ	ACT	ITR							
P'B IV.4	*zmeřealn*	ADJ	ACT	ITR							
P'B IV.4	*tueal*	V	PASS	ITR	+	NOM		+	S	SV	+
P'B IV.4	*katareal*	V	ACT	TR	+	NOM	+	+	Ø	AOV	+
P'B IV.4	*darjeal*	ADV									
P'B IV.4	*patmeal*	V	ACT	TR	+	GEN	+	-		AOV	+
P'B IV.4	*naxanjec'uc'eals*	ADJ	PASS	ITR							
P'B IV.4	*darjeal*	ADV									
P'B IV.4	*darjeal*	ADV									
P'B IV.4	*darjeal*	ADV									
P'B IV.4	*ařeal*	V	ACT	TR	+	NOM	+	-		AOV	+
P'B IV.4	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.5	*angeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.5	*matuc'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.5	*cneal*	V	PASS	ITR	+	NOM		-		SV	+
P'B IV.5	*arhamarheal*	ADJ	PASS	ITR							
P'B IV.5	*ełeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.5	*kreal*	CVB	ACT	TR	-		+	-		VO	+
P'B IV.5	*katareal*	ADJ	PASS	ITR							
P'B IV.5	*žołoveal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.5	*pndeal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.5	*apakanealk'*	CVB	PASS	ITR	-			-		V	+
P'B IV.5	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.5	*meržeal*	ADJ	PASS	ITR							
P'B IV.5	*darjeal*	ADV									
P'B IV.5	*norogeal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.5	*darjeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.5	*t'ōt'ap'ealk'*	CVB	PASS	ITR	+	NOM		-		SV	+
P'B IV.5	*handerjeal*	ADJ	PASS	ITR							
P'B IV.5	*hasealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.5	*hayec'ealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.5	*spasealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.5	*t'argmaneal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
P'B IV.5	*ařak'ealn*	ADJ	PASS	ITR							
P'B IV.5	*zasac'ealsn*	ADJ	PASS	ITR							
P'B IV.5	*yařajac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.5	*ařeal*	CVB	ACT	TR	-		+	-		OV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B IV.5	*mecac‘eal‘*	V	ACT	ITR	-			-		V	+
P‘B IV.5	*ałk‘atac‘eal‘*	V	ACT	ITR	-			-		V	+
P‘B IV.5	*cneal*	V	PASS	ITR	+	GEN		-		SV	+
P‘B IV.5	*snuc‘eal*	V	PASS	ITR	+	GEN		-		SV	+
P‘B IV.5	*hasuc‘eal*	V	PASS	ITR	+	GEN		-		SV	+
P‘B IV.5	*anargeal*	V	PASS	ITR	+	GEN		-		SV	
P‘B IV.5	*pakasealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.5	*karōtealk‘*	CVB	ACT	ITR	+	NOM		-		SV	-
P‘B IV.5	*kaškandealk‘*	ADJ	PASS	ITR							
P‘B IV.5	*zmaceal*	ADJ	PASS	ITR							
P‘B IV.5	*molorealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.5	*keal*	V	ACT	ITR	-			-		V	+
P‘B IV.5	*yułac‘uc‘eal*	CVB	ACT	TR	+	NOM		-		AOV	+
P‘B IV.5	*pateal*	V	ACT	TR	-		+	-		OV	+
P‘B IV.5	*cneal*	ADJ	PASS	ITR							
P‘B IV.5	*cneal*	ADJ	PASS	ITR							
P‘B IV.5	*arareal*	ADJ	PASS	ITR							
P‘B IV.5	*kurac‘eal*	V	ACT	ITR	-			+	S	V	-
P‘B IV.5	*cackealk‘*	ADJ	PASS	ITR							
P‘B IV.5	*srbeal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.5	*ełeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.5	*lusaworealk‘*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B IV.5	*darjeal*	ADV									
P‘B IV.5	*darjeal*	ADV									
P‘B IV.5	*ařak‘ealn*	ADJ	PASS	ITR							
P‘B IV.5	*ereweal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.5	*ekeal*	ADJ	ACT	ITR							
P‘B IV.5	*ereweal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.5	*ənkaleal*	V	ACT	TR	+	GEN	+	-		AVO	+
P‘B IV.5	*xorheal*	V	ACT	ITR	+	GEN		-		SV	+
P‘B IV.5	*tueal*	V	ACT	TR	+	GEN	+	-		AOV	+
P‘B IV.5	*ansac‘eal*	V	ACT	TR	-		+	-		VO	+
P‘B IV.5	*ansac‘eal*	V	ACT	TR	-		+	-		VO	+
P‘B IV.5	*edeal*	ADJ	PASS	ITR							
P‘B IV.5	*arkeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B IV.5	*brdeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B IV.5	*teseal*	CVB	PASS	ITR	+	NOM		-		VS	+
P‘B IV.5	*kocealn*	V	ACT	ITR	-			+	S	V	+
P‘B IV.5	*kač‘eal*	CVB	ACT	TR	-			-		V	+
P‘B IV.5	*zayrac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.5	*matuc‘ealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.5	*yłeal*	V	ACT	TR	+	GEN	+	-		VOA	+
P‘B IV.5	*pndeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.5	*čgneal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.5	*ełeal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.5	*ekeal*	V	ACT	ITR	+	GEN		+	S	SV	+
P‘B IV.5	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.5	*tueal*	V	ACT	TR	+	NOM	+	+	Ø	AVO	+
P‘B IV.5	*žołoveal*	V	ACT	TR	-		+	-		VO	+
P‘B IV.5	*c‘ruealk‘*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B IV.5	*šineal*	ADJ	PASS	ITR							
P‘B IV.5	*ert‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.5	*lc‘eal*	ADJ	PASS	ITR							
P‘B IV.6	*srtmteal*	V	ACT	ITR	+	NOM		-		VS	+
P‘B IV.6	*niwt‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.6	*č‘hawanealk‘*	CVB	ACT	ITR	+	NOM		-		SV	-
P‘B IV.6	*hramayeal*	ADJ	PASS	ITR							
P‘B IV.6	*amac‘eal*	ADJ	PASS	ITR							
P‘B IV.6	*hramayeal*	ADJ	PASS	ITR							
P‘B IV.6	*tareal*	V	IMPRS	TR	-		+	+	Ø	VO	+
P‘B IV.6	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.6	*xoc‘eal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.6	*prkeal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.6	*kaxeal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.6	*miac‘uc‘eal*	V	ACT	TR	-		+	-		OV	+
P‘B IV.6	*ełealk‘*	CVB	ACT	ITR	-			-		V	+
P‘B IV.6	*luc‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.6	*yaruc‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.6	*gohac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.6	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.6	*matuc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P'B IV.6	*kerakreal*	V	PASS	ITR	-			+	S	V	+
P'B IV.6	*matuc'eal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B IV.6	*haseal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.7	*hareal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.7	*yaruc'eal*	CVB	ACT	ITR	-			-		V	+
P'B IV.7	*bac'eal*	ADJ	PASS	ITR							
P'B IV.7	*arak'eal*	ADJ	PASS	ITR							
P'B IV.7	*ijeal*	V	ACT	ITR	-			+	S	V	+
P'B IV.7	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.8	*halaceal*	V	ACT	TR	+	NOM	+	-		AVO	+
P'B IV.8	*hawatac'eals*	ADJ	ACT	ITR							
P'B IV.8	*kočʻec'eal*	V	PASS	ITR	+	NOM		-		SV	+
P'B IV.8	*arjakeal*	V	PASS	ITR	+	NOM		+	S	SV	+
P'B IV.8	*greal*	CVB	ACT	ITR	-			-		V	+
P'B IV.8	*ełeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B IV.8	*lueal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B IV.8	*anuanealk'*	ADJ	PASS	ITR							
P'B IV.8	*arʼeal*	CVB	ACT	TR	+	NOM	+	-		VAO	+
P'B IV.8	*ełeal*	ADJ	ACT	ITR							
P'B IV.8	*yaruc'eal*	CVB	ACT	ITR	-			-		V	+
P'B IV.8	*angeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B IV.8	*angeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.8	*mtealk'*	CVB	ACT	ITR	-			-		V	+
P'B IV.8	*matuc'eal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B IV.8	*hareal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.8	*matuc'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B IV.8	*zarmac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.8	*hasealk'*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B IV.8	*arak'ealk'n*	ADJ	PASS	ITR							
P'B IV.8	*yaruc'eal*	CVB	ACT	ITR	-			-		V	+
P'B IV.8	*arʼeal*	V	ACT	TR	+	GEN	+	-		VAO	+
P'B IV.8	*lc'eal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B IV.8	*karkeals*	ADJ	PASS	ITR							
P'B IV.8	*ənbrʼneals*	ADJ	PASS	ITR							
P'B IV.8	*amōt'aparteals*	ADJ	PASS	ITR							
P'B IV.8	*k'rtneal*	V	ACT	ITR	-			+	S	V	+
P'B IV.8	*vareal*	V	ACT	TR	-		+	-		OV	+
P'B IV.8	*k'rtneal*	V	ACT	ITR	+	NOM		-		SV	+
P'B IV.8	*kac'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B IV.8	*luceal*	CVB	ACT	TR	-		+	-		VO	+
P'B IV.9	*hawatac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.9	*žołovealk'*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B IV.9	*kamec'ealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.9	*xroxtac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.9	*darjuc'eal*	CVB	ACT	TR	+	NOM	+	-		OAV	+
P'B IV.10	*arʼeal*	CVB	ACT	TR	-			-		V	+
P'B IV.10	*gnac'eal*	CVB	ACT	ITR	-			-		V	+
P'B IV.10	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.10	*zardareal*	ADJ	PASS	ITR							
P'B IV.10	*tuealk'*	CVB	ACT	TR	-		+	-		V	+
P'B IV.10	*arkealk'*	CVB	ACT	TR	-		+	-		VO	+
P'B IV.10	*hražareal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.10	*xap'aneal*	ADJ	PASS	ITR							
P'B IV.10	*xap'aneal*	ADJ	PASS	ITR							
P'B IV.10	*lueal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
P'B IV.10	*teseal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P'B IV.10	*zarmac'eal*	ADJ	ACT	ITR							
P'B IV.10	*ełeal*	CVB	ACT	ITR	-	NOM		-		V	+
P'B IV.10	*darjeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.10	*yōrineal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.10	*arak'eal*	ADJ	PASS	ITR							
P'B IV.10	*ert'eal*	V	ACT	ITR	-			+	S	V	+
P'B IV.10	*tueal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.10	*darjeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.10	*ekeal*	V	ACT	ITR	-			+	S	V	+
P'B IV.10	*yaruc'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B IV.10	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
P'B IV.10	*ełeal*	V	ACT	ITR	+	NOM		-		SV	+
P'B IV.10	*edeal*	V	PASS	ITR	+	NOM		-		SV	+
P'B IV.10	*merʼeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B IV.10	*yap'štakealk'*	V	PASS	ITR	+	NOM		+	S	SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B IV.10	*kočʻecʻeal*	V	ACT	TR	+	GEN		-		VA	+
P‘B IV.10	*hastateal*	ADJ	PASS	ITR							
P‘B IV.11	*ertʻealkʻ*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.11	*trtmeal*	V	ACT	ITR	+	GEN		-		VS	+
P‘B IV.11	*ertʻealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.11	*greal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B IV.11	*zarjakealsd*	ADJ	PASS	ITR							
P‘B IV.11	*ztueal*	ADJ	PASS	ITR							
P‘B IV.12	*jeṙnadreal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P‘B IV.12	*tʻoɫeal*	V	ACT	TR	+	GEN	+	-		OVA	+
P‘B IV.12	*snucʻeal*	V	ACT	TR	-		+	+	Ø	OV	+
P‘B IV.12	*ənkɫmeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.12	*gnacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.12	*gnacʻeal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.12	*yandimaneal*	CVB	ACT	TR	+	NOM		-		OAV	+
P‘B IV.12	*ansacʻeal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.12	*anuaneal*	ADJ	PASS	ITR							
P‘B IV.12	*vnaseal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
P‘B IV.12	*arareal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
P‘B IV.12	*tareal*	V	ACT	TR	-		+	+	Ø	OV	+
P‘B IV.12	*ekeal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.12	*aṙeal*	CVB	ACT	TR	-	NOM	+	-		OV	+
P‘B IV.12	*əmbṙneal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B IV.12	*pʻaxucʻealkʻ*	CVB	ACT	ITR	-			-		V	+
P‘B IV.12	*barjeal*	CVB	ACT	TR	+	NOM	+	-		OV	+
P‘B IV.12	*koruseal*	V	PASS	ITR	-			+	S	V	+
P‘B IV.12	*zrkeal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B IV.12	*yačaxeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.12	*kamecʻeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.12	*arareal*	V	ACT	ITR	+	GEN		+	S	VS	+
P‘B IV.12	*gnacʻeal*	V	ACT	ITR	+	GEN		-		SV	+
P‘B IV.12	*lcʻeal*	ADJ	PASS	ITR							
P‘B IV.12	*darjeal*	ADV									
P‘B IV.12	*lcʻeal*	V	PASS	ITR	-			+	S	V	+
P‘B IV.12	*kuracʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.12	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.12	*gołacʻeal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
P‘B IV.13	*akʻsorealkʻ*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B IV.13	*kecʻealkʻ*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.13	*argeleal*	V	IMPRS	TR	-		+	-		OV	+
P‘B IV.13	*darjeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.13	*zedeal*	ADJ	PASS	ITR							
P‘B IV.13	*zuartʻacʻealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.13	*kacʻeal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.13	*gnacʻeal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.13	*tʻiwreal*	V	ACT	ITR	-			+	S	V	-
P‘B IV.13	*yuzeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.13	*xałacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.13	*gorceal*	ADJ	PASS	ITR							
P‘B IV.13	*cʻankacʻeal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.13	*barkacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.13	*krkneal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.13	*asacʻeal*	V	PASS	ITR	-			+	S	SV	+
P‘B IV.13	*bnakealkʻn*	ADJ	PASS	ITR							
P‘B IV.13	*gnacʻeal*	CVB	ACT	ITR	-	NOM		-		V	+
P‘B IV.13	*eleal*	CVB	ACT	ITR	-	NOM		-		V	+
P‘B IV.13	*xōsecʻeal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B IV.13	*gteal*	CVB	ACT	TR	-			-		V	+
P‘B IV.13	*zarhureal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.13	*sermaneal*	V	ACT	TR	+	GEN	+	-		OVA	+
P‘B IV.13	*buseal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.13	*arareal*	ADJ	PASS	ITR							
P‘B IV.13	*xarakeal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.13	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.13	*nnjecʻealsn*	ADJ	ACT	ITR							
P‘B IV.13	*yarucʻeals*	ADJ	ACT	ITR							
P‘B IV.13	*nmaneals*	ADJ	ACT	ITR							
P‘B IV.13	*žoɫoveals*	ADJ	PASS	ITR							
P‘B IV.13	*gteals*	ADJ	PASS	ITR							
P‘B IV.13	*hareal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.14	*dataparteal*	CVB	PASS	ITR	-			-		V	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P'B IV.14	*ankeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.14	*ełeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.14	*kargeal*	V	PASS	ITR	+	NOM		+	S	SV	+
P'B IV.14	*šineal*	V	IMPRS	TR	-			+	S	SV	+
P'B IV.14	*arełeal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.14	*arełeal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.14	*merełeals*	ADJ	PASS	ITR							
P'B IV.14	*tueal*	V	IMPRS	TR	-		+	+	Ø	OV	+
P'B IV.14	*k'amaheal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.14	*p'araworeal*	V	PASS	ITR	+	NOM		+	S	SV	+
P'B IV.14	*žlatealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.14	*šineal*	V	ACT	TR	+	GEN	+	-		OVA	+
P'B IV.14	*skseal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.14	*mteal*	CVB	ACT	ITR	-			-		V	+
P'B IV.14	*ełeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B IV.14	*mnac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.14	*haneal*	CVB	ACT	TR	-		+	-		VO	+
P'B IV.14	*angeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.14	*asac'ealk'n*	ADJ	PASS	ITR							
P'B IV.15	*yandimaneal*	V	PASS	ITR	-			+	S	V	+
P'B IV.15	*anuaneal*	V	IMPRS	ITR	-			+	Ø	V	+
P'B IV.15	*yačaxeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.15	*trp'eal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B IV.15	*asac'ealsn*	ADJ	PASS	ITR							
P'B IV.15	*oxac'eal*	V	ACT	ITR	+	NOM		-		VS	+
P'B IV.15	*niwt'eal*	V	ACT	TR	-		+	+	Ø	VO	+
P'B IV.15	*arak'eal*	CVB	IMPRS	ITR				-		VO	+
P'B IV.15	*anuaneal*	ADJ	PASS	ITR							
P'B IV.15	*tareal*	CVB	ACT	TR	-	NOM		-		V	+
P'B IV.15	*kamec'eal*	V	ACT	ITR	+	NOM		-		SV	-
P'B IV.15	*hačeal*	V	ACT	ITR	-			-		V	+
P'B IV.15	*k'atc'rac'eal*	V	ACT	ITR	-			+	S	V	+
P'B IV.15	*ert'eal*	CVB	ACT	ITR	-	NOM		-		V	+
P'B IV.15	*kargeal*	V	PASS	ITR	+	NOM		+	S	SV	+
P'B IV.15	*žołovealn*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.15	*heceal*	V	ACT	ITR	-			+	S	V	+
P'B IV.15	*vareałk'*	ADJ	PASS	ITR							
P'B IV.15	*matuc'ealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.15	*harealk'*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B IV.15	*arełeal*	CVB	ACT	TR	-	NOM		-		V	+
P'B IV.15	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.15	*haseal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.15	*čč'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.15	*xap'aneal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
P'B IV.15	*haseal*	CVB	ACT	ITR	-			-		V	+
P'B IV.15	*gitac'eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P'B IV.15	*aceal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B IV.15	*mteal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.15	*ełeal*	V	ACT	ITR	+	NOM		-		SV	+
P'B IV.15	*matuc'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.15	*nayec'eal*	CVB	ACT	ITR	-			-		V	+
P'B IV.15	*ełbayrac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.15	*ankeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.15	*salac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.15	*cackeal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.15	*ənkołmneal*	ADJ	ACT	ITR							
P'B IV.15	*pateal*	ADJ	PASS	ITR							
P'B IV.15	*cackeal*	ADJ	PASS	ITR							
P'B IV.15	*arełeal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.15	*hełeal*	ADJ	PASS	ITR							
P'B IV.15	*xōsec'eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
P'B IV.15	*anuaneal*	V	PASS	ITR	-			+	S	V	+
P'B IV.15	*zspanealn*	ADJ	PASS	ITR							
P'B IV.15	*gnac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.15	*nsteal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.15	*ert'eal*	CVB	ACT	ITR	-			-		V	+
P'B IV.15	*patarełeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B IV.15	*arjakeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B IV.15	*hareal*	V	PASS	ITR	-			+	S	V	+
P'B IV.15	*hareal*	V	PASS	ITR	+	NOM		-		SV	+
P'B IV.15	*sastkac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B IV.15	*gełgełeal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.15	*yaytneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.15	*zarmac‘eal*	V	ACT	ITR	-	NOM		+	S	V	+
P‘B IV.15	*strjac‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.15	*hareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B IV.15	*xlxleal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.15	*zmeřealn*	ADJ	PASS	ITR							
P‘B IV.15	*lueal*	V	ACT	TR	+	GEN	+	-		OVA	+
P‘B IV.15	*hareal*	CVB	PASS	ITR	-			-		V	+
P‘B IV.15	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.15	*arareal*	ADJ	PASS	ITR							
P‘B IV.15	*parzeal*	ADJ	PASS	ITR							
P‘B IV.15	*lc‘eal*	ADJ	PASS	ITR							
P‘B IV.15	*arеal*	V	ACT	TR	+	GEN	+	-		VAO	+
P‘B IV.15	*hawaneal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.16	*kоč‘ec‘eal*	V	PASS	ITR	+	NOM		+	S	VS	+
P‘B IV.16	*erdueal*	V	ACT	ITR	+	NOM		-		SV	+
P‘B IV.16	*grgeal*	V	PASS	ITR	-			+	S	V	+
P‘B IV.16	*ylp‘ac‘ealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.16	*kaleal*	CVB	ACT	TR	-		+	-		VO	-
P‘B IV.16	*arеal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.16	*hareal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.16	*edeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.16	*zarmac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.16	*goveal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.16	*stipeal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.16	*štapeal*	CVB	PASS	ITR	-			-		V	+
P‘B IV.16	*arеal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P‘B IV.16	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
P‘B IV.16	*ełeal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.16	*knk‘eal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.18	*t‘oł eal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B IV.18	*ert‘ealk‘*	CVB	ACT	ITR	-			-		V	+
P‘B IV.18	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.18	*hareal*	V	ACT	TR	-		+	+	Ø	VO	+
P‘B IV.18	*vařealk‘*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B IV.18	*aguc‘ealk‘*	V	PASS	ITR	-			-		V	+
P‘B IV.18	*xonarheal*	ADJ	ACT	ITR							
P‘B IV.18	*haseal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B IV.19	*ənddimac‘eal*	ADJ	ACT	ITR							
P‘B IV.19	*gnac‘eal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B IV.19	*arareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.19	*t‘aguc‘eal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
P‘B IV.20	*sastkac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.20	*sastkac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.20	*mecamteal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.20	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.20	*vařealk‘*	ADJ	PASS	ITR							
P‘B IV.20	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.20	*arareal*	ADJ	PASS	ITR							
P‘B IV.20	*hasealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.20	*macealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.20	*banakealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.20	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	-
P‘B IV.20	*arеal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.20	*ekeal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.20	*arareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.20	*haneal*	ADJ	PASS	ITR							
P‘B IV.20	*młeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.20	*yardareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.20	*kazmeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.20	*včareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.20	*zarmac‘eal*	ADJ	ACT	ITR							
P‘B IV.20	*arareal*	V	ACT	TR	-		+	-		OV	+
P‘B IV.20	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.20	*nahatakeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.20	*angeal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.20	*zasac‘ealsn*	ADJ	PASS	ITR							
P‘B IV.20	*anjkac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.20	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.20	*ankeal*	V	ACT	ITR	+	NOM		+	S	SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B IV.20	*arʹeal*	ADJ	PASS	ITR							
P‘B IV.20	*xorheal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P‘B IV.20	*edeal*	ADJ	PASS	ITR							
P‘B IV.20	*xorheal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P‘B IV.20	*hiac‘eal*	ADJ	ACT	ITR							
P‘B IV.20	*zarmac‘eal*	ADJ	ACT	ITR							
P‘B IV.20	*aygoreal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.20	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.20	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.20	*t‘ołeal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
P‘B IV.20	*barjeal*	V	ACT	TR	-		+	+	A	OV	+
P‘B IV.20	*gnac‘ealk‘*	V	ACT	ITR	-			-		V	+
P‘B IV.20	*gitac‘eal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.20	*ełeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.20	*aceal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.21	*yłeal*	V	ACT	TR	-		+	-		VO	-
P‘B IV.21	*greal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
P‘B IV.21	*knk‘eal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
P‘B IV.21	*greal*	V	PASS	ITR	-			+	S	V	+
P‘B IV.21	*angeal*	V	ACT	ITR	+	NOM		-		VS	+
P‘B IV.21	*haseal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B IV.21	*varealk‘*	ADJ	PASS	ITR							
P‘B IV.21	*baxeal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.21	*čołopreal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.22	*bažaneal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.22	*haseal*	V	ACT	ITR	-			+	S	V	+
P‘B IV.22	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.22	*yereweal*	ADV									
P‘B IV.22	*haseal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.22	*maceal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.22	*zardareal*	ADJ	PASS	ITR							
P‘B IV.22	*arjakeal*	ADJ	PASS	ITR							
P‘B IV.22	*haneal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.22	*haseal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.22	*maceal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.22	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.22	*p‘axuc‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.23	*xostac‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.23	*k‘andeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
P‘B IV.23	*breal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
P‘B IV.23	*heceal*	ADJ	ACT	ITR							
P‘B IV.23	*jgeal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.23	*zarʹeal*	ADJ	PASS	ITR							
P‘B IV.24	*zgerealsn*	ADJ	PASS	ITR							
P‘B IV.24	*zgušac‘eal*	V	ACT	ITR	+	NOM		-		VS	+
P‘B IV.24	*kaleal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
P‘B IV.24	*hełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.24	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.24	*mt‘ereal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.24	*mnac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.24	*gnac‘ealk‘*	CVB	ACT	ITR	-			-		V	+
P‘B IV.24	*dimeal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.24	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.24	*dimeal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.24	*xlealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.24	*darjeal*	CVB	ACT	ITR	-	NOM		-		V	+
P‘B IV.24	*haseal*	CVB	ACT	ITR	+	GEN		-		VS	+
P‘B IV.24	*maceal*	V	ACT	ITR	+	GEN		+	S	VS	+
P‘B IV.24	*banakeal*	CVB	ACT	ITR	+	GEN		-		SV	+
P‘B IV.24	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.24	*čołopreal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.24	*zmnac‘ealsn*	ADJ	ACT	ITR							
P‘B IV.24	*p‘axuc‘ealsn*	ADJ	ACT	ITR							
P‘B IV.24	*xałac‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		OAV	+
P‘B IV.24	*barjeal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.24	*gnac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.24	*haneal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.24	*arareal*	V	ACT	TR	+	NOM	+	-		AOV	+
P‘B IV.24	*p‘axuc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.25	*xałac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.25	*p‘ut‘ac‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B IV.25	*banakeal*	ADJ	ACT	ITR							
P‘B IV.25	*čołopreal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.25	*tueal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.25	*k‘andeal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.25	*zgušac‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.25	*arkeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B IV.26	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.26	*gitac‘eal*	V	ACT	TR	+	NOM		-		VS	+
P‘B IV.26	*kotoreal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.26	*zmnac‘ealsn*	ADJ	ACT	ITR							
P‘B IV.26	*darjeal*	ADV									
P‘B IV.27	*kazmeal*	ADJ	PASS	ITR							
P‘B IV.27	*patrasteal*	ADJ	PASS	ITR							
P‘B IV.28	*dimeal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.28	*zmnac‘ealsn*	ADJ	ACT	ITR							
P‘B IV.29	*arak‘eal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B IV.29	*halaceal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.30	*arak‘eal*	V	PASS	ITR	+	NOM		-		SV	+
P‘B IV.31	*parceal*	V	ACT	ITR	+	NOM		-		SV	+
P‘B IV.31	*areal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P‘B IV.31	*meržeal*	V	PASS	ITR	-			+	S	V	+
P‘B IV.31	*arak‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.31	*parcec‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.31	*gnac‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.31	*sp‘ṙeal*	ADJ	PASS	ITR							
P‘B IV.31	*kotoreal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B IV.31	*arareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B IV.31	*čołopreal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.32	*vaṙeal*	ADJ	PASS	ITR							
P‘B IV.32	*culac‘eal*	ADJ	ACT	ITR							
P‘B IV.32	*zmnac‘ealsn*	ADJ	ACT	ITR							
P‘B IV.32	*ararealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B IV.32	*p‘axuc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.34	*arak‘eal*	CVB	PASS	ITR	-			-		V	+
P‘B IV.36	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.37	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.38	*neł eal*	CVB	PASS	ITR	-			-		V	+
P‘B IV.38	*xroxtac‘eal*	V	ACT	ITR	+	NOM		-		SV	+
P‘B IV.38	*gumareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.38	*zmnac‘ealsn*	ADJ	ACT	ITR							
P‘B IV.39	*gteal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.39	*ełeal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.39	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.40	*p‘axuc‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.40	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.41	*kotoreal*	V	PASS	ITR	-			+	S	V	+
P‘B IV.41	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.42	*ekealk‘*	V	ACT	ITR	-			-		V	+
P‘B IV.43	*čołopreal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.44	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.44	*darjeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.44	*məmkeal*	CVB	ACT	ITR	-	NOM		-		V	+
P‘B IV.44	*t‘awaleal*	V	ACT	ITR	-	NOM		+	S	V	+
P‘B IV.44	*karac‘eal*	CVB	ACT	ITR	-	NOM		-		V	-
P‘B IV.44	*mteal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.44	*gnac‘eal*	CVB	ACT	ITR	-			-		V	-
P‘B IV.44	*nayec‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.44	*patealk‘*	V	ACT	ITR	-			+	S	V	+
P‘B IV.44	*əngołmaneal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B IV.44	*gitac‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P‘B IV.44	*hareal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.44	*yaruc‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.44	*vareal*	CVB	PASS	ITR	+	NOM		-		VS	+
P‘B IV.44	*əmbṙneal*	V	ACT	ITR	+	NOM		-		VS	+
P‘B IV.45	*ekealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.45	*p‘axuc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.46	*kazmeal*	CVB	PASS	ITR	+	NOM		-		VS	+
P‘B IV.46	*patrasteal*	V	PASS	ITR	+	NOM		-		VS	+
P‘B IV.46	*apreal*	V	ACT	ITR	-	NOM		+	S	V	+
P‘B IV.47	*ačapareal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.47	*arareal*	V	ACT	TR	-		+	-		OV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P'B IV.47	*nsteal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.48	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.48	*aceal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.48	*dipeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.49	*xroxtac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.50	*mnac'ealk'n*	ADJ	ACT	ITR							
P'B IV.50	*cnealn*	V	PASS	ITR	-			+	S	V	+
P'B IV.50	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.51	*mnac'ealk'*	V	ACT	ITR	+	NOM		-		SV	+
P'B IV.51	*ekeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.51	*t'oɬeal*	V	ACT	TR	+	GEN	+	-		AVO	+
P'B IV.51	*kec'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.51	*lealk'*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.51	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.51	*kec'uc'eal*	V	ACT	TR	-		+	-		OV	+
P'B IV.51	*t'ōt'ap'eal*	V	ACT	TR	-			+	Ø	V	+
P'B IV.51	*tueal*	V	IMPRS	TR			+	+	Ø	OV	+
P'B IV.51	*cařayeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.51	*arareal*	V	ACT	TR	-		+	+	Ø	OV	+
P'B IV.51	*barkac'eal*	V	ACT	ITR	+	NOM		-		VS	+
P'B IV.51	*dipeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.51	*žoɬoveal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.51	*kardac'eal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.53	*darjeal*	ADV									
P'B IV.53	*darjeal*	ADV									
P'B IV.54	*harc'eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
P'B IV.54	*patuhaseal*	V	ACT	TR	-		+	-		VO	+
P'B IV.54	*eleal*	V	ACT	ITR	-			+	S	V	+
P'B IV.54	*ekeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.54	*ekeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B IV.54	*bereal*	ADJ	PASS	ITR							
P'B IV.54	*darjeal*	ADV									
P'B IV.54	*hareal*	ADJ	PASS	ITR							
P'B IV.54	*lueal*	V	ACT	TR	-		+	-		OV	+
P'B IV.54	*bereal*	ADJ	PASS	ITR							
P'B IV.54	*ařeal*	CVB	ACT	TR	-			-		V	+
P'B IV.54	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.54	*ařeal*	CVB	ACT	TR	+	NOM		-		SV	+
P'B IV.54	*ařeal*	CVB	ACT	TR	-			-		V	+
P'B IV.54	*hareal*	ADJ	PASS	ITR							
P'B IV.54	*əmbostac'eal*	CVB	ACT	ITR	-			-		V	+
P'B IV.54	*hpartac'eal*	CVB	ACT	ITR	-			-		V	+
P'B IV.54	*tirac'eal*	CVB	ACT	ITR	-			-		V	+
P'B IV.54	*kaleal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
P'B IV.54	*darjeal*	ADV									
P'B IV.54	*darjeal*	ADV									
P'B IV.54	*zasac'ealsn*	ADJ	PASS	ITR							
P'B IV.54	*zasac'eal*	ADJ	PASS	ITR							
P'B IV.54	*ařeal*	CVB	ACT	TR	-		+	-		VO	+
P'B IV.54	*darjeal*	ADV									
P'B IV.54	*hareal*	ADJ	PASS	ITR							
P'B IV.54	*xostac'eal*	CVB	ACT	ITR	-			-		V	+
P'B IV.54	*hareal*	V	IMPRS	TR	-		+	+	Ø	OV	+
P'B IV.54	*bazmeal*	CVB	ACT	ITR	-			-		V	+
P'B IV.54	*uřuc'eal*	CVB	ACT	ITR	-			-		V	+
P'B IV.54	*bazmeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.54	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.54	*pndeal*	ADJ	PASS	ITR							
P'B IV.54	*tueal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P'B IV.54	*teseal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
P'B IV.54	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P'B IV.54	*hanguc'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B IV.54	*t'oɬeal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	-
P'B IV.55	*ařeal*	V	ACT	TR	-		+	-		VO	+
P'B IV.55	*amrac'ealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.55	*aceal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B IV.55	*pašareal*	CVB	ACT	TR	-		+	-		OV	+
P'B IV.55	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B IV.55	*haseal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B IV.55	*haseal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B IV.55	*bazmeal*	ADJ	ACT	ITR							

