ON QUANTIFICATION AND THE ABLATIVE IN ERZYA AND MOKSHA

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Abstract

In this paper, the ablative case and quantification in the Mordvin languages are addressed, drawing on parallel sentences for various notions associated with ablative and paucal/mass quantification marking. Specific morphology is discussed, and two openly accessible and morpho-syntactically annotated corpora are described: the Tetûrev parallel corpus and the Electronic Resources for Moksha and Erzya (ERME2) corpora. An illustration of semantic nuances of the ablative is provided, as found in the parallel corpus, dealing with divergence in ablative quantificational structures, second only to the "standard of comparison" function. Paucal and mass quantifier patterns, used extensively in Moksha but not in Erzya, are inspected, along with a search for contexts where quantifiers in Moksha occur without an ablative counterpart. Finally, further observations from the Tetûrev parallel corpus are mentioned, potentially leading to new, unaddressed matters of Erzya–Moksha divergence in quantification research.

Keywords: Erzya, Moksha, morphologically annotated corpora, ablative case in syntax, quantification

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1. Introduction

This paper was born in response to the main ideas presented in a recent publication by Rueter[1] (2023), which describes findings on partitive-function ablative-case adjuncts/arguments presented in Vienna (Congressus XIII Internationalis Fenno-Ugristarum, 21–26 August 2022) and Budapest (Partitives in European Languages, 15–17 September 2022).

We use two principles for transliterating what is written in Erzya and Moksha. If the native language text represents bibliographical materials, such as those found in international library search engines, we apply the ISO 9 transliteration.[2] If, however, the materials are used in examples or other illustrations of the language, we use a version of the Uralic Phonetic Alphabet in our transcriptions.[3]

This paper attempts to provide a two-language perspective with examples from Erzya (E.) and Moksha (M.). Whereas Erzya and Moksha have been referred to as supradialects (Russian *'narečie'*) in early treatises, each language form has an ample literary record of its own and, therefore, we apply the term 'language' here.

According to Rueter[4] (2020), the Mordvin languages share a native lexicon ranging between 27 and 46 percent, and a mutual morphology slightly over 80 percent. The essence of this paper, however, is to examine the ablative of both languages and syntactic constructions in order to ascertain points of divergence. Needless to say, the illustration of language diversity calls for a closer inspection of ablative-related morphology in the two languages and an examination of syntactic structures typical to quantification (*cf.* Rueter 2013[5]).

The ablative, or *-TO-* case, appears in the nominal morphology of both Erzya and Moksha.[6] Nominals in Erzya and Moksha are an extensive group of word classes that include nouns, pronouns, adjectives, determiners, numerals,

[1] Jack Rueter: On the verbs of ingestion and partitive function in Erzya, *Folia Uralica Debreceniensia* 29, Finnugor Nyelvtudományi Tanszék, Debrecen, 2022, 139–154.

[2] https://en.wikipedia.org/wiki/Scientific_transliteration_of_Cyrillic (accessed 15 August 2023)

[3] https://en.wikipedia.org/wiki/Uralic_Phonetic_Alphabet (accessed 15 August 2023)

[4] Jack Rueter: Corpus of the national languages Erzya and Moksha: principles of development and perspectives of function/action [Korpus nacional'nyx mordovskix âzykov: principy razrabotki i perspektivy funkcionirovaniâ/ dejstviâ]. *Conference July, 2020: Meždunarodnaâ naučnaâ konferenciâ «Finno-ugorskie narody v kontekste formirovaniâ obŝerossijskoj graždanskoj identičnosti i menâûŝejsâ okružaûŝej sredy»*. Saransk, Mordovia, Russian Federation, 2020.

[5] Jack Rueter: Quantification in Erzya, in: Suihkonen, P. – Solovyev, V. (eds.): *Typology of quantification: on quantification in Finnish and languages spoken in the Volga–Kama Region*, LINCOM Studies in Language Typology, Vol. 28, Helsinki, Lincom, 2013, 99–122.

[6] The ablative ending in the Mordvin languages is related to the partitive case of the Balto-Finnic and Saamic languages, since they all derive from the Uralic ablative (separative) case **-tA*. The Mordvin ablative also shows signs of partitive-type usage familiar from Balto-Finnic (*cf.* Raija Bartens: *Mordvalaiskielten rakenne ja kehitys* [Structure and development of the Mordvin languages] Suomalais-Ugrilaisen Seuran Toimituksia 232, Helsinki, Suomalais-Ugrilainen Seura, 1999, 75–76).

verbal nouns and verbal adjectives.[7,8] From a morphological perspective, even some words presently classified as adverbs, adpositions and converbs[9] might be included as nouns with defective declensions (*cf.* Bartens: *Mordvalaiskielten*, 154–156[10]; Rueter 2011[11]).

In order to compare the two languages, Erzya and Moksha, and to study the morphological phenomena and syntactic nuances, we require access to extensive corpora and an understanding of the complex morphological aspects of the languages themselves. To this end, we establish two corpora, and provide a morpho-syntactic sketch of the two literary languages.

2. Corpora

Until recently, openly available, lemmatized and parsed corpora for either of the languages has been extremely limited. The first openly searchable, morphologically annotated corpora for Erzya and Moksha appear on the Erzya Web Corpora[12] and Moksha Web Corpora[13] (see Arkhangelskij 2019[14]). At this time, Arkhangelskij acknowledges the existence of an ERME[15] corpus for both

[7] The terms 'verbal noun' and 'verbal adjective' are used here to indicate forms derived from verbs through regular morphology to distinguish them from deverbal derivations that cannot be predicted. Elsewhere, these might be called 'action nouns' and 'participles', respectively.

[8] *Cf.* Bartens: *Mordvalaiskielten*, 70–122; Maria Imajkina: «The concepts of morphemics and morphemes», «Morphology, the study of inflection and derivation of forms» [«Valon' smusten' kandycâ pel'kstnède dy morfemikado čar'kodemas'», «Morfologiâs' – valon' polavtnemado dy forman' teemado tonavtoma»]. In: Redkollegiâs': D. V. Cygankin (ed. in chief, N. A. Agafonova, M. D. Imajkina dy liât) *The Erzya language, morphemics, derivation and morphology: [Èrzân' kel', morfemika, valon' teevema dy morfologiâ]:* Vuzon' èrzân' dy finnèn' oždeleniân' tonavtnicâtnen' turtov, Saransk, Krasnyj Oktâbr', 2000, 4–34, 53–73; Raisa Buzakova [Buzakova, R. N.]: Definition of the cases [Padežtnen' smustest], in: Redkollegiâs': D. V. Cygankin (ed. in chief, N. A. Agafonova, M. D. Imajkina dy liât) *The Erzya language, morphemics, derivation and morphology:* [*Èrzân' kel', morfemika, valon' teevema dy morfologiâ:*] *Vuzon' èrzân' dy finnèn' oždeleniân' tonavtnicâtnen' turtov.*, Saransk, Krasnyj Oktâbr', 2000, 82–87.