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B IV.55	*mt‘ereals*	ADJ	PASS	ITR							
P‘B IV.55	*acealn*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P‘B IV.55	*ekeal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.55	*asac‘eal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.55	*k‘akeal*	CVB	ACT	TR	-			-		V	+
P‘B IV.55	*sp‘ŕeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.55	*haseal*	ADJ	ACT	ITR							
P‘B IV.55	*lc‘eal*	CVB	ACT	TR	-			-		V	+
P‘B IV.55	*tapaleal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.55	*breal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.55	*k‘andeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.55	*arareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.55	*aceal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P‘B IV.55	*zbnakealsn*	ADJ	ACT	ITR							
P‘B IV.55	*gereal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.55	*xałac‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.55	*ařeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B IV.55	*gnac‘ealk‘*	CVB	ACT	ITR	-			-		V	+
P‘B IV.56	*aleworeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.56	*tueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
P‘B IV.56	*spitakec‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.56	*kamec‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.56	*ert‘eal*	V	ACT	ITR	-			-		V	+
P‘B IV.56	*matuc‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.57	*zkatareal*	ADJ	PASS	ITR							
P‘B IV.57	*tařapeals*	ADJ	PASS	ITR							
P‘B IV.57	*nuireal*	ADJ	PASS	ITR							
P‘B IV.57	*žołoveal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B IV.57	*zayrac‘ealk‘*	V	ACT	ITR	+	NOM		-		VS	+
P‘B IV.57	*karkařeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P‘B IV.58	*zmnac‘eals*	ADJ	ACT	ITR							
P‘B IV.58	*haseal*	CVB	ACT	ITR	-			-		V	+
P‘B IV.58	*ekealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B IV.58	*haseal*	ADJ	ACT	ITR							
P‘B IV.58	*arareal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
P‘B IV.58	*heceal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B IV.58	*płceal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.58	*hareal*	V	PASS	ITR	+	NOM		+	S	VS	+
P‘B IV.58	*ařeal*	CVB	ACT	TR	-			-		V	+
P‘B IV.58	*haseal*	ADJ	ACT	ITR							
P‘B IV.59	*apstambealk‘*	V	ACT	ITR	-	NOM		+	S	V	+
P‘B IV.59	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B IV.59	*tueal*	V	ACT	TR	-		+	+	Ø	VO	+
P‘B IV.59	*arkeal*	CVB	ACT	TR	-		+	-		VO	+
P‘B IV.59	*kaxeal*	ADJ	PASS	ITR							
P‘B IV.59	*kaxeal*	V	IMPRS	TR	-		+	+	Ø	VO	+
P‘B IV.59	*ařeal*	CVB	ACT	TR	-			-		V	+
P‘B V.1	*mnac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.1	*anc‘eal*	V	ACT	TR	-		+	+	Ø	OV	+
P‘B V.1	*c‘ruealk‘*	ADJ	ACT	ITR							
P‘B V.1	*p‘axuc‘ealk‘*	ADJ	ACT	ITR							
P‘B V.1	*t‘aguc‘ealk‘*	ADJ	ACT	ITR							
P‘B V.1	*ekealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.1	*žołovealk‘*	V	ACT	ITR	+	NOM		-		SV	+
P‘B V.1	*darjeal*	ADV									
P‘B V.1	*ert‘eal*	V	ACT	ITR	+	NOM		+	S	VS	-
P‘B V.1	*ereweal*	V	ACT	ITR	-			-		VS	+
P‘B V.1	*kargeals*	ADJ	PASS	ITR							
P‘B V.1	*patrasteals*	ADJ	PASS	ITR							
P‘B V.1	*vařeals*	ADJ	PASS	ITR							
P‘B V.1	*p‘ołp‘ołeals*	ADJ	PASS	ITR							
P‘B V.1	*arjakeals*	ADJ	PASS	ITR							
P‘B V.1	*lkneal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B V.1	*vtareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.1	*brnac‘eal*	CVB	ACT	ITR	-			-		OV	+
P‘B V.1	*kaleal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P‘B V.1	*awerealsn*	ADJ	PASS	ITR							
P‘B V.1	*teseal*	V	ACT	TR	+	GEN		+	Ø	VA	+
P‘B V.1	*zgušac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.2	*ařeal*	CVB	ACT	TR	-		+	-		VO	+
P‘B V.2	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P'B V.2	*arareal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.2	*čołopreal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.2	*haneal*	CVB	ACT	TR	-		+	-		VO	+
P'B V.2	*zarmac'eal*	V	ACT	ITR	+	NOM		-		SV	+
P'B V.2	*mnac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.3	*greal*	V	PASS	ITR	+	NOM		+	S	VS	+
P'B V.3	*ənkaleal*	CVB	ACT	TR	-	NOM	+	-		OV	+
P'B V.3	*sastkac'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B V.3	*kc'eal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B V.3	*vayreal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.3	*ijeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.3	*t'ap'eal*	V	ACT	ITR	+	NOM		-		SV	+
P'B V.3	*leal*	V	ACT	ITR	+	NOM		-		SV	+
P'B V.4	*darjeal*	ADV									
P'B V.4	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B V.4	*kazmeal*	ADJ	PASS	ITR							
P'B V.4	*patrasteal*	ADJ	PASS	ITR							
P'B V.4	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
P'B V.4	*xndreal*	V	ACT	TR	+	GEN	+	+	Ø	VOA	+
P'B V.4	*xałac'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B V.4	*kaleals*	ADJ	PASS	ITR							
P'B V.4	*kapeals*	ADJ	PASS	ITR							
P'B V.4	*handerjealk'*	CVB	ACT	ITR	-	NOM		-		V	+
P'B V.4	*lueal*	V	ACT	TR	+	GEN		+	Ø	VA	+
P'B V.4	*matuc'eal*	CVB	ACT	ITR	-			-		V	+
P'B V.4	*yardareal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.4	*hambarjeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B V.4	*xałac'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B V.4	*čakateal*	V	ACT	ITR	+	NOM		-		VS	+
P'B V.4	*yařajeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.4	*tagnapeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.4	*tařapeal*	ADJ	PASS	ITR							
P'B V.4	*edeal*	ADJ	PASS	ITR							
P'B V.4	*čakateal*	V	ACT	ITR	+	NOM		-		SV	+
P'B V.4	*yusac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.4	*amač'ec'eal*	V	PASS	ITR	+	NOM		+	S	VS	+
P'B V.4	*p'araworeald*	V	PASS	ITR	+	NOM		+	S	SV	+
P'B V.4	*znuirealsn*	ADJ	PASS	ITR							
P'B V.4	*p'axuc'ealsn*	ADJ	ACT	ITR							
P'B V.4	*arareal*	V	ACT	ITR	-			-		V	+
P'B V.4	*matuc'eal*	CVB	ACT	ITR	-			-		V	+
P'B V.4	*bereal*	V	ACT	TR	+	NOM	+	+	Ø	OVA	+
P'B V.4	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.4	*arjakeal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.4	*arkeal*	CVB	ACT	TR	-		+	-		VO	+
P'B V.4	*jgeal*	V	ACT	TR	+	GEN	+	-		AVO	+
P'B V.4	*hareal*	CVB	PASS	ITR	+	NOM		-		SV	+
P'B V.4	*yaruc'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.4	*t'oł eal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
P'B V.4	*ekealk'*	CVB	ACT	ITR	+	GEN		-		SV	+
P'B V.4	*kec'ealk'*	V	ACT	ITR	+	GEN		-		SV	+
P'B V.4	*meřealk'*	V	ACT	ITR	+	GEN		+	S	SV	+
P'B V.4	*vastakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.5	*gušakeal*	V	ACT	TR	+	GEN		-		VA	+
P'B V.5	*vařealk'*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B V.5	*kazmeal*	CVB	PASS	ITR	-			-		V	+
P'B V.5	*patrasteal*	V	PASS	ITR	-			+	S	V	
P'B V.5	*yarjakealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.5	*molegnealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.5	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
P'B V.5	*yarjakeal*	CVB	ACT	ITR	+	GEN		-		SV	+
P'B V.5	*ařeal*	CVB	ACT	TR	+	NOM	+	-		OAV	+
P'B V.5	*zeneal*	CVB	ACT	TR	-		+	-		VO	+
P'B V.5	*p'akealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.5	*mteal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.5	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.5	*eleal*	CVB	ACT	ITR	-			-		V	+
P'B V.5	*ənkec'eal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.5	*satakeals*	ADJ	PASS	ITR							
P'B V.5	*darjeal*	ADV									
P'B V.5	*bac'eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B V.5	*arealʼ*	CVB	ACT	TR	+	GEN	+	-		AOV	+
P‘B V.5	*zarmacʻeal*	V	ACT	ITR	+	NOM		-		SV	+
P‘B V.5	*zarmacʻeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B V.5	*mteal*	V	ACT	ITR	+	GEN		+	S	SV	+
P‘B V.5	*leal*	V	ACT	ITR	-			+	S	V	-
P‘B V.5	*teseal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
P‘B V.5	*bacʻeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
P‘B V.5	*amracʻeal*	ADJ	ACT	ITR							
P‘B V.5	*arealʼ*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.5	*darjeal*	ADV									
P‘B V.5	*elealkʻ*	CVB	ACT	ITR	-			-		V	+
P‘B V.5	*zarmacʻeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B V.5	*koruseal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B V.5	*koruseal*	V	PASS	ITR	+	NOM		+	S	SV	
P‘B V.6	*ełeal*	V	ACT	ITR	+	NOM		-		SV	+
P‘B V.6	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B V.6	*vařealkʻ*	ADJ	ACT	ITR							
P‘B V.6	*mnacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.6	*xndacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.6	*zuarčacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.6	*agucʻeal*	CVB	ACT	TR	-		+	-		VO	+
P‘B V.6	*aceal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.6	*ijeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.6	*zgecʻeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.6	*agucʻeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.6	*kapeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.6	*ijeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.6	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.6	*cackeal*	V	ACT	ITR	+	NOM		-		SV	+
P‘B V.6	*tʻołeal*	V	IMPRS	TR	-		+	+	Ø	OV	+
P‘B V.6	*pʻakeal*	ADJ	PASS	ITR							
P‘B V.6	*mteal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B V.6	*zgecʻeal*	V	ACT	TR	-		+	+	Ø	OV	+
P‘B V.6	*kapeal*	CVB	ACT	TR	-		+	-		VO	+
P‘B V.7	*gumareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B V.7	*aceal*	V	ACT	TR	-		+	+	Ø	OV	+
P‘B V.7	*gumareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.7	*leal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.7	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.7	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.7	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.7	*gereal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.7	*tareal*	V	IMPRS	TR	-		+	+	Ø	OV	+
P‘B V.7	*kankneal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B V.7	*kočʻecʻeal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B V.7	*ełeal*	V	ACT	ITR	+	NOM		-		SV	-
P‘B V.7	*išxecʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.7	*ełeal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P‘B V.7	*edeal*	V	ACT	TR	-		+	+	Ø	OV	+
P‘B V.7	*kapeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.7	*edeal*	V	ACT	TR	-		+	-		OV	+
P‘B V.7	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.7	*tueal*	V	PASS	ITR	-			+	S	V	+
P‘B V.7	*ancʻeal*	V	ACT	ITR	-	NOM		+	S	V	+
P‘B V.7	*tueal*	V	PASS	ITR	-			+	S	V	+
P‘B V.7	*gnacʻeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B V.7	*tʻagaworealn*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.7	*asacʻeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.10	*apstambeals*	ADJ	ACT	ITR							
P‘B V.12	*zmnacʻealsn*	ADJ	ACT	ITR							
P‘B V.13	*hateal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P‘B V.13	*leal*	V	ACT	ITR	-			+	S	V	+
P‘B V.13	*arareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.14	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B V.15	*kaleal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.15	*zmnacʻealsn*	ADJ	ACT	ITR							
P‘B V.15	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.15	*vtareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.16	*apstambeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.16	*arareal*	CVB	ACT	TR	-		+	-		VO	+
P‘B V.16	*zmnacʻealsn*	ADJ	ACT	ITR							

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P'B V.17	*apstambeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.18	*leal*	V	ACT	ITR	-			+	S	V	+
P'B V.20	*hawatac'eal*	ADJ	ACT	ITR							
P'B V.20	*mkrteal*	ADJ	PASS	ITR							
P'B V.20	*nuireal*	ADJ	PASS	ITR							
P'B V.21	*awerealsn*	ADJ	PASS	ITR							
P'B V.21	*korcanealsn*	ADJ	PASS	ITR							
P'B V.21	*tapaleal*	ADJ	PASS	ITR							
P'B V.21	*aniceal*	V	PASS	ITR	-			+	S	V	+
P'B V.22	*cneal*	V	PASS	ITR	-			+	S	V	+
P'B V.22	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.22	*hambareal*	V	PASS	ITR	+	NOM		+	S	SV	+
P'B V.22	*č'ereweal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.22	*t'awaleal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.22	*ełeal*	CVB	ACT	ITR	-			-		V	+
P'B V.22	*arareal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.22	*xaṙnakeal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.22	*vareal*	V	PASS	ITR	-			-		V	+
P'B V.22	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.23	*ənddimac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.23	*kštambeal*	CVB	ACT	TR	-			-		V	+
P'B V.23	*ənddimac'eal*	V	ACT	ITR	-	NOM		-		V	+
P'B V.23	*kaxeal*	ADJ	ACT	ITR							
P'B V.23	*oxac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.23	*apastaneal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.24	*yandimaneal*	V	PASS	ITR	-			+	S	V	+
P'B V.24	*ekeal*	V	ACT	ITR	-			+	S	V	+
P'B V.24	*kac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.24	*holaneal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.24	*anc'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.24	*xaṙneal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.24	*imac'eal*	CVB	ACT	ITR	-			-		V	+
P'B V.24	*ōrhneal*	V	PASS	ITR	+	NOM		+	S	VS	+
P'B V.24	*c'ankac'eal*	V	ACT	ITR	-			+	S	V	+
P'B V.24	*yarac'eal*	CVB	ACT	ITR	-			-		V	+
P'B V.24	*verac'uc'eal*	CVB	ACT	TR	-		+	-		VO	+
P'B V.24	*kaputakeal*	ADJ	ACT	ITR							
P'B V.24	*kamec'eal*	CVB	ACT	TR	+	NOM	+	-		AVO	-
P'B V.24	*c'ankac'eal*	V	ACT	ITR	-			+	S	V	+
P'B V.24	*yarac'eal*	CVB	ACT	ITR	-			-		V	+
P'B V.24	*ełeal*	CVB	ACT	ITR	-			-		V	+
P'B V.24	*hambarjeal*	CVB	ACT	TR	-		+	-		VO	+
P'B V.24	*asac'eal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.24	*aṙeal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
P'B V.24	*cackeal*	CVB	ACT	TR	-		+	-		VO	+
P'B V.24	*ert'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.24	*gorceal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	-
P'B V.25	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.25	*yap'štakeals*	ADJ	PASS	ITR							
P'B V.25	*zarmac'ealk'*	V	ACT	ITR	-			-		V	+
P'B V.25	*hanguc'eal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B V.25	*yap'štakeal*	V	IMPRS	TR	-		+	+	Ø	VO	+
P'B V.25	*ənt'ac'ealk'*	CVB	ACT	ITR	-			-		V	+
P'B V.25	*katareal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B V.25	*edeal*	V	IMPRS	TR	-		+	+	Ø	VO	+
P'B V.25	*dipealk'*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B V.25	*snealk'*	CVB	PASS	ITR	+	NOM		-		SV	+
P'B V.25	*kec'ealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.26	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.26	*sneal*	V	PASS	ITR	-			+	S	V	+
P'B V.26	*leal*	V	ACT	ITR	-			+	S	V	+
P'B V.26	*hanapazordealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.26	*eleal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B V.26	*aṙeal*	CVB	ACT	TR	-		+	-		VO	+
P'B V.26	*mteal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.26	*aceal*	V	ACT	TR	-		+	+	Ø	OV	+
P'B V.26	*haneal*	CVB	ACT	TR	-		+	-		VO	+
P'B V.26	*moloreals*	ADJ	ACT	ITR							
P'B V.26	*imac'eal*	V	ACT	TR	+	NOM	+	-		AVO	+
P'B V.26	*mteal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B V.26	*ekealk'*	CVB	ACT	ITR	+	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B V.26	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.27	*ełeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.27	*sneal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B V.27	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B V.27	*bnakeal*	V	ACT	ITR	-			+	S	V	+
P‘B V.27	*hanapazordeal*	V	ACT	ITR	-			+	S	V	+
P‘B V.27	*hanapazordeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.27	*moloreals*	ADJ	ACT	ITR							
P‘B V.27	*haneal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P‘B V.27	*hakařakealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.27	*bnakeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B V.28	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B V.28	*hawatac‘eals*	ADJ	ACT	ITR							
P‘B V.28	*čašakeal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P‘B V.28	*šineal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P‘B V.28	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.28	*əmbřneals*	V	PASS	ITR	-			+	S	V	+
P‘B V.28	*edeal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
P‘B V.28	*ijeal*	CVB	ACT	ITR	-			-		V	+
P‘B V.28	*bac‘eal*	V	IMPRS	TR	-		+	+	Ø	VO	+
P‘B V.28	*c‘nc‘łkac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.28	*edeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.28	*zarhureal*	ADJ	ACT	ITR							
P‘B V.28	*dołac‘eal*	ADJ	ACT	ITR							
P‘B V.28	*xřoveal*	ADJ	ACT	ITR							
P‘B V.28	*tagnapeal*	ADJ	ACT	ITR							
P‘B V.28	*korcaneal*	ADJ	PASS	ITR							
P‘B V.28	*hareal*	ADJ	PASS	ITR							
P‘B V.28	*parteal*	ADJ	PASS	ITR							
P‘B V.28	*t‘alac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.28	*spařeal*	V	ACT	ITR	+	NOM		-		SV	+
P‘B V.28	*yaruc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.28	*ijuc‘eal*	CVB	ACT	TR	-		+	-		VO	+
P‘B V.28	*korcaneal*	CVB	PASS	ITR	-			-		V	+
P‘B V.28	*t‘alac‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B V.28	*matuc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.28	*t‘alac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.28	*pakuc‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B V.28	*zgastac‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B V.28	*č‘hawaneal*	ADJ	ACT	ITR							
P‘B V.28	*hateal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.28	*ijeal*	CVB	ACT	ITR	-			-		V	+
P‘B V.28	*apašxareal*	V	ACT	TR	-		+	-		VO	+
P‘B V.28	*ijuc‘eal*	V	ACT	TR	-		+	-		VO	+
P‘B V.29	*ełeal*	ADJ	PASS	ITR							
P‘B V.29	*ełeal*	V	ACT	ITR	+	GEN		-		VS	+
P‘B V.30	*barjeal*	V	PASS	ITR	+	NOM		+	S	VS	+
P‘B V.30	*lk‘eal*	V	PASS	ITR	-			+	S	V	+
P‘B V.31	*mteal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B V.31	*edeal*	ADJ	PASS	ITR							
P‘B V.31	*edeal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B V.31	*šineal*	V	ACT	TR	+	NOM	+	+	Ø	OVA	+
P‘B V.31	*parspeals*	ADJ	PASS	ITR							
P‘B V.31	*amrac‘eals*	ADJ	PASS	ITR							
P‘B V.31	*šineal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
P‘B V.31	*šineal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
P‘B V.31	*hawatac‘ealk‘*	ADJ	ACT	ITR							
P‘B V.31	*hawatac‘eals*	ADJ	ACT	ITR							
P‘B V.31	*šineal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
P‘B V.31	*kargeals*	CVB	ACT	TR	-	GEN	+	-		OV	+
P‘B V.31	*t‘oleal*	V	ACT	TR	-		+	-		OV	+
P‘B V.31	*arareal*	V	ACT	TR	-			-		V	+
P‘B V.31	*kargeal*	V	ACT	TR	-		+	+	Ø	OV	+
P‘B V.31	*kargeal*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B V.31	*ařeal*	V	ACT	TR	-		+	+	Ø	OV	+
P‘B V.31	*zmeřealn*	ADJ	ACT	ITR							
P‘B V.31	*zmeřealsn*	ADJ	ACT	ITR							
P‘B V.31	*zmeřealsn*	ADJ	ACT	ITR							
P‘B V.31	*hateals*	ADJ	PASS	ITR							
P‘B V.31	*patařeals*	ADJ	PASS	ITR							
P‘B V.31	*zmeřealsn*	ADJ	ACT	ITR							