[9] The term 'converb' (a.k.a gerund, verbal adverb) is used here as it is in the Universal Dependencies (https://universaldependencies.org/u/feat/all.html#conv-converb-transgressive-adverbial-participle-verbal-adverb, accessed 15 August 2023) project to indicate non-finite verbal forms that share the characteristics of adverbs and verbs, whereas they are used as adverbial constituents of a sentence in much the same way as NPs might be in non-core case.

[10] *Cf.* Bartens: *Mordvalaiskielten rakenne ja kehitys*, 75–76.

[11] Jack Rueter: The status of the non-finite OmstO morpheme in Erzya, in: *Linguistica Uralica. XLVII* (2011), 1, 2011, 41–55 15, https://www.researchgate.net/publication/274117359_The_Status_of_the_Non-Finite_-_OmstO_Morpheme_in_Erzya (accessed 20 November 2023)

[12] http://erzya.web-corpora.net/index.html (accessed 27 October 2023)

[13] http://moksha.web-corpora.net/index.html (accessed 27 October 2023)

[14] Timofey Arkhangelskiy: Corpora of social media in minority Uralic languages, in Tommi A. Pirinen – Heiki-Jaan Kaalep – Francis M. Tyers (eds.): *Proceedings of the Fifth International Workshop on Computational Linguistics for Uralic Languages*, Tartu, Association for Computational Linguistics, 2019, 125–140, https://doi.org/10.18653/v1/w19-0311

[15] ERME https://urn.fi/urn:nbn:fi:lb-201407306 (accessed 27 October 2023)

languages (800,000 tokens), but only states that the corpus lacks morphological annotation.

Ideally, extensive work in the study of ablative-case phenomena in the Mordvin languages of Moksha and Erzya would contain both revised and non-revised source examples from the literary languages as well as spoken languages of individual villages, dialects as well as social media. Here, however, we limit ourselves to two corpora, one of which is the Electronic Resource for Moksha and Erzya (ERME) corpus of original Erzya and Moksha literature, and the other is «Tetûrev», a parallel corpus based on a translated schoolbook from the 1930s and 1940s.

In March of 2023, a new version of ERME (version 2[16]) was published through the Language Bank of Finland. The entire ERME corpus consists of literary language materials from the two Mordvin languages, including content from the Erzya-language journals *Sâtko* and *Suran' tolt* (1956–2001), the Moksha-language journal *Mokša* (1956–2000), and writings of individual authors from 1925 onwards in both languages. In addition to the bibliographic annotation practices of the earlier version, the new version introduced morphological annotation, lemmatization and disambiguation with some syntactic annotation, all available on the https://korp.csc.fi server[17] (*cf.* Rueter 2020[18] and see Rueter & Erina 2023[19]). Presently, these materials are partially accessible through the newest version of ERME, with over two million tokens of Erzya and eight hundred thousand tokens of Moksha.

The «Tetûrev» parallel corpus[20] consists of manually aligned materials from the 1939 Erzya and 1940 Moksha translations and publications of a natural science reader by Tetûrev, one of the many books from the National Library of Finland, «Kindred Language Pilot» materials available through the

[16] ERME version 2 meta-share https://urn.fi/urn:nbn:fi:lb-2023021601 (accessed 27 October 2023)

[17] ERME version 2 access https://urn.fi/urn:nbn:fi:lb-2023021602 (accessed 27 October 2023)

[18] Rueter: *Corpus of national languages,* 2020.

[19] Jack Rueter – Olga Erina (compilers): *Erzya and Moksha Extended Corpora (ERME) version 2, Korp,* Helsinki, Kielipankki, 2023. Persistent Identifier of this resource: http://urn.fi/urn:nbn:fi:lb-2023021601, Access location: http://urn.fi/urn:nbn:fi:lb-2023021602 (Automatically lemmatized and morpho-syntactically annotated treebanks: Erzya: over two million tokens; Moksha: over 800,000 tokens) (accessed 27 October 2023)

[20] Tetûrev meta-share: https://urn.fi/urn:nbn:fi:lb-2023042421 (accessed 27 October 2023); Erzya: Tetûrev, Vladimir Alekseevič: *Estestvoznaniâ: 1 pel'ks: načal'noj školan' 3 klasso tonavtnema kniga*, Moskov, Gosudarstvennoj učebno-pedagogičeskoj izdatel'stvas', 1939. http://urn.fi/URN:NBN:fi-fe2013123010091 (accessed 20 November 2023); Moksha: Tetûrev, Vladimir Alekseevič: *Estestvoznaniâ: 1 pâl'kss': načal'naj školan' 3-ce klassa tonafnema kniga*, Mosku, Gosudarstvennaj učebno-pedagogičeskâj izdatel'stvac, 1940. http://urn.fi/URN:NBN:fi-fe2013123010104 (accessed 20 November 2023)

Fenno-Ugrica site.[21] The parallel corpus (*cf.* also Rueter 2022[22]; and see also Rueter & Erina 2023[23]) consists of 2090 sentences in each language (E. 22,690 tokens, M. 22,887 tokens). When parallel sentences do not exist, a comment *Not Attested* (NA) has been placed in lieu of a correlate sentence.

In order to provide for a common point of departure in Mordvin language studies and repeatable research outcomes, the two corpora have been made available as openly searchable resource materials. Both corpora share the practice of bibliographically enhanced metadata, and a granularity for reference to number for chapter, paragraph, sentence, and token (both words and punctuation), which allows for library research work as well. Since 1999, the texts have been automatically annotated for both morphology and syntax, using finite-state tools constructed by Rueter (*cf.* Rueter et al. 2020[24]). Additional parallel corpora for these languages are already available on the Language Bank of Finland server (https://korp.csc.fi), e.g., Parallel Biblical Verses for Uralic Studies (PaBiVUS).[25] Other results of this morphological work can also be found on the Giellatekno Korp server[26] at the Norwegian Arctic University in Tromsø and at GiellaLT on Github.[27]

3. Method and motivation

Our method is empirical and descriptive. We draw our comparative materials from a small parallel corpus, which helps to delimit the extent of our text describing the two languages. When speaking of two closely related languages, there is frequent mention of their shared lexica and morphology – something that makes it easier for humans to learn each other's language.