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P'B V.31	*lc'eal*	V	PASS	ITR	-			+	S	V	+
P'B V.31	*paycařac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.31	*całkeal*	V	ACT	ITR	+	NOM		-		SV	+
P'B V.31	*ełceal*	CVB	PASS	ITR	+	NOM		-		SV	+
P'B V.31	*šineal*	V	PASS	ITR	+	NOM		+	S	VS	+
P'B V.31	*znełeals*	ADJ	ACT	ITR							
P'B V.31	*ztařapeals*	ADJ	PASS	ITR							
P'B V.31	*kargeal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
P'B V.31	*anc'eal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.31	*darjeal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.31	*kargealn*	ADJ	PASS	ITR							
P'B V.31	*kankneal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B V.31	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P'B V.31	*meřeals*	ADJ	ACT	ITR							
P'B V.32	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.32	*šineal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P'B V.32	*banakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.32	*banakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.32	*gorceal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B V.32	*hrawireal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P'B V.32	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B V.32	*mteal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.32	*pateal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.32	*vařealk'*	CVB	ACT	ITR	-			-		V	+
P'B V.32	*zgec'ealk'*	CVB	ACT	TR	-		+	-		OV	+
P'B V.32	*kargealk'*	ADJ	PASS	ITR							
P'B V.32	*psakealk'*	ADJ	ACT	ITR							
P'B V.32	*yec'eal*	CVB	ACT	ITR	-			-		V	+
P'B V.32	*bazmeal*	V	ACT	ITR	-			+	S	V	+
P'B V.32	*edeal*	V	ACT	TR	-		+	+	Ø	OV	+
P'B V.32	*kapealn*	V	ACT	TR	-		+	+	Ø	OV	+
P'B V.32	*pšuc'eal*	CVB	ACT	ITR	-			-		V	+
P'B V.32	*ařeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P'B V.32	*kac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.32	*haneal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P'B V.32	*haneal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
P'B V.34	*kamec'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.35	*eleal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B V.35	*koruseal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
P'B V.35	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.35	*kereal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
P'B V.35	*gnac'eal*	V	ACT	ITR	-			+	S	V	+
P'B V.35	*arbeal*	V	ACT	ITR	-			+	S	V	+
P'B V.35	*zařanc'eal*	V	ACT	ITR	+	NOM		-		VS	+
P'B V.35	*yaruc'eal*	CVB	ACT	ITR	+	NOM		-		V	+
P'B V.35	*yaruc'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.35	*tueal*	V	ACT	TR	-		+	+	Ø	VO	+
P'B V.35	*nayec'eal*	V	ACT	ITR	-			-		V	+
P'B V.35	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
P'B V.35	*gnac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.35	*dipeal*	V	ACT	ITR	-			+	S	V	+
P'B V.35	*haneal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B V.36	*mteal*	V	ACT	ITR	+	GEN		+	S	SV	+
P'B V.36	*ařeal*	V	ACT	TR	-	GEN	+	+	Ø	OV	-
P'B V.36	*xoc'eal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	-
P'B V.36	*kareal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.37	*tareal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P'B V.37	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
P'B V.37	*katareal*	V	ACT	TR	+	NOM	+	-		AOV	+
P'B V.37	*aprealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.37	*katareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B V.37	*zayrac'eal*	V	ACT	ITR	-			-		V	+
P'B V.37	*ekeal*	ADJ	ACT	ITR							
P'B V.37	*c'asuc'eal*	CVB	ACT	ITR	-			-		V	+
P'B V.37	*arareal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.37	*gnac'ealk'*	CVB	ACT	ITR	-			-		V	+
P'B V.37	*arareal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.37	*ɔstanjneal*	CVB	ACT	TR	+	NOM		-		AV	+
P'B V.37	*ařeal*	CVB	ACT	TR	+	NOM		-		AV	+
P'B V.37	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.37	*ekeal*	V	ACT	ITR	+	NOM		+	S	VS	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B V.37	*aŕeal*	V	ACT	TR	-		+	+	Ø	OV	+
P‘B V.37	*kaleal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
P‘B V.37	*haneal*	CVB	ACT	TR	+	NOM	+	-		OAV	+
P‘B V.37	*vastakeal*	V	ACT	TR	-		+	+	A	OV	+
P‘B V.37	*edeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.37	*kec‘eal*	V	ACT	ITR	-			-		V	+
P‘B V.37	*meŕeal*	V	ACT	ITR	-			+	S	V	+
P‘B V.37	*vastakeal*	V	ACT	ITR	+	NOM		-		SV	+
P‘B V.37	*ašxateal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.37	*eɬeal*	V	ACT	ITR	-			+	S	V	+
P‘B V.37	*leal*	V	ACT	ITR	+	NOM		+	S	SV	-
P‘B V.37	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.37	*ankeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.37	*gnac‘ealk‘*	V	ACT	ITR	-			+	S	V	+
P‘B V.37	*ekeal*	CVB	ACT	ITR	-			-		V	+
P‘B V.37	*dadareal*	V	ACT	ITR	-			+	S	V	+
P‘B V.37	*lealk‘*	V	ACT	ITR	-			+	S	V	+
P‘B V.37	*ekealk‘*	V	ACT	ITR	-			+	S	V	+
P‘B V.37	*ert‘ealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B V.37	*ekealk‘*	V	ACT	ITR	+	NOM		-		VS	+
P‘B V.37	*haseal*	ADJ	ACT	ITR							
P‘B V.37	*ekeal*	CVB	ACT	ITR	-			-		V	+
P‘B V.37	*vaŕeal*	CVB	ACT	ITR	-			-		V	+
P‘B V.37	*kazmeal*	CVB	ACT	ITR	-			-		V	+
P‘B V.37	*patrasteal*	CVB	ACT	ITR	-			-		V	+
P‘B V.37	*aŕeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B V.37	*yarjakeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.37	*aceal*	CVB	ACT	TR	-		+	-		VO	+
P‘B V.37	*haneal*	CVB	ACT	TR	-		+	-		VO	+
P‘B V.37	*kaleal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B V.37	*matuc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.37	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
P‘B V.37	*spanealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B V.37	*ənkec‘eal*	V	ACT	TR	-		+	+	Ø	VO	+
P‘B V.37	*vnaseal*	ADJ	PASS	ITR							
P‘B V.37	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.37	*haneal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
P‘B V.37	*ankeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B V.37	*edealk‘*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P‘B V.37	*ijeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B V.37	*ijeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.37	*aceal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.37	*matuc‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B V.37	*kotoreal*	CVB	ACT	TR	-		+	-		VO	+
P‘B V.37	*c‘real*	CVB	ACT	TR	-		+	-		VO	+
P‘B V.37	*arareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B V.37	*kaleal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B V.37	*kaleal*	ADJ	PASS	ITR							
P‘B V.37	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.37	*aŕeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.37	*kaleal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.37	*aŕeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
P‘B V.37	*aceal*	V	ACT	ITR	+	NOM		-		SV	+
P‘B V.38	*zyɬeal*	ADJ	PASS	ITR							
P‘B V.38	*ənkaleal*	V	ACT	TR	-	NOM	+	-		VO	+
P‘B V.38	*heceals*	ADJ	ACT	ITR							
P‘B V.38	*vaŕeals*	ADJ	ACT	ITR							
P‘B V.38	*kapeal*	ADJ	PASS	ITR							
P‘B V.38	*gteal*	V	ACT	TR	-		+	-		VO	+
P‘B V.38	*p‘araworeal*	CVB	PASS	ITR	-	NOM		-		V	+
P‘B V.38	*ekeal*	CVB	ACT	ITR	-			-		V	+
P‘B V.38	*leal*	V	ACT	ITR	-	NOM		+	S	V	+
P‘B V.38	*bereal*	CVB	ACT	TR	-		+	-		VO	+
P‘B V.38	*zarmac‘eal*	ADJ	ACT	ITR							
P‘B V.38	*hiac‘eal*	ADJ	ACT	ITR							
P‘B V.38	*yanc‘uc‘eal*	CVB	ACT	TR	+	GEN	+	-		OAV	+
P‘B V.38	*banakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.38	*arareal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.38	*zarmac‘eal*	V	ACT	ITR	+	NOM		-		VS	+
P‘B V.38	*arjakeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B V.38	*aŕeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P'B V.39	*darjeal*	CVB	ACT	ITR	-			-		V	+
P'B V.40	*heceals*	ADJ	ACT	ITR							
P'B V.40	*ekeal*	CVB	ACT	ITR	-			-		V	+
P'B V.41	*darjeal*	ADJ	PASS	ITR							
P'B V.41	*banakeal*	V	ACT	ITR	-			+	S	V	+
P'B V.42	*c'ruealk'*	ADJ	ACT	ITR							
P'B V.42	*banakeal*	V	ACT	ITR	-			+	S	V	+
P'B V.42	*mnac'ealk'*	ADJ	ACT	ITR							
P'B V.43	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.43	*tueal*	CVB	ACT	TR	+	NOM	+	-		OV	+
P'B V.43	*arealk*	V	ACT	TR	-		+	+	Ø	OV	+
P'B V.43	*urac'eal*	V	ACT	TR	-		+	-		VO	+
P'B V.43	*leal*	V	ACT	ITR	-			+	S	V	+
P'B V.43	*anc'uc'eal*	V	ACT	TR	-		+	+	Ø	OV	+
P'B V.43	*arealk*	V	ACT	TR	-		+	-		VO	+
P'B V.43	*parcec'eal*	V	ACT	ITR	+	GEN		+	Ø	SV	+
P'B V.43	*kaleal*	CVB	ACT	TR	-		+	-		VO	+
P'B V.43	*kapeal*	CVB	ACT	TR	-		+	-		VO	+
P'B V.43	*hateal*	ADJ	PASS	ITR							
P'B V.43	*tareal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.43	*arealk*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B V.43	*arealk*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B V.43	*ełeal*	CVB	ACT	ITR	-			-		V	+
P'B V.43	*kaleal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
P'B V.43	*kapeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
P'B V.43	*ənkec'eal*	V	ACT	TR	+	GEN	+	-		AVO	+
P'B V.43	*xaytarakeal*	V	ACT	TR	-		+	+	Ø	OV	+
P'B V.43	*arareal*	V	ACT	TR	-		+	-		OV	+
P'B V.43	*p'ut'ac'eal*	CVB	ACT	ITR	-			-		V	+
P'B V.43	*tueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
P'B V.43	*anc'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.43	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.43	*haseal*	CVB	ACT	ITR	-			-		V	+
P'B V.43	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
P'B V.43	*aceal*	V	IMPRS	TR	-		+	+	Ø	OV	+
P'B V.43	*patrasteal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.43	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.43	*elealk'*	CVB	ACT	ITR	-			-		V	+
P'B V.43	*arjakeal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.43	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
P'B V.43	*gerceal*	V	IMPRS	TR	-		+	+	Ø	VO	+
P'B V.43	*t'ołeal*	V	IMPRS	TR	-		+	+	Ø	OV	+
P'B V.43	*arjakeal*	ADJ	ACT	ITR							
P'B V.43	*arealk*	CVB	ACT	TR	+	GEN	+	-		OVA	+
P'B V.43	*varealk*	CVB	ACT	ITR	-			-		V	+
P'B V.43	*kazmeal*	CVB	ACT	ITR	-			-		V	+
P'B V.43	*patrasteal*	V	ACT	ITR	-			-		V	+
P'B V.43	*varealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.43	*kargealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.43	*kazmealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.43	*gumarealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.43	*arjakealk'*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B V.43	*p'ołp'ołeals*	ADJ	ACT	ITR							
P'B V.43	*eleal*	V	ACT	ITR	+	GEN		-		VS	+
P'B V.43	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.43	*edeal*	V	ACT	TR	+	NOM	+	+	Ø	AOV	+
P'B V.43	*kerparaneal*	V	ACT	TR	-		+	+	Ø	OV	+
P'B V.43	*yarjakeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B V.43	*edeal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.43	*leal*	CVB	ACT	ITR	+	GEN		-		SV	+
P'B V.43	*heceal*	V	ACT	ITR	-			+	S	V	+
P'B V.43	*ełeal*	CVB	ACT	ITR	+	NOM		-		V	+
P'B V.43	*teseal*	CVB	ACT	TR	-		+	-		VO	+
P'B V.43	*leal*	V	ACT	ITR	-			+	S	V	+
P'B V.43	*tueal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
P'B V.43	*arealk*	CVB	ACT	TR	-		+	-		V	+
P'B V.43	*xałac'eal*	CVB	ACT	ITR	-			-		V	+
P'B V.43	*arealk*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B V.43	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B V.43	*pateal*	CVB	ACT	TR	-		+	-		OV	+
P'B V.43	*mteal*	CVB	ACT	ITR	+	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P‘B V.43	*haneal*	ADJ	PASS	ITR							
P‘B V.43	*arˇeal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
P‘B V.43	*mteal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B V.43	*haneal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
P‘B V.43	*ert‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.43	*tareal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.43	*heceal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B V.43	*kaxeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.43	*anc‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.43	*t‘oł eal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P‘B V.44	*arareal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
P‘B V.44	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.44	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B V.44	*arareal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
P‘B V.44	*c‘ncac‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B V.44	*xndac‘ealk‘*	V	ACT	ITR	+	NOM		-		SV	+
P‘B V.44	*darjeal*	ADV									
P‘B V.44	*žołoveal*	CVB	IMPRS	TR	-		+	-		VO	+
P‘B V.44	*c‘ncac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B V.44	*žołoveal*	CVB	ACT	ITR	-			-		V	+
P‘B V.44	*xoc‘eal*	V	IMPRS	TR	-		+	+	Ø	OV	+
P‘B V.44	*bac‘eal*	CVB	ACT	TR	-		+	-		OV	+
P‘B V.44	*merˇeal*	V	ACT	ITR	-			+	S	V	+
P‘B V.44	*haseal*	V	ACT	ITR	-			+	S	VS	+
P‘B V.44	*kec‘eal*	V	ACT	ITR	+	GEN		+	Ø	SV	+
P‘B V.44	*kec‘eal*	V	ACT	ITR	+	GEN		-		SV	+
P‘B V.44	*edeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B V.44	*herˇac‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B V.44	*gnac‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B VI.1	*t‘agaworeal*	V	ACT	TR	+	NOM	+	-		OVA	+
P‘B VI.1	*bažaneal*	CVB	ACT	TR	-		+	-		OV	+
P‘B VI.1	*kaleal*	V	ACT	ITR	+	GEN		-		SV	+
P‘B VI.1	*bnakeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B VI.1	*krcealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
P‘B VI.1	*hatealk‘*	V	PASS	ITR	+	NOM		-		SV	+
P‘B VI.1	*arkeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B VI.2	*at‘ineals*	ADJ	PASS	ITR							
P‘B VI.2	*ztapakeals*	ADJ	PASS	ITR							
P‘B VI.2	*zžapawineals*	ADJ	PASS	ITR							
P‘B VI.2	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
P‘B VI.2	*eleal*	CVB	ACT	ITR	-			-		VS	+
P‘B VI.3	*edealn*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
P‘B VI.4	*zedeal*	ADJ	PASS	ITR							
P‘B VI.5	*hawatac‘ealk‘*	V	PASS	ITR	+	NOM		+	S	SV	+
P‘B VI.6	*leal*	V	ACT	ITR	+	NOM		+	S	VS	+
P‘B VI.6	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P‘B VI.7	*vareal*	V	ACT	ITR	-			+	S	V	+
P‘B VI.7	*ełeal*	V	ACT	ITR	+	NOM		-		VS	+
P‘B VI.7	*ašakerteal*	V	ACT	ITR	+	NOM		-		SV	+
P‘B VI.8	*heł eal*	V	ACT	ITR	-			+	S	V	+
P‘B VI.8	*dipeal*	V	ACT	ITR	-			+	S	V	+
P‘B VI.8	*heceal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B VI.8	*luac‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P‘B VI.8	*ōceal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B VI.8	*merjeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B VI.8	*edeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B VI.8	*arkeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B VI.8	*heceal*	V	ACT	ITR	-			-		V	+
P‘B VI.8	*zarmac‘eal*	CVB	ACT	ITR	-			-		V	+
P‘B VI.8	*hecealn*	ADJ	ACT	ITR							
P‘B VI.8	*spaseal*	CVB	ACT	ITR	+	GEN		-		VS	+
P‘B VI.8	*arbeal*	ADJ	ACT	ITR							
P‘B VI.8	*leal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B VI.8	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P‘B VI.8	*zgetneal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
P‘B VI.8	*yaruc‘eal*	CVB	ACT	TR	-			-		V	+
P‘B VI.8	*matuc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B VI.8	*yamarˇeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P‘B VI.8	*haneal*	CVB	ACT	TR	-		+	-		VO	+
P‘B VI.8	*arkeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P‘B VI.8	*ert‘eal*	CVB	ACT	ITR	-	NOM		-		V	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
P'B VI.8	*zarmac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B VI.8	*yamařealk'*	V	ACT	ITR	-	NOM		-		V	+
P'B VI.8	*mkrteal*	V	PASS	ITR	-	NOM		+	S	V	-
P'B VI.8	*mkrteal*	V	PASS	ITR	-			+	S	V	-
P'B VI.8	*yaruc'eal*	CVB	ACT	ITR	+	GEN		-		SV	+
P'B VI.8	*gnac'eal*	CVB	ACT	ITR	+	GEN		-		SV	+
P'B VI.8	*mkrteal*	V	PASS	ITR	+	NOM		+	S	SV	-
P'B VI.8	*ařeal*	CVB	ACT	TR	-		+	-		VO	+
P'B VI.9	*štapeal*	CVB	ACT	ITR	-			-		V	+
P'B VI.9	*ankeal*	V	ACT	ITR	-			-		V	+
P'B VI.9	*asac'eal*	CVB	ACT	TR	-			-		OV	+
P'B VI.9	*yaruc'eal*	CVB	ACT	ITR	-			-		V	+
P'B VI.10	*caraweal*	CVB	ACT	ITR	-			-		V	+
P'B VI.10	*pask'eal*	CVB	ACT	ITR	-			-		V	+
P'B VI.10	*ankeal*	CVB	ACT	ITR	-			-		V	+
P'B VI.10	*greal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B VI.10	*knk'eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
P'B VI.10	*kapeal*	ADJ	PASS	ITR							
P'B VI.12	*arbeal*	ADJ	ACT	ITR							
P'B VI.13	*hawatac'ealk'*	ADJ	ACT	ITR							
P'B VI.15	*łamłayeals*	ADJ	PASS	ITR							
P'B VI.15	*žapawineals*	ADJ	PASS	ITR							
P'B VI.16	*leal*	V	ACT	ITR	+	NOM		-		VS	+
P'B VI.16	*mekneal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B VI.16	*bnakeal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B VI.16	*amrac'ealk'*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B VI.16	*zgastac'ealk'*	ADJ	ACT	ITR							
P'B VI.16	*nełealk'*	ADJ	ACT	ITR							
P'B VI.16	*tařapealk'*	ADJ	ACT	ITR							
P'B VI.16	*tarakusealk'*	ADJ	ACT	ITR							
P'B VI.16	*molorealk'*	CVB	ACT	ITR	-			-		V	+
P'B VI.16	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
P'B VI.16	*greal*	V	PASS	ITR	-			+	S	V	+
P'B VI.16	*bnakeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B VI.16	*anuaneal*	CVB	ACT	ITR	+	NOM		-		SV	+
P'B VI.16	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B VI.16	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B VI.16	*ułłeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P'B VI.16	*ařeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
P'B VI.16	*bxeal*	CVB	ACT	ITR	+	NOM		-		VS	+
P'B VI.16	*bnakeal*	V	ACT	ITR	-			-		V	+
P'B VI.16	*bnakeal*	V	ACT	ITR	+	NOM		+	S	VS	+
P'B VI.16	*hanapazordeal*	V	ACT	ITR	+	NOM		+	S	SV	+
P'B VI.16	*šineal*	CVB	ACT	TR	-	GEN	+	-		VO	+
ŁP' §1	*arareal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP' §1	*skseal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP' §1	*anuaneal*	CVB	ACT	TR	-		+	-		OV	+
ŁP' §1	*arareal*	V	ACT	TR	+	GEN	+	-		AOV	+
ŁP' §1	*patmeal*	V	ACT	TR	+	NOM	+	-		VOA	+
ŁP' §1	*bažaneal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP' §1	*hnac'eal*	ADJ	ACT	ITR							
ŁP' §1	*awarteal*	CVB	ACT	TR	-		+	-		VOA	+
ŁP' §1	*mnac'uc'eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP' §1	*anuaneal*	CVB	ACT	TR	-		+	-		OV	+
ŁP' §1	*šaragreal*	V	PASS	ITR	+	NOM		-		SV	+
ŁP' §1	*harkaworeal*	CVB	PASS	ITR	-			-		V	+
ŁP' §1	*č'išxec'eal*	CVB	ACT	ITR	-			-		V	+
ŁP' §1	*ɔntreal*	ADJ	PASS	ITR							
ŁP' §1	*dadareal*	CVB	ACT	ITR	-			-		V	+
ŁP' §2	*patmeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP' §2	*kargeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP' §2	*gořozac'eal*	ADJ	ACT	ITR							
ŁP' §2	*moloreal*	ADJ	ACT	ITR							
ŁP' §3	*kočʻecʻeal*	V	PASS	ITR	+	NOM		-		VS	+
ŁP' §3	*yerkuac'eal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP' §3	*šineal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP' §3	*arareal*	V	ACT	TR	-		+	-		VO	+
ŁP' §3	*awrinakeal*	V	PASS	ITR	+	NOM		-		VS	+
ŁP' §3	*zart'uc'eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP' §3	*yałt'eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP' §3	*hogac'eal*	CVB	ACT	TR	-		+	-		OV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §3	*tełekac‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §3	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §3	*yařajagreal*	ADJ	PASS	ITR							
ŁP‘ §3	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §3	*teseal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §3	*šrǰap‘akeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §3	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §3	*šineal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §3	*šineal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §3	*yordeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §3	*usealk‘n*	ADJ	PASS	ITR							
ŁP‘ §3	*ařaweleal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §3	*varžeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §3	*karcec‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §3	*arkeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §3	*ankareal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §3	*aylabaneal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §3	*xařneal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §4	*ušadreal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §4	*hogac‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §4	*mnac‘eal*	ADJ	ACT	ITR							
ŁP‘ §4	*zełeals*	ADJ	ACT	ITR							
ŁP‘ §4	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §4	*yaweleal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §4	*krt‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §4	*zgušac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §4	*haseal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §4	*sneal*	V	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §4	*useal*	V	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §4	*ənkec‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §4	*əntreal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §4	*kec‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §4	*asac‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §4	*kec‘eal*	V	ACT	ITR	-			-		V	+
ŁP‘ §4	*ařaweleal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §4	*katareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §4	*edeal*	V	PASS	ITR	-			-		V	+
ŁP‘ §4	*patmeal*	V	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §4	*harkaworeal*	CVB	ACT	ITR	+	NOM	+	-		VOA	+
ŁP‘ §4	*parteal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §4	*dadareal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §4	*c‘asuc‘eal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §4	*ołok‘eal*	V	PASS	ITR	-			-		V	+
ŁP‘ §5	*zerceal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §5	*hasealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §5	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §5	*mořac‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §5	*berkreal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §5	*kargeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §5	*apawinealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §5	*orošeal*	ADJ	PASS	ITR							
ŁP‘ §5	*kanoneal*	ADJ	PASS	ITR							
ŁP‘ §5	*zanełealsn*	ADJ	ACT	ITR							
ŁP‘ §5	*zełealsn*	ADJ	ACT	ITR							
ŁP‘ §5	*npasteal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §5	*čšgrtabaneal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §5	*zedeal*	ADJ	PASS	ITR							
ŁP‘ §5	*naweal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §5	*awrhneal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §6	*ert‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §6	*katareal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §6	*xaxteal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §6	*k‘ayk‘ayeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §6	*xřoveal*	CVB	ACT	ITR	-			-		VS	+
ŁP‘ §6	*darjeal*	ADV									
ŁP‘ §6	*haseal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §6	*ařeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §6	*ełealk‘*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §6	*zgac‘uc‘eal*	V	ACT	TR	+	GEN		+	Ø	VA	+
ŁP‘ §6	*xonarheal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §6	*hašueal*	V	PASS	ITR	-			+	S	V	+

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ŁP‘ §6	*ankealk‘*	CVB	ACT	ITR	-			-		V	-
ŁP‘ §6	*stac‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §6	*matneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §6	*xonarhealk‘*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §6	*gtealk‘*	V	PASS	ITR	-			-		V	+
ŁP‘ §6	*žařangeal*	ADJ	PASS	ITR							
ŁP‘ §7	*lk‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §7	*meržeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §7	*zhoceals*	ADJ	ACT	ITR							
ŁP‘ §7	*sp‘řeal*	ADJ	PASS	ITR							
ŁP‘ §7	*dipec‘uc‘eal*	V	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §7	*sp‘řealk‘s*	ADJ	PASS	ITR							
ŁP‘ §7	*yagec‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §7	*sonk‘ac‘eals*	ADJ	ACT	ITR							
ŁP‘ §7	*ařlc‘eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §7	*verabereal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §7	*cackeal*	ADJ	PASS	ITR							
ŁP‘ §7	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §7	*pačučeals*	ADJ	PASS	ITR							
ŁP‘ §7	*cneal*	ADJ	PASS	ITR							
ŁP‘ §7	*zanazaneal*	ADJ	PASS	ITR							
ŁP‘ §7	*uraxac‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §7	*eleal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §7	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §7	*glorec‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §7	*orsac‘eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §7	*darjeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §7	*ařlc‘ealk‘*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §7	*uraxac‘ealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §7	*kaleal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §7	*ənt‘ac‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §7	*bereal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §7	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §7	*hasealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §7	*uraxac‘eal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §8	*gtealk‘*	V	PASS	ITR	-			-		V	+
ŁP‘ §8	*ełealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §8	*vičakeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §8	*bažaneal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §8	*ankeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §8	*hawatac‘eal*	ADJ	ACT	ITR							
ŁP‘ §8	*hašueal*	V	ACT	TR	-			-		V	+
ŁP‘ §8	*kec‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §8	*vripeal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §8	*lk‘eal*	CVB	ACT	TR	-		+	-		VOA	+
ŁP‘ §8	*tarakuseal*	CVB	ACT	TR	-		+	-		VOA	+
ŁP‘ §9	*bereal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §9	*ařaweleal*	ADJ	PASS	ITR							
ŁP‘ §9	*barjeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §9	*ert‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §9	*matneal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §9	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §9	*č‘zgac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §9	*t‘šnamaneal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §9	*kamec‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §9	*meržeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §9	*kaleal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §9	*meržeal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §9	*hawaneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §9	*t‘agaworec‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §10	*useal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §10	*zinuoreal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §10	*kargeal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §10	*spasaworeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §10	*tenč‘ac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §10	*ənkaleal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §10	*p‘oxeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §10	*kardac‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §10	*yařajagreal*	ADJ	PASS	ITR							
ŁP‘ §10	*tełekac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §10	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		OAV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §10	*hogac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §10	*aceal*	V	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §10	*p‘ĭjkac‘eal*	V	ACT	ITR	-			-		V	+
ŁP‘ §10	*zawrac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §10	*ekeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §10	*ənkaleal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §10	*«zawrac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §10	*ar̓eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §10	*bereal*	ADJ	PASS	ITR							
ŁP‘ §10	*ar̓eal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §10	*asac‘eal*	V	ACT	TR	+	GEN		+	Ø	VA	+
ŁP‘ §10	*zasac‘ealsn*	ADJ	PASS	ITR							
ŁP‘ §10	*mteal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §10	*imac‘uc‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §10	*zxawsec‘ealsn*	ADJ	PASS	ITR							
ŁP‘ §10	*patmeal*	CVB	ACT	TR	+	GEN	+	-		OAV	+
ŁP‘ §10	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §10	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §10	*ełeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §10	*ar̓ak‘eal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §10	*kač‘ec‘eal*	ADJ	PASS	ITR							
ŁP‘ §10	*asac‘eal*	V	ACT	ITR	+	GEN		+	S	SV	+
ŁP‘ §10	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §10	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §10	*ar̓eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §10	*dipeal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §10	*merjaworealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §10	*ar̓lc‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §10	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §10	*tełekac‘eal*	ADJ	PASS	ITR							
ŁP‘ §10	*kargeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §10	*ułłeal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §10	*yordoreal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §10	*zercealk‘*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §10	*tarakusealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §11	*žołoveal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §11	*greal*	ADJ	PASS	ITR							
ŁP‘ §11	*hogac‘eal*	V	ACT	ITR	+	GEN		+	S	SV	+
ŁP‘ §11	*ašxatealk‘*	V	ACT	ITR	-			-		V	+
ŁP‘ §11	*hražarealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §11	*awgteal*	ADJ	PASS	ITR							
ŁP‘ §11	*ekeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §11	*paheal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §11	*paheal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §11	*mnac‘eal*	ADJ	PASS	ITR							
ŁP‘ §11	*nmaneal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §11	*lueal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
ŁP‘ §11	*pancac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §11	*zxawsec‘eals*	ADJ	PASS	ITR							
ŁP‘ §11	*hastateal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §11	*tareal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §11	*šahealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §11	*arjakealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §11	*čašakeal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §11	*katareal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §11	*lusaworeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §11	*haseal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §12	*katareal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §12	*darjeal*	ADV									
ŁP‘ §12	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §12	*kec‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §12	*yaweleal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §12	*kamec‘eal*	CVB	ACT	TR	+	GEN		-		VA	-
ŁP‘ §12	*xorheal*	V	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §12	*hnazandealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §12	*goroveal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §12	*hawaneal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §12	*ekealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §12	*yawžarealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §12	*kaleal*	V	ACT	TR	-		+	+	Ø	VO	+
ŁP‘ §12	*anhogac‘eal*	V	ACT	ITR	+	NOM		+	S	VS	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §12	*hałordealk‘*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §12	*zatuc‘ealk‘*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §12	*grealk‘n*	ADJ	PASS	ITR							
ŁP‘ §12	*yerkareal*	CVB	ACT	ITR	+	NOM		-		V	-
ŁP‘ §12	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §13	*č‘karac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	-
ŁP‘ §13	*useal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §13	*ambaršteal*	ADJ	ACT	ITR							
ŁP‘ §13	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §13	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §13	*zasac‘ealsd*	ADJ	PASS	ITR							
ŁP‘ §13	*zkceal*	ADJ	PASS	ITR							
ŁP‘ §13	*asac‘ealk‘d*	ADJ	PASS	ITR							
ŁP‘ §13	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §13	*hastateal*	V	ACT	ITR	+	NOM		+	S	VS	+
ŁP‘ §13	*ənkłmeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §13	*hełeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §13	*argeleal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §13	*merjeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §13	*hamarjakeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §13	*č‘karac‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §13	*hamarjakeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §13	*sp‘op‘eal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §13	*miac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §13	*lŕeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §13	*darjeal*	ADV									
ŁP‘ §13	*žołoveal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §13	*erkrordeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §13	*kasealk‘*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §13	*barjeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §13	*usealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §13	*tareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §13	*awandeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §13	*xndreal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §13	*hawatac‘eals*	ADJ	ACT	ITR							
ŁP‘ §13	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §13	*sermaneal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §13	*mełuc‘eal*	ADJ	PASS	ITR							
ŁP‘ §13	*zp‘oxealn*	ADJ	PASS	ITR							
ŁP‘ §13	*aceal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §13	*ašakertealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §13	*arŕeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §13	*karcec‘eal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §13	*žołoveal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §13	*zmoloreal*	ADJ	ACT	ITR							
ŁP‘ §13	*drošmeal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §13	*lueal*	V	ACT	TR	-		+	+	Ø	VO	+
ŁP‘ §13	*hiwandac‘eal*	ADJ	ACT	ITR							
ŁP‘ §13	*hawatac‘eal*	ADJ	ACT	ITR							
ŁP‘ §13	*zhawatac‘eals*	ADJ	ACT	ITR							
ŁP‘ §13	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §13	*gičac‘eal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §13	*tkarac‘eal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §13	*varakeal*	V	ACT	ITR	-			-		V	-
ŁP‘ §13	*xawsec‘eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §13	*hastateal*	V	ACT	TR	-		+	+	A	OV	+
ŁP‘ §13	*ekeal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §13	*haseal*	V	ACT	ITR	+	GEN		+	S	VS	+
ŁP‘ §13	*arareal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §13	*edeal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §13	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §13	*zayragnealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §13	*šŕjap‘akeal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §13	*pašareal*	V	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §14	*miabaneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §14	*ert‘ealk‘*	CVB	ACT	ITR	-			+	S	V	+
ŁP‘ §14	*miabaneal*	V	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §14	*čełk‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §14	*canuc‘eal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §14	*lueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §14	*arareal*	CVB	ACT	TR	-		+	-		VO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §14	*ekeal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §14	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §14	*leal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §14	*darjeal*	ADV									
ŁP‘ §14	*harc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §14	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §14	*miabaneal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §14	*patueal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §14	*bereal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §14	*hawaneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §14	*mecareal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §14	*yamaŕeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §14	*merželeal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §14	*hastateal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §14	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §14	*patmeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §14	*grgŕeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §14	*kuteal*	V	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §14	*ełeal*	ADJ	ACT	ITR							
ŁP‘ §14	*ełeal*	V	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §14	*edeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §14	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §14	*canuc‘eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §14	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §14	*včareal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §14	*aŕeal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §14	*hražarealk‘*	CVB	PASS	ITR	+	GEN		-		SV	+
ŁP‘ §15	*xostac‘eal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
ŁP‘ §15	*ənddimac‘eal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §15	*merželeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §15	*ankealk‘*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §15	*katareal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §15	*ačec‘eal*	ADJ	PASS	ITR							
ŁP‘ §15	*anamawt‘ealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §15	*č‘karac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	-
ŁP‘ §15	*zayragneal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §15	*nmaneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §15	*žaŕangeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §15	*ačec‘uc‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §15	*lc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §15	*hełeal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §15	*asac‘eal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §15	*ekeal*	V	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §15	*ekealk‘*	ADJ	ACT	ITR							
ŁP‘ §15	*edeal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §15	*kargeal*	V	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §15	*tałtkac‘eal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §15	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §15	*hawasareal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §15	*varželeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §15	*aŕeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §15	*jeŕnadrealk‘*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §15	*č‘karac‘ealk‘*	CVB	ACT	ITR	-			-		V	-
ŁP‘ §15	*xoteal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §15	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §15	*hawaneal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §15	*darjeal*	ADV									
ŁP‘ §15	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §15	*kac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §16	*žołoveal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §16	*sermaneal*	CVB	ACT	TR	+	NOM		-		OVA	+
ŁP‘ §16	*darjeal*	ADV									
ŁP‘ §16	*dimealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §16	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §16	*nmaneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §16	*canuc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §16	*lusaworeal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §16	*t‘ulac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §16	*cnealk‘*	ADJ	PASS	ITR							
ŁP‘ §16	*xawseal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §16	*darjeal*	ADV									