The task here, however, is to go one step further and to align a language-technological endeavor with a linguistic one – find out how to implement a shallow-transfer rule-based machine translation system. To this end, we make

[21] Fenno-Ugrica, National Library of Finland, https://fennougrica.kansalliskirjasto.fi/ (accessed 27 October 2023)

[22] Jack Rueter: Shallow-transfer problems in Erzya-Moksha conjunctive-preterite2 syncretism. *Journal of Brief Ideas.* 2022, Online: https://doi.org/10.5281/zenodo.7232614 (accessed 20 November 2023)

[23] Jack Rueter – Olga Erina (annotators): *Tetiurev: Environment and Natural Science for 3rd grade, part one, Korp* [data set]. Kielipankki. 2023 (accessed 20 November 2023)

[24] Jack Rueter – Mika Hämäläinen – Niko Partanen: Open-Source Morphology for Endangered Mordvinic Languages, in *Proceedings of Second Workshop for NLP Open Source Software (NLP-OSS). 2020,* 94–100.

[25] PaBiVUS Meta-Share: https://urn.fi/urn:nbn:fi:lb-2020021121, https://doi.org/10.18653/v1/2020.nlposs-1.13 (accessed 20 November 2023)

[26] Giellalt Uralic language Korp server: https://gtweb.uit.no/u_korp/ (accessed 27 October 2023)

[27] Moksha https://github.com/giellalt/lang-mdf, Erzya https://github.com/giellalt/lang-myv (accessed 20 November 2023)

observations that can be helpful in the construction of a Constraint Grammar for the Erzya and Moksha languages,[28] which uses textual context to select or eliminate morphological analyses as well as syntactic functions and dependencies. In its simplest implementation, shallow-transfer machine translation merely analyzes the source text in Example (1a), transfers the lemmas, where cat = *psaka* : *katə*, very = *pek* : *päk* and big = *pokš* : *oću* and then the result of the morphological analysis is used in generation to obtain the target text in (1b). Both languages have a zero copula here, so we are fine.

(1) a. Erzya

psaka-ś	*pek pokš*
cat-NOM.SG.DEF	very big

b. Moksha

katə-ś	*päk oću*
cat-NOM.SG.DEF	very big

'The cat is very big.'

In a word, we want to know how to detect where a given text in a source language cannot (a) be simply analyzed, (b) have the lemmas translated and (c) be simply generated as a text in a target language as in Examples (1a)–(1b) (*cf.* Rueter & Hämäläinen 2020[29]). For this reason, we attempt to clarify just where the two language forms diverge in context and morphological annotation.[30] Once we

[28] Work with Constraint Grammar, originally conceived by Prof. Fred Karlsson at the University of Helsinki in the early 1990s, is continued, for example, at the University of Southern Denmark. https://edu.visl.dk/constraint_grammar.html

[29] Jack Rueter – Mika Hämäläinen: Prerequisites for Shallow-Transfer Machine Translation of Mordvin Languages: Language Documentation with A Purpose, In *Materials of the Salon for International Education* [*Materialy Meždunarodnogo obrazovatel'nogo salona]*, Iževsk: Institut komp'ûternyx issledovanij, 2020, 18–29.

[30] In order to render uniform tagging, the authors have chosen to order tags in a way closest to what might be perceived in morpheme ordering. Hence, while the Erzya plural *kudo-tńe-ďe* home-PL.DEF-ABL 'of the homes' illustrates an ordering number, definiteness, case, the singular *kudo-do-ńť* home-ABL-SG.DEF 'of the home' places case before the oblique-case definite singular marker. There are two instances in the singular where a cluster of case, definiteness and number marking are represented by a single morpheme; these are the nominative definite singular and genitive definite singular. The argumentation for placing the singular (SG) annotation at the end of the "genitive definite singular" cluster is based on the fact that the same morpheme (*-ńť* SG.DEF) is used throughout the Erzya definite singular paradigm, with the exception of the dative, which appears as a segment merged with the definite singular marker (*-ńť(t)eń* SG.DEF.DAT) in *kudo-ńťeń* house-SG.DEF.DAT 'into the house'. (Upon examining the ERME corpus, it was noted that the form "*kudo-ńťeń*" occurs multiple times but only in a single book by Kuz'ma Abramov — Purgaz.) The Moksha tag ordering will follow that of the Erzya in this article, but only for the purpose of simple alignment. In future work, it might be pertinent that the Moksha singular definite combination precede the case marker so as to match the combination *kud-ťi* house-SG.DEF.DAT 'to the house', because this ordering is retained in the

know what the actual morphological analysis of a word form is, we look to the surrounding context for clues as to what function the word form has.

After locating a divergency in the quantification structures of Erzya and Moksha, we provide a description of the context types observed. Sometimes, the context of a single sentence is not sufficient, and therefore we refer back to previous sentences. These observations are then used to enhance our understanding of ablative functions and how they align across Mordvin languages.

4. Morphology

The closely related Erzya and Moksha languages share many of the same morphologically encoded categories. One of these is the ablative, which then combines with the categories of number, definiteness, possession, as well as tense, predicate person and number[31] to different extents in the sibling languages. Both languages have three declensions: a basic declension (a.k.a. indefinite declension), a possessive declension, and a definite declension.

The basic declension attests marking for complex NPs of as many as 15 and 16 cases in Erzya and Moksha, respectively (see Rueter 2010[32]: 17; Kholodilova 2016[33]), case marking occurs only on the NP head. In the basic declension, however, only the nominative is associated with the category of number. Hence, in the absence of a number reading, forms in, for instance, the genitive, dative, ablative, illative, inessive, elative, prolative, etc. may be used in context to represent either.

The possessive declension can only be associated with 10-12 cases in Erzya and Moksha (*cf.* Rueter 2010: 129[34]), and of these, only the three core cases, nominative, genitive and dative are associated with the category of number with the singular possessors in Moksha. Erzya, on the contrary, only regularly distinguishes a nominative singular for the third person singular possessor

Moksha western dialect form *pakśä-ť-ksa* house-SG.DEF.CAU 'for the field' (*cf.* Feoktistow 1990: L–LIV, LXXIX–LXXXII).

[31] In Erzya and Moksha predicate marking that does not involve finite verbs, these categories can be marked morphologically directly on nominals, non-finites and adverbs, alike. Therefore, *vadŕa-tńe-ďe-Ĺ* good-PL.DEF-ABL-COP.PST.SG3 'was of the best' illustrates where regular synthetic predicate marking combines with other regular morphology, i.e., *-Ĺ* indicates past tense and third person singular.

[32] Jack Rueter: *Adnominal person in the morphological system of Erzya*, Suomalais-Ugrilaisen Seuran Toimituksia 261, Helsinki, Suomalais-Ugrilainen Seura, 2010, 17.

[33] Maria Kholodilova: Moksha Non-verbal Predication, in *Mordvin Language in the Field,* Ksenia Shagal and Heini Arjava (eds.): Helsinki, University of Helsinki, 2016, 229–259.

[34] Rueter, *Adnominal Person*, 2010, 129.