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §16	*zayrac‘eal‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §16	*matneal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §16	*pateal*	ADJ	PASS	ITR							
ŁP‘ §16	*awceal*	ADJ	PASS	ITR							
ŁP‘ §16	*edeal*	ADJ	PASS	ITR							
ŁP‘ §16	*tareal*	ADJ	PASS	ITR							
ŁP‘ §16	*yawšeal*	ADJ	PASS	ITR							
ŁP‘ §16	*ənkec‘eal*	ADJ	PASS	ITR							
ŁP‘ §16	*ařak‘ealn*	ADJ	PASS	ITR							
ŁP‘ §17	*zbarjrealn*	ADJ	PASS	ITR							
ŁP‘ §17	*amusnac‘ealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §17	*hałordeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*čašakeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §17	*kanonagreal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*knk‘eal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §17	*katareal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §17	*haneal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
ŁP‘ §17	*ušadrealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §17	*borbok‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*kangneal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §17	*taraceal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §17	*cackeal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*hayec‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §17	*əndeluzeal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*orošeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §17	*jkteal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*cnkealk‘*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §17	*cackeal*	ADJ	PASS	ITR							
ŁP‘ §17	*verac‘eal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §17	*caleal*	ADJ	PASS	ITR							
ŁP‘ §17	*edeal*	ADJ	PASS	ITR							
ŁP‘ §17	*greal*	V	IMPRS	TR	-		+	-		VO	+
ŁP‘ §17	*ełcealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*darjeal*	ADV									
ŁP‘ §17	*greal*	ADJ	PASS	ITR							
ŁP‘ §17	*paycařac‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*č‘darjuc‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §17	*p‘op‘oxealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*katarealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §17	*ełealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §17	*əndeluzeal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §17	*t‘řuc‘eal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §17	*hambarjeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §17	*ełeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §17	*ənkłmeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*mŕaylec‘uc‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*slac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §17	*ap‘šeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §17	*hareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §17	*hastateal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §17	*ušabereal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §17	*kangneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §17	*yacec‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §17	*xap‘aneal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §17	*barjrealn*	ADJ	PASS	ITR							
ŁP‘ §17	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*drošmeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §17	*hawatac‘eal*	ADJ	ACT	ITR							
ŁP‘ §17	*bac‘eal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §17	*cageal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §17	*kangneal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*tełekac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*arkeal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §17	*cackeal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §17	*kangneal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §17	*kendanac‘eal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §17	*glorealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*darjeal*	ADV									
ŁP‘ §17	*ełeal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §17	*cackeal*	ADJ	PASS	ITR							
ŁP‘ §17	*əndeluzeal*	ADJ	PASS	ITR							

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §17	*real*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §17	*bazmealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*arhamarheal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §17	*barjrealn*	ADJ	PASS	ITR							
ŁP‘ §17	*asacʿeal*	V	ACT	TR	+	NOM	+	+	Ø	OAV	+
ŁP‘ §17	*cnkeals*	ADJ	ACT	ITR							
ŁP‘ §17	*barjeal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §17	*greal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*knkʿeal*	V	PASS	ITR	-			-		V	+
ŁP‘ §17	*spʿŕeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §17	*əntreal*	ADJ	PASS	ITR							
ŁP‘ §17	*pʿorjeal*	ADJ	PASS	ITR							
ŁP‘ §17	*nšanakeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §17	*caleal*	ADJ	PASS	ITR							
ŁP‘ §17	*deal*	ADJ	PASS	ITR							
ŁP‘ §17	*arkeal*	V	ACT	TR	+	NOM	+	+	Ø	AVO	+
ŁP‘ §17	*greal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*grealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*xangarealk‘*	ADJ	PASS	ITR							
ŁP‘ §17	*jeŕnadrealk‘*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §17	*ǰnǰeal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §17	*greal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*darjeal*	ADV									
ŁP‘ §17	*arhamarhealk‘*	V	PASS	ITR	-			+	S	V	-
ŁP‘ §17	*ənkecʿealk‘*	V	PASS	ITR	-			-		V	-
ŁP‘ §17	*caleal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §17	*kʿahanayacʿeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §17	*kreal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §17	*yaǰordeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §17	*hambereal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*stugeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §17	*miabaneal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §17	*zawracʿealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*hamareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §17	*vačaŕeal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §17	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §17	*hayecʿeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*hasealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*zawracʿealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*arjakealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*bovandakealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §17	*tʿŕucʿeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*ušadrealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §17	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*katareal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §17	*zartʿucʿeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*barjrealn*	ADJ	PASS	ITR							
ŁP‘ §17	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §17	*lŕeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §17	*erkucʿeal*	V	ACT	ITR	-			-		V	+
ŁP‘ §17	*patuhaseal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §18	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §18	*hareal*	CVB	PASS	ITR	+	GEN		-		SV	+
ŁP‘ §18	*ampʿopʿeal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §18	*kecʿeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §18	*haseal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §18	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §18	*hastateal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §18	*tueal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §18	*ambarjeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §18	*aŕeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §18	*yanuanealn*	ADJ	PASS	ITR							
ŁP‘ §18	*kazmeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §18	*šineal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §18	*himnacʿucʿeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §18	*kargeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §18	*aŕaweleal*	ADJ	PASS	ITR							
ŁP‘ §18	*dimealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §19	*aŕeal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §19	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §19	*kazmeal*	CVB	ACT	TR	-		+	-		OV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §20	*arkeal*	V	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §20	*gteal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §20	*p‘esayac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §20	*halaceal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §20	*gitac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §20	*p‘axuc‘eal*	CVB	PASS	ITR	+	GEN		-		SV	+
ŁP‘ §20	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §20	*arɬeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §20	*čełk‘eal*	CVB	ACT	ITR	-			-		VO	+
ŁP‘ §20	*arɬak‘ealn*	ADJ	PASS	ITR							
ŁP‘ §20	*vardapeteal*	CVB	ACT	TR	+	NOM	+	-		OAV	+
ŁP‘ §20	*sermaneal*	V	ACT	TR	+	NOM	+	-		OAV	+
ŁP‘ §20	*arhamarheal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §20	*mteal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §20	*urac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §20	*ełeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §20	*sarseal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §20	*ełealk‘*	ADJ	ACT	ITR							
ŁP‘ §20	*atok‘ac‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §20	*hasealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §20	*č‘karac‘eal*	CVB	ACT	ITR	-			-		V	-
ŁP‘ §20	*c‘asuc‘eal*	CVB	PASS	ITR	+	GEN		-		SV	+
ŁP‘ §20	*hnazandeal*	V	ACT	ITR	+	NOM		+	S	VS	+
ŁP‘ §20	*kargealk‘*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §20	*meɬadrealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §20	*lueal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §20	*pɬtoreal*	ADJ	PASS	ITR							
ŁP‘ §20	*anzgayeal*	ADJ	ACT	ITR							
ŁP‘ §20	*arɬeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §20	*tapac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §20	*matuc‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §20	*darjeal*	ADV									
ŁP‘ §20	*zedealn*	ADJ	PASS	ITR							
ŁP‘ §20	*sahmaneal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §20	*matakarareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §20	*useal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §20	*ənkɬmeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §20	*miac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §20	*nerkeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §20	*č‘karac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §20	*imac‘eal*	ADJ	PASS	ITR							
ŁP‘ §20	*tareal*	ADJ	PASS	ITR							
ŁP‘ §20	*ənkaleal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §20	*tanjeal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §20	*zgetneal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §20	*č‘karac‘eal*	V	ACT	ITR	-			-		V	+
ŁP‘ §20	*gteal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §20	*zarkuc‘eal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §20	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §20	*arɬeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §20	*luac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §20	*darjealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §20	*lusap‘aylealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §20	*darjealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §20	*p‘oxealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §20	*spitakac‘eal*	ADJ	PASS	ITR							
ŁP‘ §20	*sewac‘eal*	ADJ	PASS	ITR							
ŁP‘ §21	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §21	*ełeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §21	*mteal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §21	*mt‘ereal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §21	*koruseal*	ADJ	PASS	ITR							
ŁP‘ §21	*molorealk‘*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §21	*hogac‘eal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
ŁP‘ §21	*aceal*	V	ACT	TR	-			-		V	+
ŁP‘ §21	*hastateal*	V	PASS	ITR	-			-		V	+
ŁP‘ §21	*teseal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §21	*grgřeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §21	*elewelealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §21	*hačeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §21	*goveal*	CVB	ACT	TR	+	NOM		-		AV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §21	*zarmac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §21	*goveal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §21	*greal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §21	*arareal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §22	*aceal*	V	ACT	TR	+	GEN		-		AV	+
ŁP‘ §22	*tełekac‘eal*	CVB	PASS	ITR	+	GEN		-		SV	+
ŁP‘ §22	*culac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §22	*lueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §22	*zkarcec‘eal*	ADJ	PASS	ITR							
ŁP‘ §22	*koruseal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §23	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §23	*ənt‘erc‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §23	*grealsn*	ADJ	PASS	ITR							
ŁP‘ §23	*imac‘eal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §23	*canuc‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §23	*trtmeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §23	*cneal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §23	*ačec‘eal*	CVB	ACT	ITR	+	NOM		-		V	+
ŁP‘ §23	*jgteal*	CVB	ACT	TR	+	NOM	+	-		VO	+
ŁP‘ §23	*vripealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §23	*žołovealk‘*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §24	*greal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §24	*erkuc‘eal*	CVB	PASS	ITR	+	GEN		-		SV	+
ŁP‘ §24	*edeal*	V	ACT	TR	+	GEN		-		AV	+
ŁP‘ §24	*lřeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §24	*useal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §24	*hastateal*	V	ACT	ITR	-			-		V	+
ŁP‘ §24	*greal*	V	IMPRS	TR	-		+	+	Ø	OV	+
ŁP‘ §24	*tueal*	V	IMPRS	TR	-		+	-		OV	+
ŁP‘ §24	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §24	*zgrealsd*	ADJ	PASS	ITR							
ŁP‘ §24	*lueal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
ŁP‘ §24	*anuaneal*	ADJ	PASS	ITR							
ŁP‘ §24	*hastateal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §25	*greal*	V	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §25	*hramayeal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §25	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §25	*grgŕeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §25	*kac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §25	*greal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
ŁP‘ §25	*grgŕeal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §25	*zayrac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §25	*culac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §25	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §25	*ənt‘erc‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §25	*trtmealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §25	*apastaneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §25	*xřovealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §25	*zařak‘ealsn*	ADJ	PASS	ITR							
ŁP‘ §25	*dimeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §25	*zmiabanealsn*	ADJ	ACT	ITR							
ŁP‘ §25	*orošeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §25	*urac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §26	*hasealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §26	*tueal*	V	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §26	*asac‘ealk‘n*	ADJ	PASS	ITR							
ŁP‘ §26	*harc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §26	*hamareal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §26	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §26	*erkrordeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §26	*hašueal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §26	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §26	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §26	*arareal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §26	*č‘anddimac‘ealk‘*	CVB	ACT	ITR	-			-		V	-
ŁP‘ §26	*c‘uc‘eal*	V	ACT	TR	+	GEN	+	-		OAV	+
ŁP‘ §26	*šrǰeal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §26	*kec‘eal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §26	*yamařeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §26	*kac‘eal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §26	*edeal*	V	ACT	TR	-			-		V	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §26	*edeal*	V	ACT	TR	-			+	Ø	V	+
ŁP‘ §26	*ənkaleal*	V	ACT	TR	-		+	+	Ø	VO	+
ŁP‘ §26	*hastateal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §26	*ełeal*	V	ACT	ITR	+	NOM		+	S	VS	-
ŁP‘ §26	*arˇeal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §26	*šnorheal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §27	*žołoveal*	V	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §27	*tarakusealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §27	*arˇeal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §27	*yacec‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §27	*jgeal*	V	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §27	*zhramayeals*	ADJ	PASS	ITR							
ŁP‘ §27	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §27	*t‘ołeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §27	*apawinealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §27	*hastatealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §27	*edealk‘*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §27	*xałac‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §27	*xorhealk‘n*	ADJ	PASS	ITR							
ŁP‘ §27	*teseal*	V	ACT	TR	+	GEN		+	Ø	VA	+
ŁP‘ §27	*eleal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §27	*xorheal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §27	*yaweleal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §27	*maceal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §27	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §27	*xřoveal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §27	*ekeald*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §27	*arˇaweleal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §27	*useal*	V	ACT	TR	-		+	+	A	OV	+
ŁP‘ §27	*ənkłmealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §27	*tueal*	V	ACT	TR	-		+	+	A	OV	-
ŁP‘ §27	*imac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §27	*žołovealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §27	*hawaneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §27	*yarˇajagrealn*	ADJ	PASS	ITR							
ŁP‘ §27	*useal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §27	*xrateal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §27	*zgrealsn*	ADJ	PASS	ITR							
ŁP‘ §27	*darjeal*	ADV									
ŁP‘ §27	*tenč‘ac‘eal*	ADJ	ACT	ITR							
ŁP‘ §27	*greal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §27	*nzoveal*	ADJ	PASS	ITR							
ŁP‘ §27	*arˇaweleal*	ADJ	PASS	ITR							
ŁP‘ §27	*arˇak‘ealn*	ADJ	PASS	ITR							
ŁP‘ §27	*edeal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §27	*zasac‘eals*	ADJ	PASS	ITR							
ŁP‘ §27	*t‘ulac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §27	*orošeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §27	*čełk‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §27	*matneal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §27	*šnorheal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §27	*mnac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §27	*hareal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §28	*miabanealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §28	*ert‘ealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §28	*c‘ankac‘ealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §28	*teseal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §28	*aguc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §28	*kac‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §28	*tueal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §28	*arˇeal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §28	*ert‘ealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §28	*hražarealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §28	*moloreal*	ADJ	ACT	ITR							
ŁP‘ §28	*asac‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §28	*lřeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §28	*kargeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §28	*arareal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §28	*kargeal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §28	*edeal*	V	ACT	TR	-			+	Ø	V	+
ŁP‘ §28	*haseal*	V	ACT	ITR	-			+	S	V	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §28	*teseal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
ŁP‘ §28	*gorceal*	V	ACT	TR	-		+	+	Ø	VO	+
ŁP‘ §28	*asac‘eal*	V	ACT	TR	+	GEN		-		VA	+
ŁP‘ §28	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §28	*zarmac‘ealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §28	*arʹeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §28	*hastateal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §28	*hražarealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §28	*kaskaceal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §29	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §29	*eleal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §29	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §29	*pakuc‘ealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §29	*aylap‘oxeals*	ADJ	PASS	ITR							
ŁP‘ §29	*hareal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §29	*hayec‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §29	*zasac‘ealsn*	ADJ	PASS	ITR							
ŁP‘ §29	*ak‘c‘oteal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §29	*arʹeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §29	*drʹnap‘akeals*	ADJ	PASS	ITR							
ŁP‘ §29	*barjeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §29	*cep‘eal*	ADJ	PASS	ITR							
ŁP‘ §29	*pakšoteals*	ADJ	ACT	ITR							
ŁP‘ §30	*teseal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §30	*kočʻeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §30	*gteal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §30	*useal*	V	ACT	TR	-		+	+	A	VO	+
ŁP‘ §30	*arʹeal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §30	*xawsec‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §30	*čʻkarac‘ealk‘*	CVB	ACT	ITR	-			-		V	-
ŁP‘ §30	*xarʹneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §30	*edeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §30	*ekeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §30	*kamec‘eal*	V	ACT	ITR	-			-		V	+
ŁP‘ §30	*edeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §30	*xortakeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §30	*aceal*	V	ACT	TR	+	GEN		-		VA	+
ŁP‘ §30	*tełekac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §30	*ertʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §30	*arʹeal*	V	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §30	*zknkʻeal*	ADJ	PASS	ITR							
ŁP‘ §30	*arareal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §30	*tueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §30	*haseal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §30	*yarʹajagreal*	ADJ	PASS	ITR							
ŁP‘ §30	*bereal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §30	*hawaneal*	ADJ	ACT	ITR							
ŁP‘ §30	*hogac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §30	*hogac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §30	*c‘ankac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §30	*hastateal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §30	*useal*	V	ACT	TR	-		+	+	A	VO	+
ŁP‘ §30	*hawatac‘eal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §30	*p‘axuc‘eals*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §30	*zangiteal*	V	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §30	*edeal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §30	*arareal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §30	*gnac‘eal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §30	*młeal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
ŁP‘ §30	*pataheal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §30	*kac‘eal*	V	ACT	ITR	+	NOM		+	S	VS	+
ŁP‘ §31	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §31	*ekealk‘*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §31	*kargeal*	ADJ	PASS	ITR							
ŁP‘ §31	*argeleal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §31	*argeleal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §31	*arʹajadreal*	ADJ	PASS	ITR							
ŁP‘ §31	*hayec‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §31	*čʻhawaneal*	CVB	ACT	ITR	+	NOM		-		VS	-
ŁP‘ §31	*hawaneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §31	*argeleal*	CVB	PASS	ITR	+	NOM		-		VS	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §31	*vtangeal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §31	*dipealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §31	*c‘ankac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §31	*jgeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §31	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §31	*arareal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §31	*arareal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §32	*aceal*	V	ACT	TR	+	NOM	+	+	A	OAV	+
ŁP‘ §32	*arhamarheal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §32	*imac‘eal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §32	*arˇeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §32	*žołoveal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §32	*kamec‘eal*	CVB	ACT	ITR	+	GEN		-		SV	-
ŁP‘ §32	*čanač‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §32	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §32	*taraceal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §32	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §32	*ełeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §32	*kaleal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §32	*tareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §32	*yanuaneal*	ADJ	PASS	ITR							
ŁP‘ §32	*k‘arkoceal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §32	*yaytneal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §32	*darjeal*	ADV									
ŁP‘ §32	*arˇeal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §32	*darjeal*	ADV									
ŁP‘ §32	*erdueal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §32	*knk‘eal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	-
ŁP‘ §32	*hambarjeal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
ŁP‘ §32	*barjeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §32	*tareal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §32	*hełeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §32	*verac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §32	*urac‘ealk‘s*	ADJ	ACT	ITR							
ŁP‘ §32	*złjac‘ealk‘s*	ADJ	ACT	ITR							
ŁP‘ §32	*yanc‘uc‘ealk‘s*	ADJ	ACT	ITR							
ŁP‘ §32	*apawinealk‘s*	ADJ	ACT	ITR							
ŁP‘ §32	*glorealk‘s*	ADJ	ACT	ITR							
ŁP‘ §32	*kangnealk‘s*	ADJ	PASS	ITR							
ŁP‘ §32	*caxeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §32	*cakoteal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §32	*knk‘ealk‘*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §32	*sarseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §32	*heřac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §32	*meržeal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §32	*kac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §32	*anicealk‘*	ADJ	PASS	ITR							
ŁP‘ §32	*patrasteal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §32	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §32	*greal*	CVB	IMPRS	TR	-		+	-		VO	+
ŁP‘ §32	*knk‘eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §32	*edeal*	CVB	ACT	TR	+	GEN	+	-		OAV	+
ŁP‘ §32	*katareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §32	*erkrpageal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §32	*arjakealk‘*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §32	*arˇeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §32	*ɔmbřneal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §33	*katareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §33	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §33	*ekealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §33	*lueal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §33	*imac‘eal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §33	*kazmeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §33	*edeal*	ADJ	PASS	ITR							
ŁP‘ §33	*zasac‘ealsn*	ADJ	PASS	ITR							
ŁP‘ §33	*arareal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §33	*patrasteal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §33	*tueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §33	*yařajagrealsn*	ADJ	PASS	ITR							
ŁP‘ §34	*arˇeal*	V	ACT	TR	+	NOM		-		AV	+
ŁP‘ §34	*canuc‘eal*	CVB	ACT	TR	+	GEN	+	-		OAV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §34	*kazmeals*	ADJ	PASS	ITR							
ŁP‘ §34	*argeleal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §34	*hražareal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §34	*mteal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §34	*arʹeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §34	*herʹac‘eal[k‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §34	*arareal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §34	*greal*	CVB	ACT	TR	+	NOM	+	-		VAO	+
ŁP‘ §34	*katareal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §35	*haseal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §35	*lueal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §35	*teseal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §35	*hayec‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §35	*k‘ajalereal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §35	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §35	*hayec‘eal*	CVB	ACT	TR	+	GEN		-		SV	+
ŁP‘ §35	*zawrac‘ealk‘*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §35	*k‘ajalerealk‘*	V	ACT	ITR	-			-		V	+
ŁP‘ §35	*hasealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §35	*hayec‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §35	*bažaneal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §35	*yawrineal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §35	*apawinealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §35	*katareal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §35	*iǰeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §35	*jgeal*	V	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §35	*zerceal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §35	*t‘aɫeal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §35	*haneal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §35	*zarhurec‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §35	*hayec‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §35	*arareal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §35	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §35	*c‘rueals*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §35	*elealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §35	*vstaheal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §35	*hawaneal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §35	*xoc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §35	*ɫeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §35	*šnorheal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §35	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §36	*nengeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §36	*kac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §36	*mnac‘ealk‘n*	ADJ	ACT	ITR							
ŁP‘ §36	*kac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §36	*darjuc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §36	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §36	*žoɫoveal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §36	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §36	*gorceal*	V	ACT	TR	+	NOM	+	+	Ø	OVA	+
ŁP‘ §36	*zgereal*	ADJ	PASS	ITR							
ŁP‘ §36	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §36	*arʹeal*	V	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §36	*srbealk‘*	ADJ	PASS	ITR							
ŁP‘ §36	*ɫeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §36	*pahpaneal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §36	*aceal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §36	*amač‘ec‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §36	*dadarealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §36	*c‘ankac‘ealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §36	*bereals*	ADJ	PASS	ITR							
ŁP‘ §36	*tueal*	V	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §36	*zgrealsn*	ADJ	PASS	ITR							
ŁP‘ §36	*zgrealsn*	ADJ	PASS	ITR							
ŁP‘ §36	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §36	*hawatac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §36	*pndealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §37	*katareal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §37	*haseal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §37	*tawneal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §37	*ert‘ealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §37	*haseal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §37	*dadareal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §37	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §37	*ənt‘ac‘eal*	V	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §37	*čepeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §37	*ert‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §37	*ankeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §37	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §37	*darjeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §37	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §37	*aceal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §37	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §37	*aceal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §38	*dimeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §38	*gteal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §38	*kamec‘eal*	V	ACT	ITR	+	GEN		+	S	SV	+
ŁP‘ §38	*tueal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §38	*edeal*	V	ACT	TR	+	GEN		+	Ø	VA	+
ŁP‘ §38	*hasealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §38	*lc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §38	*katareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §38	*zawrac‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §38	*čařagayt‘eal*	ADJ	ACT	ITR							
ŁP‘ §38	*patmeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §38	*gitac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §38	*ereweal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §38	*pahealk‘d*	ADJ	PASS	ITR							
ŁP‘ §38	*meržeal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §38	*vičakeal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §38	*xrateal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §38	*zawrac‘uc‘eal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §38	*vařeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §38	*zawrinadreal*	ADJ	PASS	ITR							
ŁP‘ §38	*hasealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §38	*lueal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §38	*yaǰordeal*	ADJ	PASS	ITR							
ŁP‘ §38	*hałordealk‘*	ADJ	ACT	ITR							
ŁP‘ §38	*bac‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §38	*mełkeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §38	*c‘ankac‘ealn*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §38	*xawsec‘eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §38	*nparakeal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §38	*vařeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §38	*hałordeal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §39	*merjeal*	V	ACT	ITR	+	NOM		+	S	VS	+
ŁP‘ §39	*bažaneal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §39	*arareal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §39	*c‘ankac‘ealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §39	*darjeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §39	*teseal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §39	*lk‘eals*	ADJ	PASS	ITR							
ŁP‘ §39	*partaseals*	ADJ	ACT	ITR							
ŁP‘ §39	*hayec‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §39	*p‘axuc‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §39	*ařeal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §39	*pateal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §39	*dipealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §39	*haseal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §39	*argeleal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §39	*hateal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §39	*kotoreal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §39	*arareal*	ADJ	PASS	ITR							
ŁP‘ §39	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §39	*harc‘eal*	V	ACT	ITR	-			-		V	+
ŁP‘ §39	*ijuc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §39	*greal*	ADJ	PASS	ITR							
ŁP‘ §39	*hamareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §39	*tełekac‘ealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §40	*greal*	CVB	ACT	TR	+	NOM	+	-		SV	+
ŁP‘ §40	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §40	*ənkłmeal*	CVB	ACT	ITR	+	GEN		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §40	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §40	*teseal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §40	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §40	*mnac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §41	*bažaneal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §41	*dimeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §41	*yameal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §41	*ert‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §41	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §41	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §41	*tełekac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §41	*tueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §41	*greal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §41	*knk‘eal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §41	*xałałac‘eals*	ADJ	PASS	ITR							
ŁP‘ §41	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §41	*asac‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §41	*ełeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §41	*yapałeal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §41	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §41	*ert‘ealn*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §41	*žamaneal*	CVB	ACT	ITR	-			-		V	-
ŁP‘ §41	*gteal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §41	*ekeal*	V	ACT	ITR	-					V	+
ŁP‘ §41	*iǰeal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §41	*zinealk‘*	ADJ	PASS	ITR							
ŁP‘ §41	*darjuc‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §41	*hayec‘eal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §41	*mteal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §41	*katareal*	ADJ	PASS	ITR							
ŁP‘ §41	*zarhurealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §41	*lueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §41	*mxit‘areal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §42	*ařeal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §42	*hastateal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §42	*nuačeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §42	*kamec‘eal*	V	ACT	TR	+	NOM		-		VA	+
ŁP‘ §42	*kaleal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §42	*edeal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §42	*kaleal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §42	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §42	*kaleal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §42	*karcec‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §42	*nšawakeal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
ŁP‘ §42	*arareal*	V	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §42	*zkarcec‘eal*	ADJ	PASS	ITR							
ŁP‘ §42	*canuc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §42	*vripeal*	ADJ	ACT	ITR							
ŁP‘ §42	*harc‘eal*	V	ACT	TR	-		+	-		OV	-
ŁP‘ §42	*yařajeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §42	*merkac‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §42	*c‘rueal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §42	*kapeals*	ADJ	PASS	ITR							
ŁP‘ §42	*nstuc‘eals*	ADJ	PASS	ITR							
ŁP‘ §42	*harc‘eal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §42	*lřealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §42	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §42	*aceal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §42	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §42	*katareal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §42	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §42	*tełekac‘eal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §42	*karcec‘uc‘eal*	CVB	ACT	TR	+	GEN	+	-		AOV	-
ŁP‘ §42	*xelac‘noreal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §42	*arareal*	ADJ	PASS	ITR							
ŁP‘ §42	*mxit‘areal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §42	*kamec‘eal*	V	ACT	TR	+	NOM		-		VA	+
ŁP‘ §42	*yařajeal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §42	*edeal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §42	*real*	V	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §42	*c‘eal*	V	ACT	TR	+	GEN		-		AV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §42	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		OAV	+
ŁP‘ §42	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §42	*ənkłmeal*	CVB	ACT	ITR	+	GEN		-		AV	+
ŁP‘ §42	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §42	*patreal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §42	*xawsec‘eal»*	V	ACT	ITR	+	GEN		+	S	SV	-
ŁP‘ §42	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §42	*vhateal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §43	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §43	*teseal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §43	*uxteal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §43	*zgac‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	-
ŁP‘ §43	*aceal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §43	*tareal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §43	*anc‘uc‘eal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
ŁP‘ §43	*ełeal*	V	ACT	ITR	+	NOM		+	S	VS	+
ŁP‘ §43	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §43	*hayec‘eal*	V	ACT	ITR	-			-		V	+
ŁP‘ §43	*hamareal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §43	*teseal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §43	*moxreal*	ADJ	PASS	ITR							
ŁP‘ §43	*kac‘eal*	ADJ	ACT	ITR							
ŁP‘ §43	*imac‘uc‘eal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
ŁP‘ §43	*ařeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §43	*lueal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §43	*anc‘uc‘eal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	-
ŁP‘ §43	*vnaseal*	V	ACT	TR	-		+	-		VO	-
ŁP‘ §43	*mecareal*	V	ACT	TR	-		+	+	Ø	VO	+
ŁP‘ §43	*arareal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §44	*patuhaseal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §44	*t‘šuařac‘eal*	ADJ	ACT	ITR							
ŁP‘ §44	*dizeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §44	*šnorheal*	V	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §44	*dimeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §44	*paheal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
ŁP‘ §44	*ełeal*	V	ACT	ITR	+	GEN		+	S	SV	+
ŁP‘ §44	*teseal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
ŁP‘ §44	*t‘šuařac‘uc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §44	*pataheal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §44	*kac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §44	*erkareal*	ADJ	PASS	ITR							
ŁP‘ §44	*patueal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §44	*lueal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
ŁP‘ §44	*gorceal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §44	*kargeal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §44	*c‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §44	*zkatarealn*	ADJ	PASS	ITR							
ŁP‘ §44	*złjac‘eal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §44	*pataheal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §44	*ačeal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §44	*šołac‘uc‘eal*	CVB	ACT	TR	+	NOM		-		AV	+
ŁP‘ §44	*cnealn*	ADJ	PASS	ITR							
ŁP‘ §44	*ełealn*	ADJ	ACT	ITR							
ŁP‘ §44	*elealn*	ADJ	ACT	ITR							
ŁP‘ §44	*vařeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §44	*darjeal*	ADV									
ŁP‘ §44	*kurac‘eal*	ADJ	PASS	ITR							
ŁP‘ §44	*caxeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §44	*xařneal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §44	*karac‘ealk‘*	V	ACT	ITR	+	NOM		-		SV	-
ŁP‘ §44	*handuržealk‘*	CVB	ACT	ITR	-			-		V	-
ŁP‘ §44	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §44	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §44	*teseal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §44	*ełeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §44	*lueal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §44	*zuart‘ac‘eals*	ADJ	ACT	ITR							
ŁP‘ §44	*tełekac‘eal*	CVB	PASS	ITR	+	GEN		-		VS	+
ŁP‘ §44	*lueal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
ŁP‘ §44	*patrasteal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §44	*k‘ajalereal*	CVB	PASS	ITR	-			-		V	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §44	*aceal*	V	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §44	*yawrineal*	CVB	ACT	TR	+	NOM	+	-		OAV	+
ŁP‘ §44	*xorheal*	V	ACT	ITR	+	GEN		+	S	VS	+
ŁP‘ §44	*xawseal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §44	*ɔmbŕneal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §44	*zayragneal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §44	*zayragneal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §44	*lc‘eal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §44	*včareal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §45	*mteal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §45	*srtmteal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §45	*zkapealsn*	ADJ	PASS	ITR							
ŁP‘ §45	*lueal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
ŁP‘ §45	*arkeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §45	*t‘šuaŕac‘ealn*	ADJ	ACT	ITR							
ŁP‘ §45	*heŕac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §45	*lc‘eal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §45	*aceal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §45	*harc‘eal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §45	*aceal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §45	*teseal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §45	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §45	*erkrordeal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §45	*tueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §45	*aŕeal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §45	*matuc‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §45	*zawrac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §45	*matuc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §45	*kamec‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §45	*edeal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §45	*aŕeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §45	*edeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §45	*knk‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §45	*p‘axuc‘eal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §45	*zarhureal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §45	*miabanealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §45	*mawteal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §45	*hnazandeal*	V	ACT	ITR	+	NOM		+	S	SV	-
ŁP‘ §45	*arkeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §45	*arareal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §45	*nengeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §45	*zardareal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §45	*greal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §45	*knk‘eal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §45	*tueal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §45	*grealn*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
ŁP‘ §45	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §45	*hiac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §46	*koč‘ec‘eal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §46	*zayrac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §46	*lueal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
ŁP‘ §46	*aceal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §46	*tueal*	V	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §46	*erdmnec‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §46	*erdmnec‘uc‘eal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §46	*darjeal*	ADV									
ŁP‘ §46	*gumareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §46	*matneal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §46	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §46	*haseal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §46	*pateal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §46	*p‘akeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §46	*ełeal*	CVB	IMPRS	ITR	-			-		V	+
ŁP‘ §46	*dataparteal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §46	*jałkeal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §46	*merkac‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §46	*kaleal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §46	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §46	*šineal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §46	*tanjeal*	CVB	PASS	ITR	+	GEN		-		SV	+
ŁP‘ §46	*sp‘ŕeal*	CVB	ACT	TR	+	NOM	+	-		VO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §46	*žaŕangeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §46	*patrasteal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §47	*kapeal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §48	*arareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §48	*zkapealsn*	ADJ	PASS	ITR							
ŁP‘ §48	*eleal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §48	*ekeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §48	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §48	*zkapealsn*	ADJ	PASS	ITR							
ŁP‘ §48	*haseal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §48	*ełeal*	CVB	ACT	ITR	-					V	+
ŁP‘ §48	*koruseal*	CVB	ACT	TR	-		+	-		V	+
ŁP‘ §48	*čakateal*	CVB	ACT	TR	+	GEN	+	-		OVA	-
ŁP‘ §48	*ankealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §48	*darjeal*	ADV									
ŁP‘ §48	*arareal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §48	*teseal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §48	*ənkłmeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §48	*ełeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §48	*dipeal*	V	ACT	ITR	+	NOM		+	S	VS	+
ŁP‘ §48	*kac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §48	*c‘asuc‘eal*	CVB	PASS	ITR	+	GEN		-		SV	+
ŁP‘ §48	*t‘ołeal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §48	*vatnealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §48	*imac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §48	*aŕeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §48	*zayrac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §48	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §48	*yerkareal*	CVB	ACT	TR	+	NOM		-		V	+
ŁP‘ §48	*patžealk‘*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §48	*grgŕeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §48	*kapeal*	ADJ	PASS	ITR							
ŁP‘ §48	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §49	*tanjeal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §49	*haseal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §49	*katareal*	V	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §49	*lc‘eal*	V	PASS	ITR	-			-		V	+
ŁP‘ §49	*hateal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §50	*kapeals*	ADJ	PASS	ITR							
ŁP‘ §50	*kapealk‘*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §50	*lueal*	V	ACT	TR	+	GEN		+	Ø	VA	+
ŁP‘ §50	*ełeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §50	*tełekac‘eal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §50	*tareal*	CVB	ACT	TR	+	GEN	+	-		OAV	+
ŁP‘ §50	*arareal*	V	IMPRS	TR	-		+	+	Ø	OV	+
ŁP‘ §50	*spanealk‘n*	ADJ	PASS	ITR							
ŁP‘ §50	*vripeal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §50	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §50	*mteal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §50	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §50	*zxawsec‘ealsn*	ADJ	PASS	ITR							
ŁP‘ §50	*zhaseal*	ADJ	ACT	ITR							
ŁP‘ §50	*kapealn*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §50	*katareal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §51	*kapeal*	ADJ	PASS	ITR							
ŁP‘ §51	*lueal*	CVB	ACT	TR	+	NOM		-		AV	+
ŁP‘ §51	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §51	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	VOA	+
ŁP‘ §51	*stugeal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §51	*čšgrteal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §51	*zawrac‘ealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §51	*tueal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §51	*katareal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §51	*yerkareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §51	*yruc‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §51	*zełeal*	ADJ	ACT	ITR							
ŁP‘ §51	*amp‘op‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §51	*arjakeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §51	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §51	*axtac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §51	*meržeal*	V	PASS	ITR	+	NOM		+	S	VS	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §51	*k‘arozeal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §51	*teseal*	V	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §51	*gereal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §51	*darjeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §51	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §51	*ařak‘eals*	ADJ	PASS	ITR							
ŁP‘ §51	*ařak‘ealn*	ADJ	PASS	ITR							
ŁP‘ §51	*naxanjec‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §51	*zawrac‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §51	*arkeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §51	*awrhnealk‘*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §51	*kapealsn*	ADJ	PASS	ITR							
ŁP‘ §51	*yanjneal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §51	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §51	*awrhneal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §51	*žołovealsn*	ADJ	ACT	ITR							
ŁP‘ §51	*žołoveal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §51	*ařak‘ealsn*	ADJ	PASS	ITR							
ŁP‘ §51	*lc‘ealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §51	*k‘ajalerealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §51	*apawinealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §52	*uraxac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §52	*jardeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §52	*bekeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §52	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §52	*gitac‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §52	*trtmealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §52	*hasealk‘*	V	ACT	ITR	-			-		V	+
ŁP‘ §52	*ełealk‘*	V	ACT	ITR	-			-		V	+
ŁP‘ §52	*hamakealk‘*	V	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §52	*ełeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §52	*pačučealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §52	*matuc‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §52	*janac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §52	*edeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §52	*ǰardeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §52	*zercuc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §52	*hamareal*	V	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §52	*jgteal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §53	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §53	*harealk‘*	V	PASS	ITR	-			-		V	+
ŁP‘ §53	*aylakerpeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §53	*ařak‘eal*	V	ACT	TR	+	NOM	+	+	Ø	AVO	+
ŁP‘ §53	*bac‘eal*	CVB	ACT	TR	+	NOM	+	-		OAV	+
ŁP‘ §53	*katareal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §53	*zasac‘eals*	ADJ	PASS	ITR							
ŁP‘ §53	*teseal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §53	*k‘ajalerealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §53	*apawinealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §53	*ankealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §53	*berkrealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §53	*ənkaleal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §53	*arjakeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §53	*arjakeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §53	*patrasteal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §53	*hražarealk‘n*	ADJ	ACT	ITR							
ŁP‘ §53	*mnac‘ealk‘n*	ADJ	ACT	ITR							
ŁP‘ §53	*oĺjunealk‘*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §53	*yułarkealk‘*	CVB	PASS	ITR	+	GEN		-		SV	+
ŁP‘ §53	*koč‘ec‘ealk‘*	CVB	PASS	ITR	+	GEN		-		SV	+
ŁP‘ §53	*ert‘ealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §53	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §53	*tareal*	V	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §53	*c‘eal*	V	ACT	TR	-			-		V	+
ŁP‘ §53	*lueal*	V	ACT	TR	-			-		V	+
ŁP‘ §53	*srtmteal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §53	*teseal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §53	*xřovealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §54	*lueal*	V	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §54	*čanaparhordeal*	V	ACT	ITR	+	GEN		+	S	SV	+
ŁP‘ §54	*kec‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §54	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §54	*hawatac‘eal*	ADJ	ACT	ITR							
ŁP‘ §54	*arareal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §54	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §54	*zgac‘uc‘eal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §54	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §54	*nmaneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §54	*ułekc‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §54	*ełeal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §54	*ełeal*	V	ACT	ITR	+	NOM		+	S	VS	+
ŁP‘ §54	*ełeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §54	*yanjneal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
ŁP‘ §54	*kac‘eal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §54	*darjeal*	ADV									
ŁP‘ §54	*ačec‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §54	*tareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §54	*heřac‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §54	*sneal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §54	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §54	*ənkaleal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §55	*yaruc‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §55	*zgac‘uc‘eal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §55	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §55	*mnac‘eal*	ADJ	ACT	ITR							
ŁP‘ §55	*arkeal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §55	*hambarjeal*	V	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §55	*kac‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
ŁP‘ §55	*gorceal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §55	*kapeal*	V	IMPRS	TR	-		+	+	Ø	OV	+
ŁP‘ §55	*yamarʹeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §55	*real*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §55	*yerkareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §55	*srtmteal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §55	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §55	*lueal*	CVB	ACT	TR	+	GEN	+	-		OAV	+
ŁP‘ §55	*imac‘eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §55	*tueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §55	*lueal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §55	*xawlac‘ealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §55	*zľjac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §55	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §55	*yamarʹeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §55	*hawatac‘eal*	ADJ	ACT	ITR							
ŁP‘ §55	*korusealk‘*	ADJ	PASS	ITR							
ŁP‘ §55	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §55	*srtmteal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §55	*t‘šnamaneal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §55	*koruseals*	ADJ	PASS	ITR							
ŁP‘ §56	*lueal*	V	ACT	TR	+	GEN		+	Ø	AV	+
ŁP‘ §56	*skseal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §56	*lueal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §56	*ełeal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §56	*useal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §56	*apšeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §56	*mořac‘eal*	ADJ	ACT	ITR							
ŁP‘ §56	*lueal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §56	*zgec‘eal*	V	ACT	TR	+	NOM	+	+	A	AVO	+
ŁP‘ §56	*zpask‘eal*	ADJ	ACT	ITR							
ŁP‘ §56	*uraxac‘ealk‘*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §56	*yerkareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §56	*bandagušeal*	ADJ	ACT	ITR							
ŁP‘ §56	*katareal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §56	*ekeald*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §56	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §56	*zasac‘ealn*	ADJ	PASS	ITR							
ŁP‘ §56	*pakšoteal*	ADJ	ACT	ITR							
ŁP‘ §56	*zawrac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §57	*srtmteal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §57	*karac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §57	*yaruc‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §57	*drdueal*	CVB	ACT	ITR	+	GEN		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §57	*gloreal*	CVB	ACT	ITR	+	GEN		-		SV	-
ŁP‘ §57	*yec‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §57	*matakarareal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §57	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §57	*zpataragealss*	ADJ	PASS	ITR							
ŁP‘ §57	*asac‘eal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §57	*yordeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §57	*zawrac‘eal*	ADJ	ACT	ITR							
ŁP‘ §57	*viraworeal*	V	PASS	ITR	-			+	S	V	-
ŁP‘ §57	*merkac‘uc‘eal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §57	*k‘anc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §57	*c‘eal*	V	ACT	TR	+	GEN		-		AV	+
ŁP‘ §57	*ašxateal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §57	*awgneal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §57	*matuc‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §57	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §57	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §57	*harc‘eal*	V	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §57	*lueal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §57	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §57	*gišatealk‘*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §57	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §57	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §57	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §57	*ařeal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §57	*kac‘ealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §57	*kutealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §57	*ijeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §57	*parureal*	CVB	ACT	TR	+	NOM		-		AVO	+
ŁP‘ §57	*korcaneal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §57	*glorealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §57	*ostuc‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §57	*kk‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §57	*karkeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §57	*xortakealk‘*	V	ACT	ITR	+	NOM		+	S	VS	+
ŁP‘ §57	*imac‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §57	*katareal*	CVB	IMPRS	TR	-		+	-		VO	+
ŁP‘ §57	*p‘arateal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §57	*ařeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §57	*yaruc‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §57	*teseal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §57	*ušaberealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §57	*č‘išxec‘ealk‘*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §57	*pndealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §57	*haseal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §57	*teseal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §57	*lueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §57	*apšealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §57	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §57	*vnaseal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §57	*merjealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §57	*ašxatealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §57	*karcec‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §57	*xřovealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §57	*slac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §57	*ijeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §57	*lusaworeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §57	*zuarčac‘ealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §57	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §57	*nšmareal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §57	*bureal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §57	*lc‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §57	*barjeal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §57	*dadareal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §57	*pateal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §57	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §57	*bereal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §57	*ełealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §57	*asac‘ealk‘*	ADJ	PASS	ITR							
ŁP‘ §57	*arareal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §57	*yaytneal*	CVB	ACT	TR	+	GEN	+	-		VAO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §57	*ułekc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §57	*tagnapeals*	ADJ	ACT	ITR							
ŁP‘ §57	*mełkeal*	ADJ	ACT	ITR							
ŁP‘ §57	*ełealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §57	*miabaneal*	CVB	ACT	ITR	-		+	-		OV	+
ŁP‘ §57	*lueal*	CVB	ACT	TR	+	GEN	+	-		OAV	+
ŁP‘ §57	*gteal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §57	*yapałeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §58	*mteal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §58	*ankealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §58	*barjeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §58	*tareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §58	*lueal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §58	*zarmac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §58	*tueal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §58	*mteal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §58	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §58	*ənkaleal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §58	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §58	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §58	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §58	*trtmealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §58	*t‘ołeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §58	*zhramayealsn*	ADJ	PASS	ITR							
ŁP‘ §58	*ktreal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §58	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §58	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §58	*bereal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §58	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §58	*ařeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §58	*tareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §58	*arareal*	V	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §58	*kec‘eal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §58	*zkargealsn*	ADJ	PASS	ITR							
ŁP‘ §58	*arjakeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §58	*c‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §58	*jeŕnadreal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §59	*darjealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §59	*caxeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §59	*hawanec‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §59	*ařeal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §59	*tareal*	V	ACT	TR	-			+	Ø	V	+
ŁP‘ §59	*hawanec‘uc‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §59	*teseal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §59	*zarmac‘ealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §59	*tueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §59	*gteal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	-
ŁP‘ §59	*teseal»*	V	ACT	TR	+	GEN	+	+	Ø	OAV	-
ŁP‘ §59	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §60	*kec‘eal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §60	*dimealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §60	*yałt‘ahareal*	CVB	ACT	TR	+	NOM	+	-		VAO	+
ŁP‘ §60	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §60	*lueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §60	*tareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §60	*kargeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §60	*mecareal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §60	*hřč‘akeal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §60	*zkapealsn*	ADJ	PASS	ITR							
ŁP‘ §61	*mořac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §61	*matuc‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §61	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §61	*dołac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §61	*hayec‘eal*	V	ACT	ITR	-			-		V	+
ŁP‘ §61	*teseal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §61	*tareal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §61	*sirec‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §61	*ztkarac‘eal*	ADJ	ACT	ITR							
ŁP‘ §61	*lc‘ealk‘s*	ADJ	PASS	ITR							
ŁP‘ §61	*aceal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §61	*kargeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §61	*useal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §61	*tpaworeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §61	*kargeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §61	*vařealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §61	*yarjakealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §61	*zawrac‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §61	*nmanealk‘*	ADJ	ACT	ITR							
ŁP‘ §61	*hayec‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §61	*šnorheal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §61	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §61	*kec‘ealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §61	*vaxčanealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §61	*awrhnealk‘*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §62	*ařaweleal*	ADJ	ACT	ITR							
ŁP‘ §62	*asac‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §62	*arareal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §62	*całkec‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §62	*usuc‘eal*	V	ACT	TR	+	NOM	+	-		OAV	+
ŁP‘ §62	*tueal*	V	ACT	TR	-			-		V	+
ŁP‘ §62	*xrateal*	V	ACT	TR	-			-		V	+
ŁP‘ §62	*hogac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §62	*ařaweleal*	ADJ	ACT	ITR							
ŁP‘ §62	*aceal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §62	*snuc‘eal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §62	*useal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §62	*mnac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §63	*gneal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §63	*tirac‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §63	*anc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §63	*heřac‘eal*	ADJ	ACT	ITR							
ŁP‘ §63	*koruseal*	ADJ	PASS	ITR							
ŁP‘ §63	*heřac‘eal*	ADJ	ACT	ITR							
ŁP‘ §63	*meřeal*	ADJ	ACT	ITR							
ŁP‘ §63	*t‘ak‘uc‘eal*	ADJ	PASS	ITR							
ŁP‘ §63	*vstaheal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §63	*anuaneal*	ADJ	PASS	ITR							
ŁP‘ §63	*arhamarhealk‘*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §63	*nmanec‘uc‘eal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §63	*kaleal*	V	ACT	TR	-		+	+	Ø	VO	+
ŁP‘ §63	*yapałeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §63	*lueal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §63	*anuaneal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §63	*ławłealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §63	*barjrac‘eal*	ADJ	ACT	ITR							
ŁP‘ §63	*žołovealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §63	*ařeal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §63	*xorhealk‘n*	ADJ	PASS	ITR							
ŁP‘ §64	*tařapeal*	ADJ	PASS	ITR							
ŁP‘ §64	*č‘karac‘eal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §64	*zawdeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §64	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §64	*ařeal*	V	ACT	TR	-			-		V	+
ŁP‘ §64	*kač‘eal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §64	*tueal*	V	ACT	TR	+	GEN		+	Ø	AV	+
ŁP‘ §64	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §64	*zayrac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §64	*šk‘ełac‘uc‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §64	*xoršeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §64	*erkuc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §64	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §64	*asac‘ealk‘d*	ADJ	PASS	ITR							
ŁP‘ §64	*əntreal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §64	*vripeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §64	*useal*	V	ACT	TR	-		+	+	A	OV	+
ŁP‘ §64	*t‘et‘ewac‘uc‘eal*	ADJ	PASS	ITR							
ŁP‘ §64	*lřeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §64	*kaleal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
ŁP‘ §64	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
ŁP‘ §64	*gteal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	-
ŁP‘ §64	*yamařeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §64	*lc‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §64	*luealsn*	ADJ	PASS	ITR							
ŁP‘ §64	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §64	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §64	*kaleal*	V	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §64	*apreal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §64	*meŕeal*	ADJ	ACT	ITR							
ŁP‘ §64	*hamareal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §64	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §64	*pndeal*	ADJ	ACT	ITR							
ŁP‘ §64	*zasac‘eals*	ADJ	PASS	ITR							
ŁP‘ §64	*yłeal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
ŁP‘ §64	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §64	*ert‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §64	*zxawsec‘eals*	ADJ	PASS	ITR							
ŁP‘ §64	*hramayeal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §64	*luealsn*	ADJ	PASS	ITR							
ŁP‘ §64	*lueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §64	*xawsec‘ealsn*	ADJ	PASS	ITR							
ŁP‘ §64	*grgŕeal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §64	*dadarec‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §64	*lueal*	V	ACT	TR	+	GEN		+	Ø	VS	+
ŁP‘ §64	*lueal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §64	*xŕoveal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §64	*p‘ap‘agealn*	V	ACT	TR	-			+	Ø	V	+
ŁP‘ §64	*patueal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §64	*awrhneal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §64	*ankeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §64	*kec‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §64	*edeal*	V	PASS	ITR	-			-		V	+
ŁP‘ §65	*ekeal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §65	*žołovealk‘*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §65	*hamakeal*	ADJ	PASS	ITR							
ŁP‘ §65	*nerkealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §65	*cnkealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §65	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §65	*teseal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §65	*kaseal*	CVB	ACT	ITR	-			-		V	-
ŁP‘ §65	*č‘karac‘eal*	CVB	ACT	TR	+	GEN		-		AV	-
ŁP‘ §65	*ert‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §65	*ekeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §65	*aŕaweleal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §65	*č‘mart‘ac‘eal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §65	*ert‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §65	*žołoveal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §65	*tueal*	CVB	ACT	TR	-			-		VO	+
ŁP‘ §65	*lueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §65	*zarmac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §65	*bereal*	V	ACT	TR	-		+	+	Ø	VO	+
ŁP‘ §65	*ełeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §65	*bereal*	V	ACT	TR	-		+	+	Ø	VO	+
ŁP‘ §65	*lueal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §65	*bereal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §65	*lueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §65	*asac‘ealsn*	ADJ	PASS	ITR							
ŁP‘ §65	*hareal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
ŁP‘ §65	*hnazandec‘uc‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §65	*kac‘uc‘eal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	-
ŁP‘ §65	*ardarac‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §65	*amač‘ec‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §65	*arhamarheal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §65	*hražareal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §65	*ekeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §65	*nahatakeal*	ADJ	ACT	ITR							
ŁP‘ §65	*patreal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §65	*yameal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §66	*tarakuseal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §66	*lueal*	V	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §66	*harealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §66	*gořozac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §66	*zawrac‘ealk‘*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §66	*aŕeal*	CVB	ACT	TR	+	GEN	+	-		VOA	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §66	*aṙeal*	V	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §66	*xorheal*	CVB	ACT	ITR	+	GEN		-		VA	+
ŁP‘ §66	*zxorhealsn*	ADJ	PASS	ITR							
ŁP‘ §66	*hamarjakealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §66	*lueal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §66	*vtangeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §66	*merjeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §66	*haseal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §66	*cneal*	V	ACT	TR	+	GEN	+	+	Ø	VOA	-
ŁP‘ §66	*canuc‘eal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §66	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §66	*edeal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
ŁP‘ §66	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §66	*k‘ajalerealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §66	*lc‘ealk‘*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §66	*lueal*	V	ACT	TR	+	GEN	+	+	Ø	VOA	+
ŁP‘ §66	*hayec‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §66	*canuc‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §66	*asac‘eal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §66	*urac‘ealk‘n*	ADJ	ACT	ITR							
ŁP‘ §66	*kac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §66	*matuc‘eal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §66	*bereal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §66	*edeal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §66	*vardapeteal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §66	*xostovaneal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §66	*xotoreal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §66	*nengeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §66	*urac‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §66	*erduealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §66	*hastatealk‘*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §66	*hražarealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §67	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §67	*srtabekealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §67	*hasealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §67	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §67	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §67	*hecealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §67	*zgac‘eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §67	*zercealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §67	*kaseal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §67	*hasealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §67	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §67	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §67	*nengeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §67	*ert‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §67	*aṙeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §67	*dimeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §67	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §67	*tueal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §67	*apstambeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §67	*haneal*	V	ACT	TR	-			+	Ø	V	+
ŁP‘ §67	*darjeal*	ADV									
ŁP‘ §67	*yłeal*	V	ACT	TR	+	GEN		+	Ø	AV	+
ŁP‘ §67	*kazmeal*	V	ACT	ITR	+	NOM		+	S	SV	-
ŁP‘ §67	*aṙeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §67	*culac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §67	*zawrac‘eal*	V	PASS	ITR	-			-		V	+
ŁP‘ §67	*pataheal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §67	*aṙeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §68	*teseal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §68	*darjeal*	ADV									
ŁP‘ §68	*patrastealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §68	*mteal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §68	*gt‘ac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §68	*hayec‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §68	*nparakeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §68	*edeal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §68	*darjealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §68	*anc‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §68	*darjeal*	ADV									

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §68	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §68	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §68	*gitac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §68	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §68	*lueal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §68	*karcec‘eal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §68	*yłeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §68	*gitac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §68	*zercealk‘*	ADJ	ACT	ITR							
ŁP‘ §68	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §68	*gorceal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
ŁP‘ §68	*arareal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §68	*lueal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §68	*arjakeal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §68	*heceal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §68	*yłeal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	-
ŁP‘ §68	*ekeal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §68	*asac‘eal*	CVB	ACT	ITR	+	GEN		-		VA	+
ŁP‘ §68	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §68	*harealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §68	*ekeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §68	*č‘uealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §69	*lueal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §69	*katareal*	CVB	ACT	TR	+	NOM	+	-		VO	+
ŁP‘ §69	*bažaneal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §69	*haseal*	CVB	ACT	ITR	+	GEN	+	-		SV	+
ŁP‘ §69	*zawrac‘uc‘eal*	CVB	ACT	ITR	+	GEN	+	-		SV	+
ŁP‘ §69	*tueal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §69	*eleal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §69	*čakatealk‘*	ADJ	ACT	ITR							
ŁP‘ §69	*teseal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §69	*xelac‘noreal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §69	*ekealk‘*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §69	*yarjakealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §69	*yařajeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §69	*ařeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §69	*nengeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §69	*dimealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §69	*yařajeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §69	*c‘rueal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §69	*ankeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §69	*zerceal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §69	*zyařajeal*	ADJ	ACT	ITR							
ŁP‘ §69	*hareal*	CVB	ACT	TR	+	NOM	+	-		OAV	+
ŁP‘ §69	*lueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §69	*c‘asuc‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §69	*hastateal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §69	*dimeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §69	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §69	*hareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §69	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §69	*meřeals*	ADJ	ACT	ITR							
ŁP‘ §69	*katareal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §69	*gteal*	V	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §69	*arbanekeals*	ADJ	ACT	ITR							
ŁP‘ §69	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §69	*teseal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	-
ŁP‘ §69	*ankeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §69	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §69	*ekealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §69	*barjeal*	ADJ	PASS	ITR							
ŁP‘ §69	*gteal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §69	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §69	*dimealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §69	*katareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §69	*šnorheal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §70	*zasac‘ealsn*	ADJ	PASS	ITR							
ŁP‘ §70	*anc‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §70	*apawinealn*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §70	*vařeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §70	*ařeal*	V	ACT	TR	+	GEN	+	-		AVO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §70	*mak‘real*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §70	*ənkrkeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §70	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §70	*sayt‘ak‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §70	*hogac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §70	*č‘ełealk‘*	CVB	ACT	ITR	+	NOM		-		SV	-
ŁP‘ §70	*tueal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §70	*halordealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §70	*miabaneal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §70	*hawaneal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §70	*žołoveal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §70	*merjealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §70	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §70	*zgac‘eal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §70	*zinealk‘*	ADJ	ACT	ITR							
ŁP‘ §70	*k‘ajalerealk‘*	ADJ	ACT	ITR							
ŁP‘ §70	*hareal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §70	*asac‘eal*	V	ACT	TR	+	GEN		+	Ø	AV	+
ŁP‘ §70	*lueal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §70	*hareal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §70	*teseal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §70	*ełeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §70	*zmnac‘ealsn*	ADJ	ACT	ITR							
ŁP‘ §70	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §70	*čanač‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §70	*p‘araworeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §70	*patmeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §70	*teseal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §70	*otjuneal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §71	*anc‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §71	*xałac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §71	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §71	*haseal*	V	ACT	ITR	+	NOM		+	S	VS	+
ŁP‘ §71	*arəeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §71	*č‘uealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §71	*ert‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §71	*mawtealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §71	*zsahmaneal*	ADJ	PASS	ITR							
ŁP‘ §71	*hasealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §71	*«yusac‘ealk‘n*	ADJ	ACT	ITR							
ŁP‘ §71	*sp‘ŕeal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §71	*hayec‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §71	*šaržeal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §71	*c‘rueal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §71	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §71	*zineal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §71	*dimeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §71	*ušadreal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §71	*šaržeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §71	*yarjakeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §71	*mawteal*	CVB	ACT	ITR	+	GEN		-		VA	+
ŁP‘ §71	*hareal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §71	*teseal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §71	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §71	*zarhureal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §71	*zawrac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §71	*knk‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §71	*tueal*	CVB	ACT	TR	-		+	-		OV	-
ŁP‘ §71	*šaržeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §71	*arəeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §71	*arkeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §71	*darjeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §71	*ənkec‘eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §71	*hayec‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §71	*teseal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §71	*arəeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §71	*darjealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §71	*ełealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §71	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §71	*zuarčac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §71	*ełeal*	CVB	ACT	ITR	-			-		V	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §72	*zawrac‘ealk‘*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §72	*darjealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §72	*včareal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §72	*taraceal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §72	*zerceal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §72	*lc‘eal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §72	*tueal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §72	*yerkuac‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §72	*hawatac‘eal*	ADJ	ACT	ITR							
ŁP‘ §72	*arak‘ealn*	ADJ	PASS	ITR							
ŁP‘ §72	*haneal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §72	*ənkaleal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §72	*anc‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §72	*aceal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §72	*canuc‘eal*	CVB	ACT	TR	+	NOM	+	-		VAO	+
ŁP‘ §72	*canuc‘eal*	V	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §72	*arareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §72	*arəeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §73	*teseal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §73	*yerkareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §73	*ənkaleal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §73	*aceal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §73	*c‘uc‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §73	*mnac‘eal*	ADJ	ACT	ITR							
ŁP‘ §73	*p‘oxeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §73	*psakeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §73	*teseal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §73	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §73	*greal*	ADJ	PASS	ITR							
ŁP‘ §73	*yaruc‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §73	*banakealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §73	*lueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §73	*darjeal*	ADV									
ŁP‘ §73	*anc‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §73	*darjeal*	ADV									
ŁP‘ §73	*ijeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §73	*zineals*	ADJ	ACT	ITR							
ŁP‘ §73	*darjeal*	ADV									
ŁP‘ §73	*xawseal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
ŁP‘ §73	*erdueal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §73	*č‘hawatac‘eal*	CVB	PASS	ITR	+	GEN		-		VS	-
ŁP‘ §73	*č‘ueal*	V	ACT	TR	+	NOM		-		SV	+
ŁP‘ §73	*moŕac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §73	*hareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §73	*ankeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §73	*orsac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §73	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §73	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §73	*hełgac‘eal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §73	*yerkareal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §74	*srtmteal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §74	*canuc‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §74	*lk‘eals*	ADJ	PASS	ITR							
ŁP‘ §74	*mełkeals*	ADJ	PASS	ITR							
ŁP‘ §74	*tueal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §74	*p‘arəaworeal*	V	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §74	*teseal*	CVB	ACT	TR	+	GEN	+	-		OAV	+
ŁP‘ §74	*zarhureal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §74	*hareal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §74	*eleal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §74	*gteal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §74	*pataheal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §74	*bekeal*	V	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §74	*edeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §74	*vripeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §74	*p‘arəaworeal*	ADJ	PASS	ITR							
ŁP‘ §74	*p‘axuc‘ealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §74	*darjuc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §74	*ekeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §74	*hecuc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §74	*haneal*	CVB	ACT	TR	-		+	-		OV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §74	*ełeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §74	*zerceal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §74	*arełeal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §74	*haseal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §74	*kaleal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §74	*teseal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §74	*kapeal*	ADJ	PASS	ITR							
ŁP‘ §75	*ekeal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §75	*banakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §75	*zełeal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
ŁP‘ §75	*dołac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §75	*sarseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §75	*p‘akeal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §75	*zmnac‘eal*	ADJ	ACT	ITR							
ŁP‘ §75	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §75	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §75	*eleal*	V	ACT	ITR	-			-		V	+
ŁP‘ §75	*arhamarheal*	V	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §75	*anc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §75	*lueal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
ŁP‘ §75	*arareal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
ŁP‘ §75	*awgneal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	-
ŁP‘ §75	*včareal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
ŁP‘ §75	*p‘axuc‘eal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §75	*aceal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §75	*zvatac‘ealsn*	ADJ	ACT	ITR							
ŁP‘ §75	*kargeal*	V	ACT	TR	+	GEN	+	+	A	OAV	+
ŁP‘ §75	*spaneal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §75	*kaleal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §75	*ənkec‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §76	*č‘ueal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §76	*arełeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §76	*zkapealn*	ADJ	PASS	ITR							
ŁP‘ §76	*kapealsn*	ADJ	PASS	ITR							
ŁP‘ §76	*teseal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §76	*xandałateal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §76	*dadareal*	V	ACT	ITR	+	GEN		+	S	AV	-
ŁP‘ §76	*hanguc‘eal*	V	ACT	ITR	-			+	S	V	-
ŁP‘ §76	*čašakeal*	V	ACT	TR	-		+	-		VO	-
ŁP‘ §76	*dařnac‘eal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §76	*lrteseal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §76	*ankeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §76	*dipeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §76	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §76	*karac‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §76	*merjealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §76	*anuaneal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §76	*teseal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §76	*vštac‘eals*	ADJ	PASS	ITR							
ŁP‘ §76	*arjakeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §76	*meržeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §76	*lueal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §76	*haneal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §76	*zkapealn*	ADJ	PASS	ITR							
ŁP‘ §76	*teseal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §76	*gorceal*	V	ACT	TR	+	NOM	+	+	Ø	AOV	+
ŁP‘ §76	*pašareal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §76	*orsac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §76	*p‘axuc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §76	*p‘axuc‘ealn*	ADJ	ACT	ITR							
ŁP‘ §76	*apawineal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §76	*yawžarec‘uc‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §76	*urac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §76	*canuc‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §76	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §76	*zmawtealn*	ADJ	ACT	ITR							
ŁP‘ §76	*gneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §76	*vaxčaneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §76	*urac‘eal*	V	ACT	ITR	+	GEN		+	Ø	VS	+
ŁP‘ §76	*hamareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §76	*katareal*	V	ACT	TR	+	GEN	+	-		VAO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §76	*amp‘op‘eal*	ADJ	PASS	ITR							
ŁP‘ §77	*č‘ueal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §77	*katareal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §77	*nahatakeal*	ADJ	PASS	ITR							
ŁP‘ §77	*hogac‘eal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
ŁP‘ §77	*č‘uealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §77	*ert‘ealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §77	*teseal*	V	ACT	TR	-		+	+	Ø	OV	-
ŁP‘ §77	*xoc‘ealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §77	*holovealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §77	*kac‘eal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §77	*barjeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §77	*viraworeals*	ADJ	PASS	ITR							
ŁP‘ §77	*kamec‘eal*	V	ACT	TR	-			-		V	+
ŁP‘ §77	*dipeals*	ADJ	ACT	ITR							
ŁP‘ §77	*tenč‘ac‘eal*	V	ACT	TR	-			-		V	+
ŁP‘ §77	*heřac‘uc‘eal*	V	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §77	*anhogac‘eal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §77	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §77	*aceal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §77	*matuc‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §77	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §77	*gitac‘eal*	CVB	ACT	TR	+	NOM		-		VA	+
ŁP‘ §77	*bereal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §77	*teseal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §77	*patmeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §77	*lueal*	CVB	ACT	TR	+	GEN	+	-		AV	+
ŁP‘ §77	*t‘ołeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §77	*aceal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §77	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §77	*t‘aguc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §77	*bžškeal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §77	*šnč‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §77	*skseal*	V	ACT	TR	-			+	A	V	+
ŁP‘ §77	*k‘nneal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §77	*hasealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §77	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §77	*hawatac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §77	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §77	*gitac‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §77	*xorheal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §77	*arareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §77	*zarmac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §77	*zarhureal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §77	*apšealk‘*	CVB	ACT	ITR	+	NOM		-		V	+
ŁP‘ §77	*tareal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §77	*arbanekealk‘*	ADJ	ACT	ITR							
ŁP‘ §77	*«p‘axuc‘ealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §77	*xelac‘norec‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §78	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §78	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §78	*dimeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §78	*zgac‘uc‘eal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
ŁP‘ §78	*haseal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §78	*edeal*	V	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §78	*pateal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §78	*pašareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §78	*katareal*	CVB	ACT	TR	-		+	-		VOA	+
ŁP‘ §78	*patueal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §78	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §78	*hasealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §78	*kargeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §78	*zarhurealk‘*	CVB	ACT	ITR	-			-		V	-
ŁP‘ §78	*bažaneal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §78	*ařeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §78	*darjuc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §78	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §78	*čašakeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §78	*křuealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §78	*c‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §78	*edeal*	CVB	ACT	TR	-		+	-		VO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §78	*ənkec‘eal*	ADJ	ACT	ITR							
ŁP‘ §78	*ołormeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §78	*aceal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §78	*žamaneal*	CVB	ACT	ITR	-			-		V	-
ŁP‘ §78	*darjeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §79	*c‘rueal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §79	*edeal*	CVB	ACT	TR	+	NOM	+	-		OV	+
ŁP‘ §79	*hetamteal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §79	*dimeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §79	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §79	*kotoreal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §79	*banakeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §79	*karcec‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §79	*ankeal*	ADJ	ACT	ITR							
ŁP‘ §79	*pndeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §79	*gteal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §79	*ankeal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §79	*əmbřneal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §79	*pataheal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §79	*stugeal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §79	*zuarčac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §79	*k‘akteal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §79	*nuačeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §79	*p‘axuc‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §79	*lueal*	V	ACT	TR	-			+	Ø	V	+
ŁP‘ §79	*č‘ueal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §79	*kac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §79	*greal*	V	ACT	TR	+	GEN		+	Ø	VA	+
ŁP‘ §80	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §80	*lueal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §80	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §80	*nengeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §80	*steal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §80	*miabanec‘uc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §80	*teseal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §80	*steal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §80	*vtangealk‘*	ADJ	ACT	ITR							
ŁP‘ §80	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §80	*kaleal*	V	ACT	TR	-		+	+	A	OVA	+
ŁP‘ §80	*gteal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	-
ŁP‘ §80	*vayeleal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §80	*p‘orjeal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §81	*parspeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §81	*xoc‘oteal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §81	*ert‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §81	*kamec‘eal*	V	ACT	TR	-			-		V	+
ŁP‘ §81	*banakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §81	*kanxeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §81	*včareal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §81	*vripealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §81	*xřovealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §81	*merjealk‘*	V	ACT	ITR	-			-		V	+
ŁP‘ §81	*hasealk‘*	V	ACT	ITR	-			-		V	+
ŁP‘ §81	*kamec‘ealk‘*	V	ACT	TR	-			-		V	+
ŁP‘ §81	*teseal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §81	*zayrac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §81	*yarjakeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §81	*zercuc‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §81	*grgřealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §81	*hayec‘eal*	ADJ	PASS	ITR							
ŁP‘ §81	*teseal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §81	*zawrac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §81	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §81	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §81	*korac‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §81	*yařajadreal*	ADJ	PASS	ITR							
ŁP‘ §81	*haseal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §81	*kamec‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §82	*miabaneal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §82	*nuazec‘uc‘eal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §82	*matneal*	CVB	ACT	TR	-		+	-		VO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §82	*gteal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §82	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §82	*srtmteal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §82	*haseal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §82	*hawanec‘uc‘eal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §82	*kargeal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §82	*ařeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §82	*arareal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
ŁP‘ §82	*xařneal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §82	*hareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §82	*křueal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §82	*c‘uc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §83	*darjeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §83	*ert‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §83	*zmnac‘eal*	ADJ	ACT	ITR							
ŁP‘ §83	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §83	*kamec‘eal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §83	*ařeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §83	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §83	*zayragneal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §83	*teseal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §83	*tueal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §83	*pargeweal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §83	*zangiteal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §83	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §83	*bažaneal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §83	*čakatealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §83	*hayec‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §83	*darjuc‘eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §83	*teseal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §83	*zarhurealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §83	*teařnagreal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §83	*apšeal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §83	*arareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §83	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §83	*yarjakeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §83	*spaneal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §83	*hareal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §83	*pancac‘eal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §83	*c‘eleal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §83	*včareal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §83	*pułeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §83	*matneal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §83	*darjeal*	ADV									
ŁP‘ §83	*erkaynamteal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §83	*złǰac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §83	*ełeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §83	*anc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §83	*t‘ulac‘eal*	ADJ	ACT	ITR							
ŁP‘ §83	*včareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §83	*arkeal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
ŁP‘ §83	*yarjakealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §84	*t‘ap‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §84	*pateal*	CVB	ACT	TR	+	NOM		-		V	+
ŁP‘ §84	*ařeal*	CVB	ACT	TR	+	NOM		-		V	+
ŁP‘ §84	*teseal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §84	*c‘ruealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §84	*k‘ayk‘ayealk‘*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §84	*aceal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §84	*srtmeřeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §84	*yałt‘eal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §84	*hamareal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §84	*yarjakeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §84	*patařeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §84	*sakawac‘ealk‘s*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §84	*aceal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §84	*ařak‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §84	*ařeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §84	*mnac‘ealk‘s*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §84	*včareal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
ŁP‘ §84	*aceal*	CVB	ACT	TR	+	NOM	+	-		AOV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §84	*yanc‘eal*	ADJ	ACT	ITR							
ŁP‘ §84	*yarjakeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §84	*gorceal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §84	*zerceal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §85	*aceal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §85	*ekeal*	V	ACT	ITR	-			-		V	+
ŁP‘ §85	*tarakuseal*	CVB	ACT	TR	+	NOM	+	-		VAO	+
ŁP‘ §85	*ekeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §85	*zercealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §85	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §85	*haseal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §85	*canuc‘eal*	CVB	IMPRS	TR			+	-		OV	+
ŁP‘ §85	*ənkłmeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §85	*kac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §85	*t‘alkac‘eal*	ADJ	ACT	ITR							
ŁP‘ §85	*zgac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §85	*kočʼec‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §85	*karac‘eal*	CVB	ACT	TR	+	NOM		-		AV	+
ŁP‘ §85	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §85	*ztesealsn*	ADJ	PASS	ITR							
ŁP‘ §85	*zluealsn*	ADJ	PASS	ITR							
ŁP‘ §85	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §85	*xorheal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §85	*lk‘eal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §85	*srtabekeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §85	*edeal*	CVB	ACT	TR	+	NOM		-		AV	+
ŁP‘ §85	*hasuc‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §85	*dimeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §85	*aprealk‘n*	ADJ	ACT	ITR							
ŁP‘ §85	*ołormeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §85	*yusac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §85	*lueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §85	*zayrac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §85	*hasealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §85	*harealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §85	*zercealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §85	*hasealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §86	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §86	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §86	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	-
ŁP‘ §86	*zarhurec‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
ŁP‘ §86	*vatnełeal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
ŁP‘ §86	*teseal*	V	ACT	TR	+	GEN	+	-		OAV	+
ŁP‘ §86	*teseal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
ŁP‘ §86	*yarjakeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §86	*yarjakeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §86	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §86	*kotoreal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §86	*čʼerkucʼealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §86	*haneal*	V	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §86	*xawsecʼeal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §86	*čepealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §86	*t‘ołeal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §86	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §86	*ekeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §86	*himnarkeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §86	*zhnac‘eal*	ADJ	ACT	ITR							
ŁP‘ §86	*uraxac‘ealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §86	*čʼueal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §86	*dadareal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §87	*lueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §87	*zarhureal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §87	*haseal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §87	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §87	*xorheal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §87	*žołovealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §87	*zxorhealsn*	ADJ	PASS	ITR							
ŁP‘ §87	*yawžareal*	CVB	ACT	TR	+	NOM	+	-		VAO	+
ŁP‘ §87	*mnac‘eal*	ADJ	ACT	ITR							
ŁP‘ §87	*hnazandeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §87	*xawsecʼeal*	CVB	ACT	TR	-		+	-		OV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §87	*edeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §88	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §88	*pʻaxucʻealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §88	*kacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §88	*koruseal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §88	*lueal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
ŁP‘ §88	*harcʻeal*	V	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §88	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §88	*ełeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §88	*yarjakeal*	V	ACT	ITR	-			-		V	+
ŁP‘ §88	*včareal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §88	*kuteal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §88	*yarjakealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §88	*tueal*	CVB	ACT	TR	+	NOM	+	-		SV	+
ŁP‘ §88	*išxecʻeal*	V	ACT	TR	+	GEN		-		AV	+
ŁP‘ §88	*karcecʻeal*	CVB	PASS	ITR	+	GEN		-		VS	+
ŁP‘ §88	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §88	*kargeal*	ADJ	PASS	ITR							
ŁP‘ §88	*zasacʻealsn*	ADJ	PASS	ITR							
ŁP‘ §88	*nuačeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §88	*yłeal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §88	*čʻkaracʻeal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §88	*xawseal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §88	*hražareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §89	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §89	*dadareal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §89	*teseal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §89	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §89	*tueal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §89	*žołoveal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §89	*xorheal*	CVB	ACT	ITR	+	NOM	+	-		AVO	+
ŁP‘ §89	*ekeal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §89	*xorheal*	V	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §89	*imacʻeal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
ŁP‘ §89	*xorheal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §89	*korcaneal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §89	*bnakealk‘*	ADJ	ACT	ITR							
ŁP‘ §89	*kendanacʻeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §89	*yaweleal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §89	*škʻełacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §89	*zxostacʻealsn*	ADJ	PASS	ITR							
ŁP‘ §89	*hastateal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §89	*edeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §90	*xawsecʻeal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §90	*hražareal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §90	*teseal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §90	*tueal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §90	*katareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §90	*ekeal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §90	*ertʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §90	*tueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §90	*lueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §90	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §90	*yłeal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §90	*mxitʻareal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §90	*uraxacʻucʻeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §90	*nuačeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §90	*xawsecʻeal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §90	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §90	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §90	*uxteal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
ŁP‘ §90	*ənkaleal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §90	*patueal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §90	*hražareal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §90	*teseal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §90	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §90	*patuealk‘*	V	PASS	ITR	-			-		V	+
ŁP‘ §90	*arhamarhealk‘*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §90	*darjealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §90	*teseal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §90	*arkeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §90	*p‘arˊaworeal*	ADJ	PASS	ITR							
ŁP‘ §90	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §90	*haseal*	V	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §90	*matuc‘eal*	V	ACT	TR	-		+	-		VO	+
ŁP‘ §90	*lueal*	CVB	ACT	TR	+	NOM	+	-		VAO	+
ŁP‘ §90	*yłealsn*	ADJ	PASS	ITR							
ŁP‘ §90	*t‘ueal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	-
ŁP‘ §90	*tełekac‘eal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §90	*ənkaleal*	CVB	ACT	TR	+	NOM	+	-		VOA	+
ŁP‘ §91	*č‘ueal*	V	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §91	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §91	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §91	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §91	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §91	*xawsec‘eal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §91	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §91	*teseal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §91	*arˊak‘eal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §91	*uraxac‘ealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §91	*č‘ueal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §91	*merjealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §91	*patrastealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §91	*hnč‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §91	*zarhurealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §91	*arˊak‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §91	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §91	*gnac‘eal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §91	*xawsec‘eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §91	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §91	*teseal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §91	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §91	*zekeal*	ADJ	ACT	ITR							
ŁP‘ §91	*lueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §91	*tueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §91	*katareal*	CVB	IMPRS	TR	-		+	-		VO	+
ŁP‘ §91	*asac‘ealk‘*	ADJ	PASS	ITR							
ŁP‘ §91	*lc‘eal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §91	*arˊeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §91	*ełeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §91	*aceal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §91	*tueal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §91	*kec‘eal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §91	*č‘karac‘eal*	CVB	ACT	TR	-			-		V	-
ŁP‘ §91	*hawaneal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §91	*ekeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §92	*xawsec‘eal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §92	*lueal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §92	*teseal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
ŁP‘ §92	*arˊak‘eal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §92	*atec‘ealk‘*	ADJ	PASS	ITR							
ŁP‘ §92	*kasealk‘*	ADJ	ACT	ITR							
ŁP‘ §92	*lk‘ealk‘*	ADJ	PASS	ITR							
ŁP‘ §92	*tueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §92	*ełeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §92	*awgteal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §92	*canuc‘eal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §92	*kec‘eal*	V	ACT	ITR	-			-		V	+
ŁP‘ §92	*mecac‘eal*	V	PASS	ITR	-			-		V	+
ŁP‘ §92	*barjeal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §92	*koruseal*	V	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §92	*anc‘eal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §92	*č‘canuc‘eal*	CVB	ACT	TR	-			-		V	-
ŁP‘ §92	*ełeal*	V	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §92	*useal*	V	ACT	TR	-		+	+	A	V	-
ŁP‘ §92	*korac‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §92	*zarhureal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §92	*hastateal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §92	*ełeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §92	*kac‘eal*	V	ACT	ITR	-			+	S	V	+
ŁP‘ §92	*parˊaktealk‘*	V	PASS	ITR	-			+	S	V	-
ŁP‘ §92	*k‘ayk‘ayealk‘*	V	PASS	ITR	-			-		V	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §92	*arareal*	V	ACT	TR	+	GEN	+	-		OAV	+
ŁP‘ §92	*erkrordeal*	V	ACT	TR	+	NOM		-		AV	+
ŁP‘ §92	*arareal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §93	*lueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §93	*uraxac‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §93	*maceal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §93	*p‘arateal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §93	*mxit‘areal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §93	*uraxac‘ealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §93	*hražarealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §93	*žołoveal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §93	*xawsec‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §93	*arəeal*	V	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §93	*lusaworeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §93	*ijeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §93	*merkac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §93	*ciwrealk‘*	ADJ	PASS	ITR							
ŁP‘ §93	*cnkealk‘*	ADJ	PASS	ITR							
ŁP‘ §93	*erit‘ac‘ealk‘*	ADJ	ACT	ITR							
ŁP‘ §93	*nmanealk‘*	ADJ	ACT	ITR							
ŁP‘ §93	*xaytarəakeal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §93	*katareal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §93	*t‘šuarac‘ealk‘*	ADJ	ACT	ITR							
ŁP‘ §93	*merželeal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §93	*žołoveal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §93	*apšealk‘*	ADJ	ACT	ITR							
ŁP‘ §93	*zart‘uc‘ealk‘*	ADJ	PASS	ITR							
ŁP‘ §93	*zarhureal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §93	*patueal*	ADJ	PASS	ITR							
ŁP‘ §93	*katareal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §93	*grealn*	ADJ	PASS	ITR							
ŁP‘ §93	*erkrordeal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §93	*greal*	V	PASS	ITR	+	NOM		+	S	SV	+
ŁP‘ §94	*xawsec‘eal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §94	*ənddimac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §94	*uraxac‘eal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §94	*hražarealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §94	*awereal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §94	*tarakuseal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §94	*ənkłmealk‘*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §94	*gteal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §94	*merjeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §94	*tearnagreal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §94	*himnac‘eal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §94	*mteal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §94	*matuc‘eal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §94	*katareal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §94	*kazmeal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §94	*kargeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §94	*kazmeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §94	*haseal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §94	*harealk‘*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §94	*matneal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §94	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §94	*k‘ajac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §94	*c‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
ŁP‘ §94	*hřč‘akeal*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §94	*lawac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §94	*erewec‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §94	*p‘axuc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §95	*žołoveal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §95	*č‘ueal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §95	*gnac‘ealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §95	*ert‘eal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §95	*lueal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §95	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §95	*aceal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §95	*harc‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §95	*žołoveal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §95	*lc‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §95	*xawsec‘ealsn*	ADJ	PASS	ITR							