(see Rueter 2016[35]; Rueter 2020[36]; Rueter 2023[37]). The ablative and other noncore cases can, once again, be used in context with singular and plural NP heads.

The definite (a.k.a. determinate) declension is associated with the category of number, and there are certain limitations to the number of cases used in this declension. The literary Moksha language, for instance, recognizes only three cases: the nominative, genitive and dative. Other cases, such as the ablative and local cases, can be represented analytically, using postpositions in conjunction with definite or possessive genitive marking on the preceding NP head. In contrast, the literary Erzya language attests more synthetic case categories with the definite plural (as many as 13) than with the definite singular (as many as 11) (see Rueter, *Adnominal Person*, 129), but it also takes analytical case marking in the form of postpositions. This divergence in case structures also affects the ablative.

Moksha only has three cases in the definite declension. In order to associate the ablative case and definiteness, the postposition *ezda* POSTP.ABL is often used for analytically expressing some of the same categories as the synthetic ablative case in *-də/-tə* (*cf.* Imârekova 2000[38]; Keresztes 2011[39]; Buzakova 2000: 250[40]). Thus, the synthetic Moksha basic declension form *kut-tə* home-ABL is aligned with the two analytic definite/determinate ablative forms in Example (2). In Erzya, however, the basic declension form *kudo-do* home-ABL 'from home; than home; about home' can be associated with four definite forms, two of which are synthetic (see (3a)), and the other two analytic (see (3b)). The analytic forms present a change in terminology, i.e., instead of a postposition with an ablative, Erzya uses the elative. In fact, the analytic elative case marker *ejste* POSTP.ELA 'away from; of; out of' in Erzya covers for both the elative and

[35] Jack Rueter: Towards a systematic characterization of dialect variation in the Erzya-speaking world: Isoglosses and their reflexes attested in and around the Dubyonki Raion, in: Shagal, Ksenia – Arjava, Heini (eds): *Mordvin languages in the field*, Uralica Helsingiensia 10, Helsinki, 2016, 109–148.

[36] Jack Rueter: Linguistic Distance between Erzya and Moksha. Dependent morphology, in: Klement'eva, E. F. – Močalova, T. I. – Râbov, I. N. (eds.): *Finno-ugorskie âzyki v sovremennom mire: funkcionirovanie i perspektivy razvitiâ: materialy Vserossiŭskoŭ naučno-praktičeskoŭ konferencii, posvâšennoŭ 95-letiŭ zaslužennogo deâtelâ nauki RF, doktora filologičeskix nauk, professora Cygankina Dmitriâ Vasil'eviča*; MGU im. N. P. Ogarëva, Saransk, 2020, 90–110.

[37] Jack Rueter: Moksha Mordvin, in Daniel Abondolo and Riitta-Liisa Valijärvi (eds.): *The Uralic Languages,* 2023, 487–492, https://doi.org/10. 4324/9781315625096-11

[38] V. Imârekova = Imârekova V.M.: «Čislitel'najs'», «Valmel'gaksne», «Soûsne», «Časticatne». *Mokšen' kâl'. Morfologiâ*: Vuzon' mokšen' i finno-ugran' M 74 otdeleniân' tonafnixnendi učebnik /Sërmatf-tif N. S. Alâmkinon' kâdâla, Saransk, Tip. «Kras. Okt.», 2000, 190–201.

[39] László Keresztes: *Bevezetés a mordvin nyelvészetbe* [Introduction to Mordvin linguistics], Debrecen, Debreceni Egyetemi Kiadó, 2011, 73–74, 100.

[40] Raisa N. Buzakova: The postposition [Valmel'gaksos'], in: Redkollegiâs': D. V. Cygankin (ed. in chief, N. A. Agafonova, M. D. Imajkina dy liât) *The Erzya language, morphemics, derivation and morphology:* [*Èrzân' kel', morfemika, valon' teevema dy morfologiâ:*] *Vuzon' èrzân' dy finnèn' oždeleniân' tonavtnicâtnen' turtov.*, Saransk, Krasnyj Oktâbr', 2000, 249–254.

ablative, while its Moksha counterpart, the analytic ablative case *ezdə* POSTP. ABL 'from; out of' also covers for both.[41] In both Examples (2) and (3), the translation might involve marking the standard of comparison, other definitions will be given below.

(2) Moksha

kut-ć	*ezdə*
house-GEN.SG.DEF	POSTP.ABL
kut-ćńə-ń	*ezdə*
house-PL.DEF-GEN	POSTP.ABL
'away from the house'	'away from the houses'
(Own information.)	

(3) a. Erzya

kudo-do-ńť	*kudo-tńe-ď́e*	*bajťak*
house-ABL-SG.DEF	house-PL.DEF-ABL	plenty
'about the house'	'there were plenty of houses'	
(Own information.)		

b. Erzya

kudo-ńť	*ejste*	*kudo-tńe-ń*	*ejste*
house-GEN.SG.DEF	POSTP.ELA	house-PL.DEF-GEN	POSTP.ELA
'away from the house'		'away from the houses'	
(Own information.)			

5. Ablative functions

The Erzya and Moksha ablative is associated with several uses. Here, we will present its meanings according to Anan'ina (2000)[42] with essential additions in as far as they present themselves in the Tetûrev corpus (*cf.* Bartens,

[41] The Erzya postposition *ejste* covers for some elative and ablative case functions. The stem in *ez-/ej-* cannot be translated by itself, but it is the locus of some other cases: *ej-s* POSTP-ILL 'into; up to', *ej-se* POSTP-INE 'in; incomplete object', *ez-ga* POSTP-PRL 'along; distributed throughout', *ej-ška* POSTP-COMP 'the size of'. Likewise, the Moksha postposition *ezda* covers for some of the elative and ablative case functions with a stem in *ez-/e-*. In addition to the ablative case, this Moksha postposition declines: *e-s* POSTP-ILL 'into; up to', *e-sə* POSTP-INE 'with', *ez-ga* POSTP-PRL 'along; distributed throughout', *e-ška* POSTP-COMP 'the size of'.

[42] K.I. Anan'ina: Suŝestvitel'najs', in N. S. Alâmkin (ed.): *Mokšen' kâl'. Morfologiâ: Vuzon' mokšen' i finno-ugran' otdeleniân' tonafnixnendi učebnik* /Sërmatf-tif N. S. Alâmkinon' kâdâla, Saransk, Tip. «Kras. Okt.», 2000, 65–66.

Mordvalaiskielten, 93–95; Buzakova, *Definition of cases*, 84; Toldova et al. 2018[43]; Hamari & Ajanki 2022[44]; Rueter, Moksha, 492–497):

Standard of comparison
Quantification of items, persons, phenomena
Quantifying modifier (*mońďeń* [*pŕado*] *seŕej*) 'taller than me by a head'
Portion of food (argument with verbs of ingestion a.k.a. consumption)
Reference point of separation
Against
Cause
Point of manipulation on patient (as opposed to instrument controlled by agent)
Topic of discourse (only found in Erzya)

5.1 Standard of comparison

In Erzya and Moksha, there is no morphological marking for comparative or superlative on adjectives or adverbs. Instead, the notion of comparison is indicated by marking the standard of comparison, which is primarily a noun, but it can also be a numeral, pronoun or even an adjective.

Work with the Tetûrev parallel corpus, introduced above, reveals that probably the most frequent use of the ablative in both literary languages is to mark the standard of comparison. In Examples (4a) and (4b), the numeral '450 thousand' is marked as standard of comparison with the ablative, and it modifies the determiner *lamo* (E.) and *lamə* (M.) 'a lot', which is followed by a nominative plural form of the noun 'tractor'.[45]

(4) a. Erzya

mińek	*kolxoz-tne-ńeń*	*dı*	*sovxoz-tne-ńeń*
PL1.GEN	collective.farm-PL.DEF-DAT	and	state.farm-PL.DEF-DAT

[43] Toldova, S.Û. (chief ed.) – Xolodilova, M.A. (chief ed.) – Tatevosov, S.G. – Kaškin, E.V. – Kozlov, A.A. – Kozlov, L.S. – Kuxto, A.V. – Privizenceva, M.Û. –Stenin, I.A.: *Elements of the Moksha Language in the Light of Typology [Èlementy mokšanskogo âzyka v tipologičeskom osveŝenii]*, Moscow, «Buki Vedi», 2018, 91–92, 107–108, 130–135, 154–155.

[44] Arja Hamari – Rigina Ajanki: Mordvin (Erzya and Moksha), in: Bakró-Nagy, Marianne – Laakso, Johanna – Skribnik, Elena (eds.): *The Oxford Guide to the Uralic Languages* (Oxford Guides to the World's Languages), Oxford, Oxford University Press, 2022, 399–403.

[45] A note on segmentation: The Erzya perfect participle *maks-oź* 'given' shows a morpheme-initial vowel ‹o›, which elsewhere might be shown attached to the stem. Our reasoning is that although the quality of this vowel is determined by the preceding stem, due to what is called progressive vowel harmony in Erzya, the requirement of vowel presence is dictated by the affix (*cf.* ÈRS 1993: 17; Rueter: *Adnominal Person*, 15–16).

maks-oź	*uš*	*450*	*tišča-do*
give-PRFPTC	already	450	thousand-ABL

lamo	*traktor-t,*	*kona-t*	*mogut*	*ćej-eme*
a.lot	tractor-NOM.PL	that-NOM.PL	can.PL3	do-INF.LOC

kavkso	*miĺĺon-do*	*lamo*
eight	million-ABL	a.lot

ĺišme-ń	*koŕa-s*	*śe-ď́e*	*lamo*	*robota*
horse-GEN	in.relation.to-ILL	PRON.DEM-ABL	a.lot	work

(Tetûrev 1939: 2.50.2.)

b. Moksha

miń	*kolxoz-əńkə-ńď́i*	*i*	*sovxoz-əńkə-ńď́i*
PL1.GEN	collective.farm-PXPL1-DAT	and	state.farm-PXPL1-DAT

maks-f	*ńi*	*450*	*ťožäń-ď́ə*	*lamə*	*traktor̥-t,*
give-PRFPTC	already	450	thousand-ABL	a.lot	tractor-NOM.PL

kona-t	*rabota-də*	*mogut*	*ťijəms*
that-NOM.PL	work-ABL	can.PL3	do-INF.ILL

śa-də	*lamə,*	*čem*	*8*	*miĺĺion*	*alaša-ś.*
PRON.DEM-ABL	a.lot	than	8	million	horse-NOM.SG.DEF

‘Our collective and state farms have already been given more than 450 thousand tractors that can do more work than eight million horses.’ (Tetûrev 1940: 2.50.2)

Tetûrev parallel corpus references, after the year, indicate chapter, paragraph, and sentence. Despite word-order differences in the two languages (Examples (5a) and (5b)), we can identify the use of a synthetic case ablative form marking an NP head noun the standard of comparison. Note the Erzya word *norma-do-ńť* is in the definite declension whereas the Moksha counterpart *norma-də-nzə* is in the possessive declension. In addition to marking a numeral or noun as the standard of comparison, pronouns are also marked with the ablative. In fact, the ablative case form of the demonstrative pronouns *śe* (Erzya) and *śä* (Moksha) ‘that’ in *śe-ď́e* and *śa-də*, respectively, are oftentimes seen as comparative particles (see Examples (4a), (4b) and (5a)).

(5) a. Erzya

ťe	*uĺńe-ś*	*ŕekordnoj*	*vyrabotka,*	*kona*
PRON.DEM	be-PST.SG3	record.ADJ	production	PRON.REL
14 raz	*śe-ďe*	*pokš-oĺ*		
14 time	PRON.DEM-ABL	big-PST.SG3		
zabojščik-eń	*obyčnoj*	*norma-do-ńť.*		
butcher-GEN	usual	norm-ABL-SG.DEF		

'This was a record achievement, which was 14 times bigger than the usual norm of a butcher.'
(Tetûrev 1939: 2.235.3)

b. Moksha

ťä	*uĺ-ś*	*ŕekordnaj*	*vərabotka,*	*ťä*
PRON.DEM	be-PST.SG3	record.ADJ	production	PRON.DEM
mäk	*kemńiĺə-kśť*	*zabojščik-ť*		*obəčnaj*
even	fourteen-times	butcher-GEN.SG.DEF		usual
norma-də-nzə	*lamə.*			
norm-ABL-PXSG3	a.lot			

'This was a record achievement, it [was] even fourteen times more than a butcher's usual norm.'
(Tetûrev 1940: 2.235.3)

Both Mordvin languages express absolute superlatives with a structure similar to the English *bigger than big*. In Example (6a), we see the Erzya adjective *pokš* 'big' reduplicated with the first instance taking the ablative standard of comparison marker and an additional additive clitic, rendering *pokš-to-jak pokš* (lit. even than big big). Example (6b) illustrates the same structure with *oću-də-ŋga oću*. The parallel corpus did not reveal a single instance where both languages were using the same structure, i.e., when one language used the ADJ$_i$-ABL-CLT/ADD ADJ$_i$ structure, the other used the degree modifier 'very' *pek* and *päk* for Erzya and Moksha, respectively. Thus it might be assumed that *pokš-to-jak pokš* might be replaced with *pek pokš* in Erzya, and *oću-də-ŋga oću* might be substituted with *päk oću* in Moksha 'quite big'.