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §95	*asac‘eal*	V	ACT	TR	-		+	+	A	OV	+
ŁP‘ §95	*xawsec‘eal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
ŁP‘ §95	*steal*	V	ACT	ITR	+	GEN		+	Ø	SV	+
ŁP‘ §95	*xawsec‘eal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §95	*koruseal*	V	ACT	TR	+	NOM	+	+	Ø	AOV	+
ŁP‘ §95	*ełeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §95	*karac‘eal*	V	ACT	TR	+	GEN		+	Ø	AV	+
ŁP‘ §95	*tueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §95	*bołok‘ealk‘*	V	ACT	ITR	-			-		V	+
ŁP‘ §95	*č‘lseal*	V	ACT	TR	-			-		V	-
ŁP‘ §95	*katareal*	V	ACT	TR	+	NOM	+	+	Ø	AOV	+
ŁP‘ §95	*patueal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §95	*gteal*	V	PASS	ITR	-			+	S	V	+
ŁP‘ §95	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §95	*arareal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
ŁP‘ §95	*teseal*	V	ACT	TR	+	GEN	+	-		OAV	+
ŁP‘ §95	*arareal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
ŁP‘ §95	*ałtełeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §95	*ařeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §95	*šnorheal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §95	*zarmac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §95	*pargeweal*	ADJ	PASS	ITR							
ŁP‘ §95	*xorheal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §95	*imac‘eal*	V	ACT	TR	-		+	-		OV	+
ŁP‘ §95	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
ŁP‘ §95	*t‘ołeal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §95	*asac‘eal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §96	*xorheal*	V	ACT	TR	+	GEN		-		VA	+
ŁP‘ §96	*ařeal*	CVB	ACT	TR	+	NOM		-		AV	+
ŁP‘ §96	*arareal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §96	*ełeal*	V	ACT	ITR	-			-		V	+
ŁP‘ §96	*lřec‘uc‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §96	*tueal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §96	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §96	*tueal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
ŁP‘ §96	*tueal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §96	*zgloreal*	ADJ	PASS	ITR							
ŁP‘ §96	*zkoruseal*	ADJ	PASS	ITR							
ŁP‘ §96	*gteal*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §96	*yaruc‘eal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §96	*yaruc‘eal*	V	ACT	TR	-		+	+	Ø	OV	+
ŁP‘ §96	*meřeal*	ADJ	ACT	ITR							
ŁP‘ §96	*harc‘eal*	CVB	ACT	TR	+	GEN		-		AV	+
ŁP‘ §96	*asac‘eal*	V	ACT	TR	+	GEN		-		AV	+
ŁP‘ §96	*šnorheal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §96	*kendanac‘eal*	ADJ	PASS	ITR							
ŁP‘ §96	*darjeal*	ADV									
ŁP‘ §96	*tueal*	V	IMPRS	TR	-		+	+	Ø	VO	+
ŁP‘ §97	*hražareal*	CVB	ACT	TR	+	GEN	+	-		VAO	+
ŁP‘ §97	*ekeal*	V	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §97	*pataheal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §97	*zčgneal*	ADJ	PASS	ITR							
ŁP‘ §97	*zardareal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §97	*ařak‘ealn*	ADJ	PASS	ITR							
ŁP‘ §97	*asac‘eal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §97	*awrhneal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §97	*hogac‘eal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §97	*lc‘ealk‘*	CVB	ACT	TR	-		+	-		OV	+
ŁP‘ §97	*zuarčac‘ealk‘*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §97	*kac‘eal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §97	*č‘ueal*	CVB	ACT	ITR	+	GEN		-		VS	+
ŁP‘ §98	*teseal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §98	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
ŁP‘ §98	*čanaparhordeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §98	*greal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
ŁP‘ §98	*ačec‘eal*	ADJ	ACT	ITR							
ŁP‘ §98	*nuazeal*	ADJ	ACT	ITR							
ŁP‘ §98	*bnakeal*	V	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §98	*darjeal*	ADV									
ŁP‘ §99	*bereal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §99	*kargeal*	CVB	ACT	TR	-		+	-		OV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
ŁP‘ §99	*arʹeal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §99	*lueal*	CVB	ACT	TR	+	GEN	+	-		VOA	+
ŁP‘ §99	*tueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
ŁP‘ §99	*morʹacʻeal*	CVB	ACT	TR	+	GEN	+	-		SV	+
ŁP‘ §99	*dimeal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §99	*baweal*	CVB	ACT	TR	+	GEN		-		VA	+
ŁP‘ §99	*teseal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §99	*šnorheal*	ADJ	PASS	ITR							
ŁP‘ §99	*berkreal*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §99	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
ŁP‘ §99	*tueal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §100	*cragreal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
ŁP‘ §100	*tnkagorceal*	CVB	PASS	ITR	-			-		V	+
ŁP‘ §100	*cawaleal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §100	*cawaleal*	ADJ	PASS	ITR							
ŁP‘ §100	*cceal*	CVB	PASS	ITR	+	GEN		-		VS	+
ŁP‘ §100	*baninlcʻeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §100	*suzeal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §100	*luacʻeal*	CVB	ACT	TR	+	NOM	+	-		OAV	+
ŁP‘ §100	*lusazardeal*	CVB	ACT	TR	+	NOM		-		SV	+
ŁP‘ §100	*pʻoxeal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §100	*awrhneal*	V	PASS	ITR	+	NOM		+	S	VS	+
ŁP‘ §100	*«awrhneal*	V	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §100	*paycarʹacʻeal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §100	*zgecʻeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
ŁP‘ §100	*salarealkʻ*	CVB	ACT	ITR	+	GEN		-		SV	+
ŁP‘ §100	*gorʹozacʻealkʻn*	ADJ	ACT	ITR							
ŁP‘ §100	*išxanacʻealkʻn*	ADJ	ACT	ITR							
ŁP‘ §100	*nsteal*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §100	*greal*	ADJ	PASS	ITR							
ŁP‘ §100	*ašxatealkʻ*	ADJ	ACT	ITR							
ŁP‘ §100	*darjeal*	ADV									
ŁP‘ §100	*kočʻecʻealkʻ*	CVB	PASS	ITR	+	NOM		-		VS	+
ŁP‘ §100	*bazmealkʻ*	CVB	ACT	ITR	-			-		V	+
ŁP‘ §100	*patrastealkʻ*	CVB	ACT	TR	-			-		V	+
ŁP‘ §100	*yarʹajajayneal*	CVB	ACT	TR	+	NOM	+	-		OVA	+
ŁP‘ §100	*zhiwandacʻealsn*	ADJ	ACT	ITR							
ŁP‘ §100	*arbeal*	V	IMPRS	TR	-		+	-		OV	+
ŁP‘ §100	*yandimaneal*	CVB	ACT	TR	+	NOM		-		AV	+
ŁP‘ §100	*darjeal*	ADV									
ŁP‘ §100	*zmardacʻealn*	ADJ	ACT	ITR							
ŁP‘ §100	*kʻarełēngreal*	ADJ	PASS	ITR							
ŁP‘ §100	*arʹakaxawseal*	CVB	ACT	TR	+	NOM	+	-		OAV	+
ŁP‘ §100	*greal*	V	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §100	*miacʻeal*	V	PASS	ITR	-			-		V	+
ŁP‘ §100	*ašxatealkʻ*	ADJ	ACT	ITR							
ŁP‘ §100	*ənkecʻeal*	CVB	ACT	TR	-			-		V	+
ŁP‘ §100	*žołoveal*	CVB	ACT	TR	-		+	-		VO	+
ŁP‘ §100	*axtacʻeals*	ADJ	ACT	ITR							
ŁP‘ §100	*zbekeals*	ADJ	PASS	ITR							
ŁP‘ §100	*vripeal*	CVB	PASS	ITR	+	NOM		-		SV	+
ŁP‘ §100	*meʹreal*	ADJ	ACT	ITR							
ŁP‘ §100	*meʹreal*	ADJ	ACT	ITR							
ŁP‘ §100	*ankeal*	CVB	ACT	ITR	+	NOM		-		V	+
ŁP‘ §100	*zarhureal*	CVB	ACT	ITR	+	NOM		-		SV	+
ŁP‘ §100	*ełeal*	ADJ	ACT	ITR							
ŁP‘ §100	*pʻarʹaworeal*	ADJ	PASS	ITR							
ŁP‘ §100	*awrhnealkʻ*	ADJ	PASS	ITR							
ŁP‘ §100	*zpatrasteal*	ADJ	PASS	ITR							
Eł. p. 4	*kargagreal*	V	ACT	TR	-		+	-		VO	+
Eł. p. 4	*edeal*	V	ACT	TR	-		+	-		VO	+
Eł. p. 4	*hayecʻeal*	CVB	ACT	ITR	+	GEN		-		SV	+
Eł. p. 4	*dandałeal*	CVB	ACT	ITR	+	GEN		-		SV	-
Eł. p. 4	*hayecʻeal*	CVB	ACT	ITR	+	GEN		-		SV	+
Eł. p. 4	*ənkaleal*	CVB	ACT	TR	+	GEN	+	-		OAV	+
Eł. p. 5	*yarjakeal*	ADJ	ACT	ITR							
Eł. p. 5	*teseal*	CVB	ACT	TR	+	GEN	+	-		OAV	+
Eł. p. 5	*ełeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 5	*cʻncacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 6	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 6	*mtʻereal*	ADJ	PASS	ITR							