(6) a. Erzya

vana	*kosto*	*saj-ev-śt́*	*pesok-oń*
look	where.ELA	take-PASS-PST.PL3	sand-GEN
dı	*śovoń-eń*	*ńe-t́*	*pokš-to-jak*
and	clay-GEN	these-NOM.PL	big-ABL-CLT/ADD
pokš	*massa-t́ńe*		
big	mass-PL.DEF.NOM		

'Look where those bigger than big masses of sand and clay have come from.'
(Tetûrev 1939: 2.75.1)

b. Moksha

stroja-f-t	*ćvetnoj*	*metall-əń*	*šäńäft-əma-ń*
build-PRFPTC-NOM.PL	flowered	metal-GEN	produce-VNOUN-GEN
oću-do-ŋga	*oću*	*zavot-t:*	
big-ABL-CLT/ADD	big	factory-NOM.PL	

'There have been factories built for producing non-ferrous metals that are bigger than big.'
(Tetûrev 1940: 2.328.1)

The temporal adverbs *mejĺe* 'late', *meĺe* 'late' and *ikeĺe* 'before', *iŋgəĺə* 'before', which elsewhere might be classified as postpositions with ablative government (see Examples (7a) and (7b)) form the second largest group of frequency in the Tetûrev parallel corpus. Here, we will simply consider it yet another instance of standard of comparison marking, where the standard of comparison is usually a demonstrative pronoun or a verbal noun in the ablative. Both sentences translate in the same way, regardless of the habitual aspect marking (7b) (*cf.* also Rueter, *Shallow-transfer*, 2022).

(7) a. Erzya

pulta-mo-do	*mejĺe*	*izvestńak-oś*
burn-VNOUN-ABL	late.ADV	limestone-NOM.SG.DEF
veĺavt-ı	*ńegašenoj_izveś́t-eks.*	
turn-SG3	quicklime-TRA	

(Tetûrev 1939: 2.130.2)

(7) b. Moksha

pəlʲ̣ta-m-də	*meĺə*	*izveśt́-ś*	
burn-VNOUN-ABL	late.ADV	limestone-NOM.SG.DEF	
t́ij-əńd́əv-i	*af*	*gašonaj*	*izveśt́-əks.*
become-HAB-SG3	NEG	slaked	lime-TRA

'After burning, limestone turns into quicklime.'
(Tetûrev 1940: 2.130.2)

No instances of ablative analytic case markers *ezdə* (M. ablative) or *ejste* (E. elative) were attested in the Tetûrev or ERME corpora as markers of the standard of comparison.

5.2 Quantification of items, persons, and phenomena

The quantifying phrase in Moksha and Erzya appears to exhibit a dichotomy reminiscent of that found in the locative vs existential clauses. Whereas a locative clause provides a definite NP_1 with a location in NP_2 (see Example (8)), the existential clause departs from an established place for which there is some instance of something (see Examples (9a) and (9b)).

(8) (locative clause)
The cat_1 is in the $woods_2$

(9) a. (existential clause)
In the $woods_1$ is a cat_2

b. (existential clause)
There is a cat_2 in the $woods_1$

In Moksha and Erzya, the quantifying phrase takes an item, person or phenomenon marked with the ablative, and then makes an indication of quantity by using the paucal and mass quantifiers *lamo* 'a lot', *alamo* 'little', *źarıja* 'a few' in Erzya or their equivalents in Moksha: *lamə* 'a lot', *af lamə* 'little', *śńarə* 'a few'. Both languages will take cardinal numerals as well.

Both Mordvin languages begin the first quantifying construction with what is going to be quantified marked ablative. In Erzya, the element to be quantified tends to be expressed in the definite declension, where the category of number is required (see Example (10a)). In Moksha, on the contrary, the item to be quantified is most likely to appear in the basic declension, where the category

of number is not applied (see Example (10b)). Hence, let us make note of plural marking in Erzya but not in Moksha, whereas in context, definiteness in Erzya can be derived from the high salience of 'lakes', introduced in the previous sentence (e.g., Erzya to English: 'There is a lot of salt dissolved in the waters of salty lakes').

(10) a. Erzya

iśt́a-t	*eŕke-t́ńe-d́e*	*mińek*	*lamo*	*přikaspijskoj*
such-NOM.PL	lake-PL.DEF-ABL	PL1.GEN	a.lot	Caspian.ADJ

śt́ep-t́ńe-va.
steppe-PL.DEF-PRL

'As for lakes of this kind, we have a lot across the Caspian steppe.'
(Tetûrev 1939: 2.160.3)

b. Moksha

t́aftamə	*oźəra-də*	*miń-ćəŋk*	*lamə*	*přikaspijskäj*
such	lake-ABL	PL1-INTENSE.GEN	a.lot	Caspian.ADJ

śt́ep-ńə-ń	*ezga.*
steppe-PL.DEF-GEN	POSTP.PRL

'As for lakes of this kind, we have a lot across the Caspian steppe.'
(Tetûrev 1940: 2.160.3)

Similar to the examples in (10a)–(10b), Erzya uses a definite singular ablative marker where Moksha uses an ablative marker in the basic declension. Once again, the definite marking in the Erzya version might readily be associated with the salience of 'feldspar' in the preceding sentence (see (11a) and (11b)), yet as we can see this salience is not shown by Moksha definiteness.

(11) a. Erzya

poĺevoj	*špat-to-ńt́*	*śex*	*lamo*	*grańit-se-ńt́,*
field	spar-ABL-SG.DEF	most	a.lot	granite-INE-SG.DEF

śeks	*śex*	*pek*	*poĺevoj*
therefore	most	very	field.ADJ

špat-ońt́	*ćvet-enze*	*ejste*	*ašt́-i*
spar-GEN.SG.DEF	color-GEN.PXSG3	POSTP.ELA	stay-SG3

grańit-eńť	*ćvet-eze:*	*jakśťeŕe*	*iĺi*	*śeroj.*
granite-GEN.SG.DEF	color-SG.NOM.PXSG3	red	or	gray

'Feldspar [occurs] most of all in granite, because of this the color of the granite depends most on the color of the feldspar.'
(Tetûrev 1939: 2.60.4)

b. Moksha

poĺəvoj	*špat-tə*	*śembə-də*	*lamə*	*granit-sə,*	*śas.i*
field	spar-ABL	all-ABL	a.lot	granite-INE	therefore.and

poĺəvoj	*špat-ť*	*ezdə*	*zavišit*
field.ADJ	spar-GEN.SG.DEF	POSTP.ABL	depend.SG3

grańit-ť	*jakśťəŕ*	*iĺi*	*śeraj*	*ćvet-əc-ka.*
granite-GEN.SG.DEF	red	or	gray	color-SG.NOM. PXSG3-CLT/ADD

'Feldspar [occurs] most of all in granite, and therefore even the red or gray color of granite is dependent on it.'
(Tetûrev 1940: 2.60.4)

In Examples (12a) and (12b), the word for 'clay' cannot be derived from the previous context. In Erzya, this is typically seen in the absence of a *mass or paucal quantifier* + *ablative* formula, which, in contrast, is found in Moksha. Both texts can be translated in the same way.

(12) a. Erzya

kona~kona	*počva-ťńe-se*	*lamo*	*śovoń.*
PRON.INDEF	soil-PL.DEF-INE	a.lot	clay

(Tetûrev 1939: 2.30.1)

b. Moksha

kona~kona	*počva-ťńə-ń*	*esə*	*lamə*	*śovəń-də.*
PRON.INDEF	soil-PL.DEF-GEN	POSTP.INE	a.lot	clay-ABL

'In some types of soil, there is a lot of clay.'
(Tetûrev 1940: 2.30.1)

5.3 Quantifying modifier (*mońďeń* [*pŕado*] *seŕej*) 'taller than me by a head'

The ablative forms *pŕa-do* (E.) and *pŕa-də* (M.) 'by a head' are direct quantification modifiers of the predicate. Finnish has a similar use of the partitive in *minu-a pää-tä pitempi* 'taller than me by a head'. In Examples (13a) and (13b), we observe the quantifier *lamo* and *lamə* 'a lot/greatly' being used in the ablative to express this.

(13) a. Erzya

śovońev	*počva-ńť*	*svojstva-nzo*	*lamo-do*
clayey	soil-GEN.SG.DEF	characteristic-NOM.PL.PXSG3	a.lot-ABL
ašť-iť	*śovoń-eńť*	*svojstva-nzo*	*ejste.*
stand-PL3	clay-GEN.SG.DEF	characteristic-GEN.PXSG3	POSTP.ELA

'The characteristics of the clayey soil depend greatly on the characteristics of the clay.'
(Tetûrev 1939: 2.30.3)

b. Moksha

śovəńu	*počva-ťńə-ń*	*svojstva-snə*	*lamə-də*
clayey	soil-PL.DEF-GEN	characteristic-NOM.PXPL3	a.lot-ABL
zavišat	*śovəń-ť*	*ezdə.*	
depend.PL3	clay-GEN.SG.DEF	POSTP.ABL	

'The characteristics of the clayey soil depend greatly on the clay.'
(Tetûrev 1940: 2.30.3)

In Examples (14a) and (14b), however, we observe that the Moksha sentence does not use the ablative construction when the quantifier modifies a noun, the object of the transitive verb 'give'. The Erzya version has a quantification structure where the hundredweight-ABL quantification further develops the theme of the sentence.

(14) a. Erzya

śreďńej-ste	*sojuz-ońť*	*keĺe-s*	*jarvoj*
mid-ELA	union-GEN.SG.DEF	breadth-ILL	spring

tovśuro-ńt́ *jarovizaćija-ś* *kast-ı*
wheat-GEN.SG.DEF vernalization-NOM.SG.DEF raise-SG3

urožaj-eńt́ *mala-v* *omboće* *peĺ* *ćeńt́ner-de*
harvest-GEN.SG.DEF near-LAT second half hundredweight-ABL

gektar-s.
hectare-ILL

'On an average vernalization of spring crops throughout the Soviet Union has raised the harvest by nearly one and a half hundredweights per hectare.'
(Tetûrev 1939: 6.97.4)

b. Moksha
sojuz-sə-ŋk *jarovoj* *toźer-ńə-ń* *jarovizaćija-snə*
union-INE-PXPL1 spring wheat-PL.DEF-GEN vernalization-NOM.PXPL3

maks-ś-ixt́ *śreďńäj-sta* *eŕ* *gektar-sta* *pəctaj* ½
give-HAB-PL3 mid-ELA every hectare-ELA nearly ½

ćeńt́ńər *pribavka.*
hundredweight increase

'Vernalization[46] of spring wheat in our Union provides, on an average, an increase of nearly one half a hundredweight per hectare.'
(Tetûrev 1940: 6.97.4)

5.4 Portion of food (argument with verbs of ingestion a.k.a. consumption)

The ingestives, 'eat', 'drink', 'swallow', etc. comprise a small group of verbs with ablative government, all of which can be used without an ablative argument. The rules in both languages appear to show no divergence in the alignment of verb with ablative-case argument (see Examples (15a) and (15b)).

[46] In Moksha, only the possessa in core cases (nominative, genitive, dative) and with singular possessors show a distinction for number. Elsewhere, no distinction for the category of number is made in any of the cases. Thus, the possessum *jarovizaćija-snə* vernalization-NOM.PXPL3 'their vernalization' is not annotated for number. In this context, however, the verb clearly demonstrates the presence of the plural category, as seen in *maks-ś-ixt́* give-HAB-PL3 'they give'.

(15) a. Erzya

a	*eŕav-i*	*śim-ems*	*avoĺ*	*vańks*	*veď-ťe.*
NEG	have.to-SG3	drink-INF	NEG	clean.ADJ	water-ABL

(Tetûrev 1939: 7.43.2)

b. Moksha

af	*eŕäv-i*	*śim-əńď-əms*	*ərdazu*	*veď-tə.*
NEG	have.to-SG3	drink-HAB-INF	dirty	water-ABL

'You shouldn't drink dirty water.'
(Tetûrev 1940: 7.43.2)

5.5 Reference point of separation

In Examples (16)–(17), the ablative equivalent in English might be 'from', where the NP could be considered a point in 'two-dimensional space'. The translations are given once, as the texts correspond to a single text.

(16) a. Erzya

pśi	*veď*	*marto*	*omboće*	*stakan-oś*
hot	water	with	second	tumbler-NOM.SG.DEF

eŕva	*jon-do*	*piŕa-ź*	*vozdux-oń*	*sloj-se...*
every	direction-ABL	set.off-PRFPTC	air-GEN	layer-INE

(Tetûrev 1939: 4.35.7)

b. Moksha

pśi	*veď*	*marʦə*	*ombońə*	*stakan-ć*	*śembə*
hot	water	with	second	tumbler-NOM.SG.DEF	every

šiŕ-ďə	*peŕa-f*	*kožf-əń*	*sloj-sə...*
direction-ABL	set.off-PRFPTC	air-GEN	layer-INE

'The second tumbler with hot water in it was set off with a layer of air from all directions.'
(Tetûrev 1940: 4.35.7)

(17) a. Erzya

stratostat-oś	*parśťe*	*valg-ś*
balloon-NOM.SG.DEF	well	go.down-PST.SG3
Moskov-do-ńť	*avoĺ*	*vaso-v.*
Moscow-ABL-SG.DEF	NEG	far-LAT

(Tetûrev 1939: 4.63.6)

b. Moksha

stratostat-ś	*lac*	*valg-ś*	*af*	*ičkəź-i*
balloon-NOM.SG.DEF	well	go.down-PST.SG3	NEG	far-LAT

Mosku-ť	*ezda*
Moscow-GEN.SG.DEF	POSTP.ABL

'The stratospheric balloon landed without mishap not far from Moscow.' (Tetûrev 1940: 4.63.6)

5.6 Against

The ablative function illustrated in Examples (18a) and (18b) comes close to 'against' as in *protect against or from something*.