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Eł. p. 6	*dełeal*	ADJ	PASS	ITR							
Eł. p. 6	*zhawatac‘eałk‘s*	ADJ	ACT	ITR							
Eł. p. 6	*nełeal*	CVB	ACT	TR	-			-		V	+
Eł. p. 7	*p‘axuc‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 7	*borbok‘eal*	ADJ	ACT	ITR							
Eł. p. 8	*vayrateal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 8	*kapeal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 8	*vařealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 8	*jeřealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 8	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 8	*argelealk‘*	V	PASS	ITR	+	NOM		-		SV	+
Eł. p. 8	*tueal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 8	*ekeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 8	*haseal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 8	*edeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 8	*k‘ałeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Eł. p. 8	*haneal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
Eł. p. 8	*arareal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 8	*ənkec‘eal*	ADJ	PASS	ITR							
Eł. p. 9	*hnazandeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 10	*hawatac‘eałk‘*	ADJ	ACT	ITR							
Eł. p. 10	*mkrtealk‘*	ADJ	PASS	ITR							
Eł. p. 10	*gitac‘eal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 11	*tueal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 11	*yaytneal*	V	PASS	ITR	+	NOM		+	S	SV	-
Eł. p. 11	*bekeal*	ADJ	PASS	ITR							
Eł. p. 11	*hareal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 11	*zpatuirealsn*	ADJ	PASS	ITR							
Eł. p. 11	*yułarkealk‘*	CVB	ACT	ITR	-			-		V	+
Eł. p. 11	*ełealk‘*	CVB	ACT	ITR	-			-		V	+
Eł. p. 11	*katareal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 11	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 11	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 12	*křueal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 12	*skseal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 12	*əndvzeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 13	*c‘asuc‘eal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 13	*c‘noreal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 13	*xoc‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 13	*ayrec‘eal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 13	*kapeal*	ADJ	PASS	ITR							
Eł. p. 13	*kapeal*	ADJ	PASS	ITR							
Eł. p. 13	*haneal*	CVB	IMPRS	TR	-		+	-		VO	+
Eł. p. 14	*t‘ulac‘eal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 14	*ankeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 14	*imac‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 14	*imac‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 14	*katareal*	ADJ	PASS	ITR							
Eł. p. 14	*ařaweleal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 15	*əndostuc‘eal*	V	PASS	ITR	-			-		V	+
Eł. p. 15	*zart‘uc‘eal*	V	PASS	ITR	-			-		V	+
Eł. p. 15	*zayrac‘eal*	ADJ	PASS	ITR							
Eł. p. 15	*əntreal*	CVB	ACT	TR	-			-		V	+
Eł. p. 15	*vařeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 16	*patrasteal*	ADJ	PASS	ITR							
Eł. p. 16	*p‘č‘eal*	CVB	ACT	ITR	+	GEN		-		SV	+
Eł. p. 16	*zayrac‘eal*	ADJ	PASS	ITR							
Eł. p. 17	*skseal*	CVB	ACT	TR	-			-		V	+
Eł. p. 17	*yordeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 18	*yarjakeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 18	*teseal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
Eł. p. 18	*tueal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 18	*ełeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 19	*ařeal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 19	*hawatac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 19	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 19	*hełgac‘eal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 19	*xařneal*	V	ACT	TR	-		+	-		VO	+
Eł. p. 20	*ařeal*	V	ACT	TR	+	GEN	+	-		OVA	+
Eł. p. 20	*dateal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 20	*arareal*	V	ACT	TR	-		+	-		OV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 20	*zoheal*	ADJ	PASS	ITR							
Eł. p. 20	*eleal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 21	*anargeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 21	*darjeal*	ADV									
Eł. p. 21	*zkargeal*	ADJ	PASS	ITR							
Eł. p. 21	*patrasteal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 21	*useal*	V	ACT	TR	+	NOM	+	+	A	AOV	+
Eł. p. 22	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 22	*snucʻeal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
Eł. p. 22	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 22	*haseal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 22	*bereal*	V	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 22	*bnakeal*	V	ACT	ITR	+	NOM		-		SV	+
Eł. p. 23	*hamareal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
Eł. p. 23	*haneal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 23	*arkeal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	-
Eł. p. 24	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 24	*xabeal*	ADJ	PASS	ITR							
Eł. p. 24	*yłacʻeal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 25	*xarneal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 25	*moloreal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 26	*xabeal*	ADJ	PASS	ITR							
Eł. p. 26	*darjeal*	ADV									
Eł. p. 26	*ełeal*	V	ACT	ITR	+	NOM		-		VS	+
Eł. p. 26	*moloreal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 26	*moloreal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 26	*zrkeal*	V	PASS	ITR	-			-		V	+
Eł. p. 26	*katareal*	ADJ	PASS	ITR							
Eł. p. 27	*eleal*	ADJ	ACT	ITR							
Eł. p. 27	*meřeal*	ADJ	ACT	ITR							
Eł. p. 27	*tʻałeal*	ADJ	PASS	ITR							
Eł. p. 27	*yarucʻeal*	ADJ	ACT	ITR							
Eł. p. 27	*veracʻeal*	ADJ	ACT	ITR							
Eł. p. 28	*žołovealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 29	*awandeal*	V	IMPRS	TR	-		+	+	Ø	OV	+
Eł. p. 29	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
Eł. p. 29	*kʻarkoceal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 29	*arřeal*	V	ACT	TR	+	NOM	+	-		OVA	+
Eł. p. 30	*hawatacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 30	*arareal*	V	ACT	TR	+	GEN		+	Ø	VA	+
Eł. p. 30	*gorceal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
Eł. p. 30	*arareal*	V	ACT	TR	-			+	Ø	V	+
Eł. p. 30	*kargeal*	ADJ	PASS	ITR							
Eł. p. 30	*yarmareal*	ADJ	PASS	ITR							
Eł. p. 31	*bažaneal*	ADJ	PASS	ITR							
Eł. p. 31	*darjeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 31	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 31	*patuireal*	V	ACT	TR	-			+	Ø	V	+
Eł. p. 32	*gloreal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 32	*arareal*	CVB	ACT	TR	-			-		V	+
Eł. p. 33	*maleal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 33	*pʻošiacʻeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 33	*trtmacʻeal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 33	*tʻołeal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 34	*hayecʻeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 34	*katareal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 34	*lceal*	V	PASS	ITR	-			+	S	SV	+
Eł. p. 34	*asacʻeal*	ADJ	PASS	ITR							
Eł. p. 34	*xarneal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 34	*xarneal*	V	PASS	ITR	+	NOM		+	S	VS	+
Eł. p. 34	*goyacʻeal*	V	ACT	ITR	-			-		V	+
Eł. p. 34	*koruseal*	V	ACT	TR	-		+	-		VO	+
Eł. p. 35	*arřeal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 35	*yarmareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 35	*katareal*	ADJ	PASS	ITR							
Eł. p. 35	*edeal*	ADJ	PASS	ITR							
Eł. p. 36	*tʻołeal*	V	PASS	ITR	+	NOM		-		SV	+
Eł. p. 36	*tueal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 36	*vripeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 37	*zarhureal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 37	*stambakeal*	CVB	ACT	ITR	+	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 37	*gnac‘eal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 37	*ekeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 37	*mořac‘eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Eł. p. 37	*meržeal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 37	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 37	*c‘noreal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 37	*patuireal*	ADJ	PASS	ITR							
Eł. p. 38	*t‘oł‘eal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 38	*spařnac‘eal*	ADJ	PASS	ITR							
Eł. p. 38	*zmeřeals*	ADJ	ACT	ITR							
Eł. p. 40	*tueal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 42	*ahabekealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 42	*moloreal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 42	*edeal*	V	ACT	TR	+	GEN		+	Ø	AVO	+
Eł. p. 42	*dařnac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 42	*kač‘ec‘eal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Eł. p. 42	*tueal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 43	*t‘oł‘eal*	V	ACT	TR	-		+	+	Ø	VO	+
Eł. p. 43	*gitac‘eal*	V	ACT	TR	-		+	-		VO	+
Eł. p. 43	*hastateal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 44	*čgnealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 44	*nmaneal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 44	*p‘rp‘real*	CVB	ACT	ITR	-			-		V	+
Eł. p. 44	*kutakeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 44	*p‘leal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 44	*arjakeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 44	*«erdueal*	V	ACT	TR	+	GEN		-		VA	+
Eł. p. 45	*goyac‘ealsn*	ADJ	ACT	ITR							
Eł. p. 45	*hawatac‘ealk‘n*	ADJ	ACT	ITR							
Eł. p. 45	*hastatealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 45	*hayec‘ealk‘*	CVB	ACT	ITR	-			-		V	+
Eł. p. 45	*ekeal*	ADJ	ACT	ITR							
Eł. p. 45	*matuc‘eal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 46	*yuzeal*	V	PASS	ITR	+	NOM		+	S	VS	+
Eł. p. 46	*darjuc‘eal*	V	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 46	*moloreal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 46	*zmeřeals*	ADJ	ACT	ITR							
Eł. p. 46	*c‘rueals*	ADJ	PASS	ITR							
Eł. p. 46	*vayrateals*	ADJ	PASS	ITR							
Eł. p. 46	*barkac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 47	*tueal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 47	*vičakealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 47	*edeal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 47	*darjeal*	ADV									
Eł. p. 47	*dařnac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 47	*t‘anjrac‘eal*	ADJ	ACT	ITR							
Eł. p. 48	*c‘ankac‘eald*	V	ACT	ITR	-			+	S	V	+
Eł. p. 48	*mnac‘ealk‘n*	ADJ	ACT	ITR							
Eł. p. 48	*darjeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 48	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 48	*asac‘eals*	ADJ	PASS	ITR							
Eł. p. 48	*tueal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 48	*zařaceal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 48	*hawatac‘ealk‘n*	ADJ	ACT	ITR							
Eł. p. 48	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 48	*nuireal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Eł. p. 48	*edeal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Eł. p. 49	*mkrteal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 49	*čepeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Eł. p. 49	*xoc‘eal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 49	*teseal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Eł. p. 49	*zcackeals*	ADJ	PASS	ITR							
Eł. p. 50	*xroxtac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 50	*yap‘štakeal*	CVB	PASS	ITR	-			-		V	-
Eł. p. 50	*edeal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 50	*c‘ncac‘eal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 50	*karcec‘eal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 50	*šrǰeal*	ADJ	ACT	TR							
Eł. p. 50	*awereal*	ADJ	ACT	TR							
Eł. p. 50	*patueal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 50	*c‘norealn*	ADJ	ACT	ITR							

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 50	*ełceal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 50	*kurac‘eal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 51	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 51	*darjeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 51	*arareal*	V	ACT	TR	+	GEN	+	-		AVO	+
Eł. p. 51	*katareal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
Eł. p. 51	*matuc‘eal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 51	*yaruc‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 51	*arareal*	V	ACT	TR	+	NOM	+	-		OV	+
Eł. p. 51	*haseal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 51	*ařeal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 52	*čepeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 52	*edeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 52	*nuireal*	CVB	PASS	ITR	+	NOM		-		VS	+
Eł. p. 52	*hawatac‘ealk‘n*	ADJ	ACT	ITR							
Eł. p. 52	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 52	*darjeal*	ADV									
Eł. p. 52	*ačec‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 53	*ařeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Eł. p. 54	*hawatac‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 54	*t‘ałceal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 54	*hareal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 54	*daŕnac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 54	*lŕeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 55	*zpatuirealsn*	ADJ	PASS	ITR							
Eł. p. 55	*mkrtealk‘*	V	PASS	ITR	-			+	S	V	+
Eł. p. 55	*sneal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 55	*merkac‘ealk‘*	CVB	PASS	ITR	-			-		V	+
Eł. p. 55	*spaŕnac‘eal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
Eł. p. 55	*ayrec‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 55	*t‘anjrac‘eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 55	*kurac‘ealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 55	*p‘oreal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
Eł. p. 56	*t‘et‘ewac‘ealk‘*	CVB	ACT	ITR	-			-		V	+
Eł. p. 56	*azatealk‘*	CVB	PASS	ITR	-			-		V	+
Eł. p. 56	*barkac‘ealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 56	*c‘asuc‘ealk‘*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 56	*p‘rkeal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
Eł. p. 57	*ełeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 57	*daŕnac‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 57	*k‘akeal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 57	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 57	*pataŕeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 57	*haseal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 57	*hareal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 57	*anc‘eal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 58	*zinealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 58	*saławartealk‘*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 58	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 58	*barjrac‘uc‘eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 59	*ařeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 59	*ekealn*	V	ACT	ITR	-			+	S	V	+
Eł. p. 59	*lueal*	V	ACT	TR	+	GEN		+	Ø	VS	+
Eł. p. 60	*lŕeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 60	*anuaneals*	ADJ	PASS	ITR							
Eł. p. 60	*darjeal*	ADV									
Eł. p. 61	*ačec‘eal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 61	*srtmteal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 61	*daŕnac‘eal*	V	ACT	ITR	+	NOM		-		V	+
Eł. p. 61	*tueal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 61	*hastateal*	ADJ	ACT	ITR							
Eł. p. 61	*lŕeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 61	*ačapareal*	V	ACT	ITR	+	GEN		+	Ø	SV	-
Eł. p. 61	*darjeal*	V	ACT	ITR	+	GEN		-		SV	-
Eł. p. 62	*sneal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 62	*čšmarteal*	CVB	ACT	TR	+	NOM		-		SV	+
Eł. p. 62	*arareal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 62	*katareal*	ADJ	ACT	TR							
Eł. p. 63	*c‘rueal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 63	*haneal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 63	*darjeal*	ADV									

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 63	*kaleal*	V	ACT	TR	-		+	+	Ø	VO	+
Eł. p. 63	*spaŕnacʻeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 64	*bereal*	V	ACT	TR	-		+	+	Ø	VO	+
Eł. p. 64	*drdeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 64	*hastateal*	CVB	ACT	TR	-			-		V	+
Eł. p. 64	*ənkaleal*	V	ACT	TR	+	NOM	+	+	Ø	AOV	+
Eł. p. 64	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 64	*tʻeracʻeal*	V	ACT	ITR	+	GEN		+	S	SV	+
Eł. p. 64	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 64	*kʻakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 65	*aŕeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 65	*žołoveal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 65	*xotoreal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 66	*bažaneal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 66	*aŕeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Eł. p. 66	*žołoveal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 66	*arareal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 66	*meržeal*	CVB	PASS	ITR	-			-		V	-
Eł. p. 66	*hastateal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 67	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 67	*yaǰołealkʻ*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 67	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 67	*pʻapʻkacʻeal*	ADJ	ACT	ITR							
Eł. p. 67	*vštacʻeal*	ADJ	ACT	ITR							
Eł. p. 67	*nuałeal*	ADJ	ACT	ITR							
Eł. p. 67	*ənkecʻeal*	CVB	PASS	ITR	+	NOM		-		VS	+
Eł. p. 67	*arhamarheal*	CVB	PASS	ITR	+	NOM		-		VS	+
Eł. p. 67	*anargeal*	V	PASS	ITR	+	NOM		-		VS	+
Eł. p. 68	*zmeŕeal*	ADJ	ACT	ITR							
Eł. p. 68	*hamareal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 68	*znnǰecʻealsn*	ADJ	ACT	ITR							
Eł. p. 68	*darjeal*	ADV									
Eł. p. 68	*darjeal*	ADV									
Eł. p. 69	*aŕeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 69	*hastateal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 69	*katareal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 70	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 70	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 70	*hareal*	CVB	PASS	ITR	+	GEN		-		SV	+
Eł. p. 70	*paycaŕacʻeal*	ADJ	ACT	ITR							
Eł. p. 70	*aceal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 71	*stambakeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 71	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 71	*tʻulacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 71	*darjeal*	ADV									
Eł. p. 71	*tueal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 71	*aŕeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 72	*stambakeal*	ADJ	ACT	ITR							
Eł. p. 72	*pʻaxucʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 72	*apreal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 72	*tʻagaworeal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 72	*ənkaleal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 72	*xizaxeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 72	*patrasteal*	V	ACT	TR	-		+	+	A	OV	+
Eł. p. 72	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 73	*eleal*	ADJ	ACT	ITR							
Eł. p. 73	*kacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 73	*darjeal*	ADV									
Eł. p. 73	*vatasrteal*	CVB	ACT	ITR	-			-		V	-
Eł. p. 74	*ekeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 74	*kacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	-
Eł. p. 75	*kʻakeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 75	*stugeal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 75	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 75	*zinealkʻ*	V	ACT	ITR	-			-		V	+
Eł. p. 75	*vaŕealkʻ*	V	ACT	ITR	-			-		V	+
Eł. p. 76	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 76	*bekeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 76	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 76	*darjeal*	CVB	ACT	ITR	+	GEN		-		VS	+
Eł. p. 77	*zankealsn*	ADJ	ACT	ITR							

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 77	*apreal*	ADJ	ACT	ITR							
Eł. p. 77	*tʻagucʻeal*	ADJ	ACT	ITR							
Eł. p. 77	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 77	*prceal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 77	*mnacʻeal*	ADJ	ACT	ITR							
Eł. p. 77	*zankeal*	ADJ	ACT	ITR							
Eł. p. 77	*darjeal*	ADV									
Eł. p. 77	*aceal*	V	ACT	TR	-		+	+	A	OV	+
Eł. p. 77	*tueal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 77	*pʻrkeal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 77	*cʻrueal*	V	ACT	ITR	+	NOM		-		SV	+
Eł. p. 78	*vatneal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 78	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 78	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	-
Eł. p. 78	*zetełeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 78	*hareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 78	*patarʻeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 78	*kacʻeal*	V	ACT	ITR	-			-		V	+
Eł. p. 79	*awereal*	V	ACT	TR	-		+	-		VO	+
Eł. p. 79	*arʻeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 79	*awereal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 79	*arareal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 79	*pʻaxucʻeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 79	*meržeal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 79	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 79	*tareal*	V	ACT	TR	-		+	-		VO	+
Eł. p. 79	*vareal*	V	ACT	TR	-		+	-		VO	+
Eł. p. 79	*kapeal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 79	*edeal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 79	*spʻrʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 79	*taraceal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 79	*mnacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 79	*tueal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 79	*arareal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 80	*arʻeal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 80	*katareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 80	*hasucʻeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 80	*uracʻealn*	ADJ	ACT	ITR							
Eł. p. 80	*ełeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 80	*gteal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
Eł. p. 80	*arʻeal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 80	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 80	*hareal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
Eł. p. 80	*tʻołeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 81	*hareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 81	*tueal*	V	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 81	*luceal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 81	*aceal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 82	*edeal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	-
Eł. p. 82	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 82	*ancʻucʻeal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 82	*krtʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 82	*tełekacʻeal*	V	ACT	TR	-		+	+	Ø	OV	-
Eł. p. 82	*mteal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 82	*ertʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 82	*šaržeal*	CVB	ACT	TR	+	NOM		-		AV	+
Eł. p. 82	*pakaseal*	ADJ	ACT	ITR							
Eł. p. 82	*darjeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 82	*stugeal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 82	*zvayrenacʻeal*	ADJ	ACT	ITR							
Eł. p. 83	*gorceal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
Eł. p. 83	*yancʻucʻeal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 83	*kacʻeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 83	*ereweal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 83	*əntreal*	ADJ	PASS	ITR							
Eł. p. 83	*yargeal*	V	PASS	ITR	+	NOM		+	S	VS	+
Eł. p. 83	*mecarealkʻ*	CVB	PASS	ITR	-			-		V	+
Eł. p. 84	*ertʻeal*	V	ACT	ITR	+	NOM		-		SV	+
Eł. p. 84	*amačʻecʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 84	*tueal*	V	ACT	TR	+	GEN		+	Ø	VA	+
Eł. p. 84	*nełeal*	CVB	ACT	ITR	-			-		V	+

Place	ptcp	Category	Voice	Valency	subj	S/A	O	Cop.	agr	Order	Pol.
Eł. p. 85	*argeleal*	V	act	tr	-		+	+	Ø	VO	+
Eł. p. 85	*zhateal*	adj	pass	itr							
Eł. p. 85	*zargeleal*	adj	pass	itr							
Eł. p. 85	*kargeal*	V	pass	itr	+	nom		+	S	SV	+
Eł. p. 85	*arjakeal*	V	pass	itr	-			+	S	V	+
Eł. p. 85	*yap‘štakeal*	V	pass	itr	+	nom		+	S	SV	+
Eł. p. 85	*haneal*	V	act	tr	+	gen		+	Ø	VA	+
Eł. p. 86	*xoramankeal*	cvb	act	itr	+	nom		-		SV	+
Eł. p. 86	*p‘ut‘ac‘eal*	cvb	act	itr	+	nom		-		SV	+
Eł. p. 86	*stugeal*	cvb	act	tr	-			-		V	+
Eł. p. 86	*darjeal*	adv									
Eł. p. 86	*zarmac‘eal*	cvb	act	itr	+	nom		-		SV	+
Eł. p. 86	*ařeal*	cvb	act	tr	-		+	-		OV	+
Eł. p. 86	*ełeal*	cvb	act	itr	-			-		V	+
Eł. p. 86	*mteal*	cvb	act	itr	-			-		V	+
Eł. p. 87	*aprealk‘s*	cvb	act	itr	+	nom		-		SV	+
Eł. p. 87	*hastatealk‘*	cvb	act	itr	-			-		V	+
Eł. p. 87	*miac‘eal*	cvb	pass	itr	-			-		V	+
Eł. p. 87	*yaruc‘eal*	cvb	act	itr	-			-		V	+
Eł. p. 87	*nnjec‘eals*	adj	act	itr							
Eł. p. 87	*mełuc‘eal*	V	act	itr	-			+	S	V	-
Eł. p. 88	*zhawatac‘eals*	adj	act	itr							
Eł. p. 88	*ekeal*	cvb	act	itr	-			-		V	+
Eł. p. 88	*hanguc‘eal*	V	act	itr	+	nom		+	S	VS	+
Eł. p. 88	*gorceal*	V	act	tr	+	gen	+	+	Ø	OVA	+
Eł. p. 88	*haseal*	cvb	act	itr	-			-		V	+
Eł. p. 88	*mteal*	V	act	itr	+	nom		-		VS	+
Eł. p. 88	*hareal*	V	act	tr	+	gen	+	+	Ø	OVA	+
Eł. p. 89	*hareal*	adj	pass	itr							
Eł. p. 89	*sprdeal*	cvb	act	itr	+	nom		-		VS	+
Eł. p. 89	*hateal*	cvb	pass	itr	+	nom		-		VS	+
Eł. p. 89	*ankeal*	V	act	itr	+	nom		-		VS	+
Eł. p. 90	*matuc‘eal*	cvb	act	tr	-		+	-		OV	+
Eł. p. 90	*anc‘eal*	V	act	itr	+	nom		+	S	VA	+
Eł. p. 90	*stugeal*	cvb	act	tr	-		+	-		VO	+
Eł. p. 90	*zateal*	V	act	itr	+	gen		-		SV	+
Eł. p. 90	*orošeal*	V	act	itr	+	gen		+	Ø	SV	+
Eł. p. 90	*gorceal*	V	act	tr	+	gen	+	+	Ø	OVA	-
Eł. p. 91	*dařnac‘eal*	cvb	act	itr	+	nom		-		V	+
Eł. p. 91	*t‘mbreal*	V	act	itr	-			-		V	+
Eł. p. 91	*c‘noreal*	V	act	itr	-			-		V	+
Eł. p. 91	*k‘akeal*	V	act	itr	-			+	S	V	+
Eł. p. 91	*trtmeals*	adj	act	itr							
Eł. p. 91	*zateal*	V	act	tr	+	nom	+	-		AOV	+
Eł. p. 91	*orošeal*	V	act	tr	+	nom	+	+	Ø	AOV	+
Eł. p. 91	*heřac‘eal*	V	act	itr	-			-		V	+
Eł. p. 91	*awtarac‘eal*	V	act	itr	-			-		V	+
Eł. p. 91	*katareal*	adj	pass	itr							
Eł. p. 91	*hateal*	cvb	act	tr	-		+	-		OV	+
Eł. p. 91	*yanuaneal*	adj	pass	itr							
Eł. p. 93	*bažaneals*	adj	pass	itr							
Eł. p. 94	*yełeal*	cvb	pass	itr	-			-		V	+
Eł. p. 94	*edeal*	V	act	tr	+	gen	+	+	Ø	AOV	+
Eł. p. 94	*ławłeal*	V	act	itr	+	nom		-		SV	+
Eł. p. 95	*t‘ak‘uc‘eal*	V	act	itr	+	nom		+	S	SV	+
Eł. p. 95	*zurac‘eal*	adj	act	itr							
Eł. p. 95	*yusac‘eal*	V	act	itr	-			+	S	V	+
Eł. p. 96	*ełeal*	cvb	act	itr	-			-		V	+
Eł. p. 97	*k‘akeal*	cvb	act	tr	-		+	-		VO	+
Eł. p. 98	*vařealk‘*	V	act	itr	+	nom		+	S	SV	+
Eł. p. 98	*əntreal*	cvb	act	tr	-		+	-		OV	+
Eł. p. 99	*stugeal*	cvb	act	tr	-		+	-		VO	+
Eł. p. 99	*miabanealk‘*	V	act	itr	+	nom		+	S	SV	+
Eł. p. 99	*břnac‘eal*	cvb	act	tr	+	nom	+	-		AVO	+
Eł. p. 99	*tueal*	cvb	act	tr	-		+	-		OV	+
Eł. p. 99	*ekeal*	cvb	act	itr	+	nom		-		SV	+
Eł. p. 99	*kac‘eal*	V	act	itr	+	nom		+	S	SV	+
Eł. p. 100	*heceal*	adj	act	itr							
Eł. p. 100	*mteal*	V	act	itr	+	gen		+	Ø	VS	+
Eł. p. 101	*gteal*	V	pass	itr	+	nom		+	S	SV	+
Eł. p. 101	*yałt‘ealk‘*	adj	pass	itr							

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 101	*arʹeal*	V	ACT	TR	-		+	+	Ø	VO	+
Eł. p. 101	*matucʻeal*	CVB	ACT	ITR	-					V	+
Eł. p. 101	*erkucʻeal*	CVB	PASS	ITR	-			-		V	-
Eł. p. 101	*haseal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 102	*kacʻeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 102	*edeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 102	*learnacʻeal*	ADJ	ACT	ITR							
Eł. p. 102	*gazanacʻeal*	ADJ	ACT	ITR							
Eł. p. 102	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 103	*edeal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 103	*šineal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 103	*cʻankacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 103	*ambaršteal kʻ*	ADJ	ACT	ITR							
Eł. p. 103	*ardaracʻealkʻ*	ADJ	ACT	ITR							
Eł. p. 104	*srtmteal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 104	*sartucʻeal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 104	*lueal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
Eł. p. 104	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Eł. p. 104	*ztʻaxceal*	ADJ	ACT	ITR							
Eł. p. 104	*trtmealkʻ*	V	ACT	ITR	-			+	S	V	+
Eł. p. 104	*zuartʻacʻealkʻ*	V	ACT	ITR	-			-		V	+
Eł. p. 104	*zgastacʻealkʻ*	V	ACT	ITR	-			-		V	+
Eł. p. 104	*lrjacʻealkʻ*	V	ACT	ITR	-			+	S	V	+
Eł. p. 104	*darjeal*	ADV									
Eł. p. 105	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 105	*martucʻeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 105	*kʻakteal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 105	*lkʻeal*	CVB	PASS	ITR	+	NOM		-		SV	-
Eł. p. 105	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 105	*ekeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 105	*arʹeal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
Eł. p. 106	*zmnacʻealsn*	ADJ	ACT	ITR							
Eł. p. 106	*darjeal*	ADV									
Eł. p. 106	*uracʻealn*	ADJ	ACT	ITR							
Eł. p. 106	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 106	*herʹacʻeal*	V	PASS	ITR	+	NOM		+	S	SV	-
Eł. p. 106	*arʹeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 106	*ankealkʻ*	ADJ	ACT	ITR							
Eł. p. 106	*tueal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 106	*cakoteal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 106	*katareal*	ADJ	PASS	ITR							
Eł. p. 107	*darjeal*	ADV									
Eł. p. 107	*zənkaleal*	ADJ	PASS	ITR							
Eł. p. 107	*tpaworeal*	ADJ	PASS	ITR							
Eł. p. 107	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 107	*zawracʻeal*	ADJ	ACT	ITR							
Eł. p. 108	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 108	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 108	*cnealkʻ*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 109	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 109	*barjracʻeal*	CVB	PASS	ITR	+	NOM		-		VS	+
Eł. p. 109	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 110	*yarucʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 110	*miacʻeal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 110	*cageal*	ADJ	ACT	ITR							
Eł. p. 110	*ełeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 110	*ełeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 110	*haseal*	V	ACT	ITR	-			-		V	+
Eł. p. 110	*teseal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 110	*ankeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 110	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 111	*yaǰołeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 111	*mecamteal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 111	*kuracʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 111	*xarʹneal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 111	*molorealkʻ*	CVB	ACT	ITR	-			-		V	+
Eł. p. 112	*arʹawelealkʻ*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 112	*kuracʻealkʻ*	V	ACT	ITR	-			+	S	V	+
Eł. p. 112	*teseal*	V	ACT	TR	+	GEN	+	-		AVO	+
Eł. p. 112	*kuracʻealkʻ*	ADJ	ACT	ITR							
Eł. p. 112	*ereweal*	V	ACT	ITR	+	NOM		+	S	SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 112	*awrhnealk‘*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 112	*zkatareal*	ADJ	PASS	ITR							
Eł. p. 113	*haseal*	CVB	ACT	ITR	+	GEN		-		VS	+
Eł. p. 113	*yanjneal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 113	*kargeal*	ADJ	PASS	ITR							
Eł. p. 113	*vaŕealk‘*	ADJ	ACT	ITR							
Eł. p. 113	*patrastealk‘*	ADJ	ACT	ITR							
Eł. p. 113	*stac‘eal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 114	*ułłeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 114	*urac‘eal*	ADJ	ACT	ITR							
Eł. p. 114	*useal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 115	*matneal*	CVB	ACT	ITR	+	GEN		-		SV	+
Eł. p. 115	*p‘axuc‘eals*	ADJ	ACT	ITR							
Eł. p. 116	*matuc‘eal*	V	ACT	ITR	+	NOM		-		SV	+
Eł. p. 116	*gazanac‘eal*	ADJ	ACT	ITR							
Eł. p. 117	*arareal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
Eł. p. 117	*zangiteal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 117	*haseal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 117	*aŕeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 117	*baxealk‘*	CVB	ACT	ITR	-			-		V	+
Eł. p. 117	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 117	*bekeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 117	*aŕeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 117	*k‘akeal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 117	*k‘akeal*	ADJ	ACT	ITR							
Eł. p. 117	*mnac‘eal*	ADJ	ACT	ITR							
Eł. p. 118	*barjeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 118	*aŕeal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 118	*ankeal*	V	ACT	ITR	+	GEN		-		VS	+
Eł. p. 118	*zkatareal*	ADJ	PASS	ITR							
Eł. p. 118	*ankeal*	CVB	ACT	ITR	+	GEN		-		VS	+
Eł. p. 118	*xtac‘eal*	V	ACT	ITR	+	GEN		-		SV	+
Eł. p. 118	*mnac‘ealk‘n*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 118	*vatnealk‘*	V	ACT	ITR	-			-		V	+
Eł. p. 118	*c‘ruealk‘*	V	ACT	ITR	-			+	S	V	+
Eł. p. 118	*darjeal*	ADV									
Eł. p. 119	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 119	*ankeal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 119	*yec‘eal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 119	*c‘aneal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 119	*haseal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 120	*ankealsn*	ADJ	ACT	ITR							
Eł. p. 120	*darjeal*	ADV									
Eł. p. 121	*urac‘ealn*	ADJ	ACT	ITR							
Eł. p. 121	*t‘aguc‘eal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 121	*tueal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 121	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 122	*darjeal*	ADV									
Eł. p. 122	*aŕeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 122	*ankeal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 122	*edeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 122	*darjeal*	ADV									
Eł. p. 122	*ełeal*	V	ACT	ITR	-					V	+
Eł. p. 122	*ankeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 122	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 123	*anc‘uc‘eal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
Eł. p. 123	*lueal*	CVB	ACT	TR	+	NOM	+	-		OAV	+
Eł. p. 123	*ijeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 123	*aŕak‘inac‘eal*	ADJ	ACT	ITR							
Eł. p. 123	*ankeal*	ADJ	ACT	ITR							
Eł. p. 124	*hareal*	CVB	ACT	TR	+	NOM	+	-		OAV	+
Eł. p. 124	*tueal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 124	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 124	*urac‘eal*	ADJ	ACT	ITR							
Eł. p. 124	*haseal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 124	*hamareal*	V	PASS	ITR	+	NOM		+	S	VS	+
Eł. p. 124	*znkareal*	ADJ	PASS	ITR							
Eł. p. 125	*katareal*	ADJ	PASS	ITR							
Eł. p. 125	*zankealsn*	ADJ	ACT	ITR							
Eł. p. 125	*ełeal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 125	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 125	*edeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 125	*martucʻeal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 125	*zmnacʻealsn*	ADJ	ACT	ITR							
Eł. p. 126	*darjeal*	ADV									
Eł. p. 126	*matucʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 126	*ijeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 126	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 126	*eleal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 126	*haseal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 126	*zmnacʻealsn*	ADJ	ACT	ITR							
Eł. p. 126	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 126	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 126	*darjeal*	ADV									
Eł. p. 127	*darjeal*	ADV									
Eł. p. 127	*ayrecʻeal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 127	*yałtʻeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 127	*bekeal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 127	*zmnacʻealsn*	ADJ	ACT	ITR							
Eł. p. 127	*martucʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 127	*aprealkʻ*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 127	*darjeal*	ADV									
Eł. p. 127	*ankealkʻn*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 127	*lʹeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 127	*edeal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 127	*hastateal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 128	*yarjakeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 128	*hareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 128	*arʹeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 128	*srtmteal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 128	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 128	*lʹeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 128	*matucʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 129	*mnacʻeal*	ADJ	ACT	ITR							
Eł. p. 129	*awereal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
Eł. p. 129	*trtmeal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 129	*arʹeal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 129	*awereal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
Eł. p. 129	*hareal*	V	ACT	TR	-		+	+	Ø	VO	+
Eł. p. 129	*darjeal*	ADV									
Eł. p. 129	*awereal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
Eł. p. 129	*ancʻucʻeal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 129	*kʻandeal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
Eł. p. 129	*ɔmbʹneal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 130	*yuracʻealn*	ADJ	ACT	ITR							
Eł. p. 130	*haseal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 130	*ertʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 130	*bʹnacʻeal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Eł. p. 130	*arʹeal*	V	ACT	TR	+	GEN	+	-		OVA	+
Eł. p. 130	*awereal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
Eł. p. 131	*eleal*	V	ACT	ITR	+	NOM		-		SV	+
Eł. p. 131	*koruseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 131	*gnacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 131	*tʻołeal*	V	ACT	TR	-		+	+	A	OV	+
Eł. p. 131	*kaleal*	V	ACT	TR	+	NOM	+	+	Ø	AVO	+
Eł. p. 131	*cʻasucʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 131	*tʻołeal*	CVB	ACT	TR	-			-		V	+
Eł. p. 131	*cʻaneal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 131	*cʻruealkʻ*	V	ACT	ITR	+	NOM		-		SV	+
Eł. p. 132	*lueal*	CVB	ACT	TR	+	GEN	+	-		OVA	+
Eł. p. 132	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
Eł. p. 132	*edeal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
Eł. p. 133	*yłeal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
Eł. p. 133	*matucʻeal*	CVB	ACT	ITR	-			-		SV	+
Eł. p. 133	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
Eł. p. 133	*yuracʻeal*	ADJ	ACT	ITR							
Eł. p. 133	*gorceal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 133	*mnacʻeal*	ADJ	ACT	ITR							
Eł. p. 133	*apreal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 134	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 134	*barekamacʻeal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 134	*vastakeal*	V	ACT	ITR	-			+	S	V	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 134	*urac'ealn*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 135	*karcec'eal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Eł. p. 135	*gteal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
Eł. p. 135	*lueal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
Eł. p. 135	*haseal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 136	*zurac'ealn*	ADJ	ACT	ITR							
Eł. p. 136	*əndeluzeal*	ADJ	PASS	ITR							
Eł. p. 136	*arkeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 136	*tueal*	V	ACT	TR	+	NOM	+	-		AVO	+
Eł. p. 136	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 136	*zardareal*	ADJ	PASS	ITR							
Eł. p. 136	*šk'ełac'eal*	ADJ	ACT	ITR							
Eł. p. 137	*gteal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
Eł. p. 137	*anc'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 137	*zarmac'eal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 137	*lueal*	V	ACT	TR	+	GEN		+	Ø	VA	+
Eł. p. 138	*katareal*	ADJ	PASS	ITR							
Eł. p. 138	*lueal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
Eł. p. 138	*c'ankac'ealn*	V	ACT	ITR	-			+	S	V	+
Eł. p. 138	*ařeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 138	*urac'ealn*	ADJ	ACT	ITR							
Eł. p. 139	*gteal*	V	ACT	TR	+	GEN		+	Ø	VA	+
Eł. p. 139	*hareal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 139	*k'ameal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 140	*lueal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 140	*darjeal*	ADV									
Eł. p. 140	*gnac'eal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 140	*eleal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 140	*nuačeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 140	*č'arč'areal*	ADJ	PASS	ITR							
Eł. p. 142	*lueal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
Eł. p. 142	*darjeal*	ADV									
Eł. p. 142	*xałac'eal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 142	*ankeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 142	*nełeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 142	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 142	*mteal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 142	*darjeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 142	*matuc'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 143	*barkac'eal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 143	*arareal*	V	IMPRS	TR	-			+	Ø	V	+
Eł. p. 143	*č'arč'areal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
Eł. p. 143	*useal*	V	ACT	TR	-		+	+	Ø	VO	+
Eł. p. 144	*graweal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Eł. p. 144	*katareal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 144	*moloreal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 144	*ert'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 144	*zkargeal*	ADJ	PASS	ITR							
Eł. p. 144	*štapeal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 145	*zarmac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 145	*luceal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 145	*kec'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 145	*hareal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 145	*yaruc'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 145	*hayec'eal*	V	ACT	ITR	-			-		V	+
Eł. p. 145	*vařeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 145	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 145	*ijeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 145	*luc'eal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 145	*lueal*	V	ACT	TR	+	GEN		+	Ø	AV	+
Eł. p. 145	*moloreal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 145	*darjeal*	ADV									
Eł. p. 146	*čšmarteal*	CVB	ACT	TR	+	NOM		-		VS	+
Eł. p. 146	*lueal*	V	ACT	TR	+	GEN		+	Ø	VA	+
Eł. p. 146	*t'mbreal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 146	*yaruc'eal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 146	*zkapealsn*	ADJ	PASS	ITR							
Eł. p. 146	*ənt'ac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 146	*lueal*	V	ACT	TR	+	GEN		+	Ø	VA	+
Eł. p. 146	*handerjeal*	ADJ	PASS	ITR							
Eł. p. 146	*janjrac'ealk'*	V	ACT	ITR	-			+	S	V	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 147	*xndacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 147	*katareal*	ADJ	PASS	ITR							
Eł. p. 147	*cʻankacʻealkʻ*	V	ACT	ITR	-			+	S	V	+
Eł. p. 148	*yarucʻeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 148	*yarucʻeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 148	*xawareal*	ADJ	PASS	ITR							
Eł. p. 148	*kuracʻeal*	ADJ	ACT	ITR							
Eł. p. 149	*darjeal*	ADV									
Eł. p. 149	*kuracʻeal*	CVB	ACT	ITR	-						
Eł. p. 149	*zmoloreals*	ADJ	ACT	ITR							
Eł. p. 149	*nmaneal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 149	*załxeal*	ADJ	PASS	ITR							
Eł. p. 149	*koruseals*	ADJ	ACT	ITR							
Eł. p. 150	*eleal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 150	*darjeal*	ADV									
Eł. p. 150	*moloreal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 150	*xroxtacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 150	*koracʻeal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 150	*xałałeal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 150	*kacʻeal*	CVB	ACT	ITR	+	GEN		-		SV	+
Eł. p. 150	*mteal*	CVB	ACT	ITR	+	GEN		-		SV	-
Eł. p. 150	*ambarjeal*	CVB	ACT	TR	+	GEN	+	-		AOV	+
Eł. p. 150	*pšucʻeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 150	*kangneal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 151	*yarucʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 151	*ancʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 151	*handerjeal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 151	*hastateal*	CVB	ACT	TR	-			-		V	+
Eł. p. 152	*cʻankacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 152	*alēkoceal*	ADJ	ACT	ITR							
Eł. p. 152	*merjeal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 152	*cʻankacʻealkʻ*	V	ACT	ITR	-			+	S	V	+
Eł. p. 152	*arareal*	V	IMPRS	TR			+	+	Ø	VO	+
Eł. p. 152	*zkapealsn*	ADJ	PASS	ITR							
Eł. p. 152	*haneal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 152	*zkapealsn*	ADJ	PASS	ITR							
Eł. p. 153	*ancʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 153	*kecʻeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 153	*hałordeal*	CVB	ACT	ITR	-			+	S	V	+
Eł. p. 154	*moŕacʻeal*	V	ACT	TR	+	GEN	+	+	Ø	VAO	+
Eł. p. 154	*pʻakeal*	ADJ	PASS	ITR							
Eł. p. 155	*ekeal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 155	*bereal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 155	*zarmacʻeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 155	*ekeal*	ADJ	ACT	ITR							
Eł. p. 155	*haseal*	ADJ	ACT	ITR							
Eł. p. 155	*katareal*	ADJ	PASS	ITR							
Eł. p. 156	*lueal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 156	*arareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 156	*ankeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 156	*tʻulacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 156	*eleal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 157	*arareal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 157	*arareal*	V	IMPRS	TR	-		+	+	Ø	VO	+
Eł. p. 157	*ertʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 157	*ereweal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 158	*erkmteal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 158	*xarxareal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 158	*hřčʻakeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 158	*cʻaneal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 158	*mecareal*	CVB	PASS	ITR	+	NOM		-		VS	+
Eł. p. 158	*tueal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
Eł. p. 158	*zdaŕnacʻeal*	ADJ	ACT	ITR							
Eł. p. 158	*zťjacʻeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 159	*ənkecʻeal*	V	ACT	TR	-		+	-		VO	+
Eł. p. 159	*arkeal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	+
Eł. p. 159	*hamareal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 159	*katareal*	ADJ	PASS	ITR							
Eł. p. 160	*vičakeal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 161	*apreal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 161	*hayecʻeal*	CVB	ACT	ITR	+	GEN		-		VS	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 161	*arbealkʻ*	ADJ	ACT	ITR							
Eł. p. 161	*čʻarčʻareal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 162	*vareal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 162	*katareal*	ADJ	PASS	ITR							
Eł. p. 162	*kaxeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 163	*haseal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 163	*katareal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 164	*yimareal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 164	*uracʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 164	*ašakertealkʻn*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 164	*xaṙneal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 164	*patrasteal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 164	*haseal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 165	*tueal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 165	*useal*	ADJ	ACT	ITR							
Eł. p. 165	*xrateal*	ADJ	PASS	ITR							
Eł. p. 165	*martucʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 166	*teseal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	-
Eł. p. 166	*orošeal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 166	*goyacʻeals*	ADJ	ACT	ITR							
Eł. p. 166	*arkeal*	V	ACT	TR	+	GEN	+	+	Ø	VOA	+
Eł. p. 166	*beranacʻeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 166	*tʻṙucʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 167	*hastateal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 167	*tueal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 167	*špʻotʻeal*	ADJ	PASS	ITR							
Eł. p. 167	*ankeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 167	*arareal*	ADJ	PASS	ITR							
Eł. p. 168	*zxačʻelealn*	ADJ	PASS	ITR							
Eł. p. 168	*maceal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 169	*gtʻacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 169	*aṙeal*	V	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 169	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 169	*hamareal*	V	ACT	TR	+	GEN		+	Ø	VA	+
Eł. p. 169	*edeal*	V	ACT	TR	+	GEN		+	Ø	AV	+
Eł. p. 169	*eleal*	V	ACT	ITR	+	NOM		+	S	VS	+
Eł. p. 169	*axtacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 169	*gteal*	V	ACT	TR	-		+	-		VO	-
Eł. p. 170	*janjracʻeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 170	*janjracʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 170	*kereal*	V	ACT	TR	+	GEN	+	+	Ø	AOV	+
Eł. p. 171	*čʻgteal*	CVB	ACT	TR	-		+	-		VO	-
Eł. p. 171	*xoteal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 171	*gteal*	V	ACT	TR	+	GEN	+	-		AVO	-
Eł. p. 172	*hiwandacʻeal*	ADJ	ACT	ITR							
Eł. p. 172	*pʻutʻacʻeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 172	*haseal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 172	*matucʻeal*	V	ACT	ITR	-			-		V	+
Eł. p. 172	*ankeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 172	*tareal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 172	*matucʻeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 172	*axtacʻeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 173	*gtʻacʻeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 173	*cneal*	V	ACT	TR	-		+	-		VO	+
Eł. p. 173	*gitacʻeal*	V	ACT	TR	+	GEN	+	-		AOV	-
Eł. p. 173	*vayeleal*	V	ACT	ITR	-			-		V	-
Eł. p. 173	*čʻarčʻareal*	ADJ	PASS	ITR							
Eł. p. 173	*lueal*	V	ACT	TR	+	GEN		+	Ø	AV	+
Eł. p. 174	*tareal*	CVB	ACT	TR	+	NOM	+	-		AOV	+
Eł. p. 175	*teseal*	V	ACT	TR	+	GEN	+	+	Ø	OVA	-
Eł. p. 175	*meṙeal*	ADJ	ACT	ITR							
Eł. p. 175	*moloreal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 175	*borbokʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 176	*darjeal*	ADV									
Eł. p. 176	*pʻapareal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 176	*teṙeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 176	*gijacʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 176	*mroteal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 176	*haseal*	V	ACT	ITR	+	GEN		+	Ø	SV	+
Eł. p. 176	*darjeal*	ADV									
Eł. p. 176	*lueal*	V	ACT	TR	+	GEN		+	Ø	VA	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 176	*usucʻeal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
Eł. p. 176	*kuracʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 177	*aceal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 177	*haneal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 177	*ankeal*	V	ACT	ITR	+	GEN		-		SV	+
Eł. p. 177	*darjeal*	ADV									
Eł. p. 177	*darjeal*	ADV									
Eł. p. 177	*hayecʻeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 177	*ekeal*	ADJ	ACT	ITR							
Eł. p. 177	*darjeal*	ADV									
Eł. p. 178	*gorceal*	CVB	PASS	ITR	+	NOM		-		SV	+
Eł. p. 178	*ənkaleal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 179	*ancʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 179	*ekeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 179	*bašxeal*	CVB	ACT	TR	-			-		V	+
Eł. p. 179	*yordoreal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 180	*katareal*	ADJ	PASS	ITR							
Eł. p. 180	*tʻmbrealkʻ*	ADJ	ACT	ITR							
Eł. p. 180	*ankeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 180	*darjeal*	ADV									
Eł. p. 180	*kangneal*	ADJ	ACT	ITR							
Eł. p. 180	*tagnapealkʻ*	V	ACT	ITR	-			-		V	+
Eł. p. 180	*cʻorealkʻ*	V	ACT	ITR	-			-		V	+
Eł. p. 180	*ekeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 180	*kangneal*	ADJ	PASS	ITR							
Eł. p. 181	*haseal*	V	ACT	ITR	+	GEN		+	Ø	SV	+
Eł. p. 181	*kamecʻeal*	V	ACT	TR	+	GEN		+	Ø	VA	+
Eł. p. 181	*darjeal*	ADV									
Eł. p. 181	*neɫeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 181	*hačeal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 181	*haseal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 181	*darjeal*	ADV									
Eł. p. 182	*kapeal*	ADJ	PASS	ITR							
Eł. p. 182	*žoɫoveal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 182	*useal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 182	*nšanakeal*	V	ACT	TR	-			+	Ø	V	+
Eł. p. 182	*edeal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 182	*ənkecʻeal*	V	ACT	TR	+	GEN		+	Ø	AV	+
Eł. p. 182	*nšanakeal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 183	*gteal*	V	ACT	TR	-		+	-		OV	+
Eł. p. 183	*darjeal*	ADV									
Eł. p. 183	*arʻeal*	CVB	ACT	TR	-			-		V	+
Eł. p. 183	*aceal*	V	ACT	TR	+	GEN	+	+	Ø	AVO	+
Eł. p. 184	*snucʻeal*	V	ACT	TR	+	GEN		-		AV	+
Eł. p. 184	*usucʻeal*	V	ACT	TR	+	GEN		+	Ø	AV	+
Eł. p. 184	*ekeal*	V	ACT	ITR				+	S	V	+
Eł. p. 184	*zateal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 184	*orošeal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 184	*gteal*	V	ACT	TR	+	NOM	+	+	Ø	AOV	+
Eł. p. 184	*yancʻucʻeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 184	*meɫucʻeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 184	*kecʻeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 185	*erdueal*	V	ACT	ITR	+	GEN		-		VS	+
Eł. p. 185	*amačʻecʻeal*	ADJ	ACT	ITR							
Eł. p. 185	*srtmteal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 186	*darjeal*	ADV									
Eł. p. 186	*ankeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 186	*leal*	V	ACT	ITR	-			+	S	V	-
Eł. p. 187	*haseal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 187	*katarealkʻ*	ADJ	PASS	ITR							
Eł. p. 187	*ənkaleal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 187	*hawaneal*	V	ACT	ITR	+	GEN		-		VS	+
Eł. p. 188	*hareal*	CVB	PASS	ITR	+	NOM		-		VS	+
Eł. p. 188	*awandeal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 188	*kapealkʻ*	ADJ	PASS	ITR							
Eł. p. 188	*katareal*	ADJ	PASS	ITR							
Eł. p. 188	*cʻncacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 188	*paycařacʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 189	*cʻaneal*	ADJ	ACT	ITR							
Eł. p. 189	*cʻrueal*	ADJ	ACT	TR							
Eł. p. 189	*ertʻeal*	CVB	ACT	ITR	+	NOM		-		SV	+

Place	PTCP	Category	Voice	Valency	SUBJ	S/A	O	Cop.	AGR	Order	Pol.
Eł. p. 189	*anjkac'eal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 189	*kargeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 190	*kerparaneal*	ADJ	PASS	ITR							
Eł. p. 190	*zhražarealsn*	ADJ	ACT	ITR							
Eł. p. 190	*zkapealsn*	ADJ	PASS	ITR							
Eł. p. 190	*c'ncac'eal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 190	*anjkac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 190	*zargeleal*	ADJ	PASS	ITR							
Eł. p. 190	*hareal*	V	PASS	ITR	+	NOM		-		SV	+
Eł. p. 190	*pašareal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 190	*lc'eal*	CVB	PASS	ITR	+	NOM		-		VS	+
Eł. p. 191	*ənkaleal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 191	*darjeal*	ADV									
Eł. p. 191	*meŕeal*	ADJ	ACT	ITR							
Eł. p. 191	*hanapazordeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 191	*katareal*	ADJ	PASS	ITR							
Eł. p. 191	*bnakeal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 191	*ankeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 191	*banakeal*	V	ACT	ITR	-			+	S	SV	+
Eł. p. 192	*p'oxadreal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 194	*zarmac'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 194	*sk'anč'ac'eal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 194	*kapeal*	ADJ	PASS	ITR							
Eł. p. 194	*kapeal*	ADJ	PASS	ITR							
Eł. p. 194	*janjrac'eal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 195	*ekeal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 195	*eleal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 195	*ašakerteal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 195	*edeal*	V	ACT	TR	-		+	+	Ø	OV	+
Eł. p. 195	*anc'eal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 196	*aŕeal*	CVB	ACT	TR	-		+	-		OV	+
Eł. p. 196	*yajołeal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 196	*kapealk'n*	ADJ	PASS	ITR							
Eł. p. 196	*aŕaweleal*	ADJ	ACT	ITR							
Eł. p. 197	*č'arč'areal*	V	PASS	ITR	-			+	S	V	+
Eł. p. 197	*eleal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 197	*gteal*	CVB	ACT	TR	+	GEN	+	-		AVO	+
Eł. p. 197	*bažaneal*	ADJ	PASS	ITR							
Eł. p. 197	*arareal*	CVB	ACT	TR	-		+	-		VO	+
Eł. p. 197	*zmnac'eal*	ADJ	ACT	ITR							
Eł. p. 198	*erkmteal*	CVB	ACT	ITR	+	NOM		-		SV	-
Eł. p. 198	*darjeal*	ADV									
Eł. p. 199	*šnorheal*	V	ACT	TR	+	GEN	+	+	Ø	OAV	+
Eł. p. 199	*leal*	V	ACT	ITR	-			+	S	V	+
Eł. p. 199	*darjeal*	ADV									
Eł. p. 200	*leal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 200	*vareal*	CVB	ACT	TR	+	NOM	+	-		AVO	+
Eł. p. 200	*mxit'areal*	CVB	PASS	ITR	-			-		V	+
Eł. p. 200	*orošeal*	V	PASS	ITR	+	NOM		-		SV	+
Eł. p. 200	*bnakeal*	V	ACT	ITR	+	NOM		+	S	SV	+
Eł. p. 201	*tapaleal*	CVB	PASS	ITR	+	NOM		-		VS	+
Eł. p. 201	*grgealk'*	V	PASS	ITR	+	NOM		-		SV	+
Eł. p. 201	*gguealk'*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 201	*xndreal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 201	*sneal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 201	*sewac'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 202	*katarealk'*	ADJ	PASS	ITR							
Eł. p. 202	*ełeal*	CVB	ACT	ITR	+	NOM		-		SV	+
Eł. p. 202	*zp'akeal*	ADJ	PASS	ITR							
Eł. p. 202	*zkargeal*	ADJ	PASS	ITR							
Eł. p. 203	*xc'eal*	CVB	ACT	ITR	+	NOM		-		VS	+
Eł. p. 203	*kangneal*	V	PASS	ITR	+	NOM		+	S	SV	+
Eł. p. 203	*nšanakeal*	V	PASS	ITR	+	NOM		-		SV	+
Eł. p. 203	*kaseal*	CVB	ACT	ITR	-			-		V	+
Eł. p. 203	*č'arč'arealk'*	ADJ	PASS	ITR							
Eł. p. 203	*zardarealk'*	ADJ	PASS	ITR							
Eł. p. 203	*mxit'arealk'*	ADJ	PASS	ITR							
Eł. p. 203	*zekeal*	ADJ	ACT	ITR							

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