(18) a. Erzya

son	*vansta-ź-eĺ*	*keĺme-ma-do-ńť*	*eščo*
SG3	protect-PRFPTC-PST.SG3	cool-VNOUN-ABL-SG.DEF	yet

vozdux-oń	*sloj-se-ńť*
air-GEN	layer-INE-SG.DEF

'It was protected against cooling with a layer of air, too' (Tetûrev 1939: 4.36.2)

b. Moksha

son	*uĺ-ś*	*keĺmə-ma-ť*	*ezdə*
SG3	be-PST.SG3	cool-VNOUN-GEN.SG.DEF	POSTP.ABL

arala-f	*kožf-sa*
protect-PRFPTC	air-INE

'It was protected against cooling with air' (Tetûrev 1940: 4.36.2)

5.7 Cause

The ablative can be used to indicate cause 'due to lack of air' (see (19a) and (19b)).

(19) a. Erzya

vozdux-oń	*a*	*sato-ma-do-ńť*	*śovońev*
air-GEN	NEG	suffice-VNOUN-ABL-SG.DEF	clayey

počva-ćńe-se	*sasto*	*moĺ-i*	*navoz-oń*
soil-PL.DEF-INE	slowly	go-SG3	manure-GEN

naksad-oma-ś-kak.
rot-VNOUN-NOM.SG.DEF-CLT/ADD

(Tetûrev 1939: 2.37.2)

b. Moksha

śovəńu počva-sə	*kožf-ć*	*af*
clayey soil-INE	air-GEN.SG.DEF	NEG

satńə-ma-nc	*ezdə*	*śa-da*	*valom*
suffice-VNOUN-GEN.PXSG3	POSTP.ABL	PRON.DEM-ABL	slowly

moĺ-i	*naźom-ć*	*naksad-əma-c.*
go-SG3	manure-GEN.SG.DEF	rot-VNOUN-SG.NOM.PXSG3

'Due to lack of air in the clayey soil, the manure decomposes (M.: more) slowly.'
(Tetûrev 1940: 2.37.2)

5.8 Point of manipulation on patient

In Examples (20a) and (20b), we see the point of manipulation marked with the ablative and the instrument, which is controlled by the agent, marked with the inessive.

(20) a. Erzya

ńej	*saj-sıńek*	*ṕatak-ońć*	*kraj-ď́e*	*ščipca-so*
now	take-PL1>3	coin-GEN.SG.DEF	edge-ABL	tweezer-INE

(Tetûrev 1939: 2.67.4)

b. Moksha

ćäńi	*śav-saśk*	*ṕatak-ć*	*ščipca-sə*	*kraj-də*
now	take-PL1>3	coin-GEN.SG.DEF	tweezer-INE	edge-ABL

'Now let's take the coin with tweezers by the edge…'
(Tetûrev 1940: 2.67.4)

5.9 Topic of discourse (only found in Erzya)

Marking the topic of discourse with the ablative is a practice found in Erzya. The ablative appears with several verbs and nouns, e.g., 'write', 'talk', 'tell', 'hear', 'inform', 'know'; 'science', 'plan', 'law', 'picture', etc. Next to words of ingestion, this usage is much more robust. In Moksha, the topic of discourse is indicated by the postposition *kolga*.

(21) a. Erzya

ṕŕiroda-do	*nauka-ńťeń*	*meŕ-iť*	*jeśťestvoznańija.*
nature-ABL	science-SG.DEF.DAT	say-PL3	natural.science

(Tetûrev 1939: 1.1.2)

b. Moksha

ṕŕiroda-ť	*kolga*	*nauka-ťi*	*märǵ-ixť*
nature-GEN.SG.DEF	about	science-SG.DEF.DAT	say-PL3

jeśťestvoznańija.
natural.science

'They call the science of nature «natural science».'
(Tetûrev 1940: 1.1.2)

5.10 Summary

In the Tetûrev parallel corpus (2090 sentences in all), the three uses most frequently attested were the standard of comparison, quantificational phrase, quantifying modifier adverbial. The most common use of the ablative case in either language was marking the standard of comparison. The association of the ablative with quantificational phrase or with quantifying modifier adverbials, on the contrary, appeared to split the two languages, whereas Moksha featured a high number of quantificational phrases, and Erzya had a high number of quantifying modifier adverbials. Of approximately 418 and 382 instances of synthetic ablative marking in Erzya and Moksha, respectively, approximately 208 and 190 instances of standard of comparison marking were automatically annotated, i.e., slightly under 50%.

6. Quantifying constructions

While searching for examples in the Tetûrev corpus, we encountered ample materials for work with quantification and future research. We noted that the Moksha Tetûrev text had 131 sentences with one of the following paucal or mass quantifiers *lama* 'a lot', *kərža* 'little', *məźarə* 'how many', *śəńarə* 'as many', of which 110 also featured an instance of an ablative. The analogical figures for Erzya were 128 and 72, respectively, for the Erzya paucal or mass quantifiers *lamo* 'a lot', *alamo* 'little', *źaro* 'how many', *źńaro* 'as many' (Rueter & Erina 2013[47]). Upon simply comparing the figures 110/131 = 0.84 for Moksha and 72/128 = 0.56 for Erzya, we had to assume that something was different in the quantification structures.

We began our description to illuminate quantification structures addressed in Examples (10)–(12), above, by aligning Moksha and Erzya sentences with ablative marking and one of four quantifiers from the Tetûrev parallel corpus. Once aligned, the 110 Moksha and 72 Erzya sentences gave us a cumulative number of 151 sentences. Of these sentences, 52 illustrated that both languages shared the initial feature pair, and 99 did not. We inspected the sentence pairs, during the process of which many pairs were discarded as irrelevant, i.e., the ablative forms and quantifiers were not part of the same construction. Once again, we inspected the sentence pairs and validated 94 sentences. Of the 94 sentences, 18 shared the ablative + quantifier construction in both languages, whereas 77 sentences only attested the construction in Moksha.

The ablative + quantifier construction is shared by Moksha and Erzya when the item to be quantified is part of the topic. In Examples (8)–(9), above, a parallel was alluded to between quantifying construction dichotomy and the locative versus existential clause split. The idea was one of topic development whereby the ablative + paucal or mass quantifier in Erzya is present where the item quantified is not only part of the topic but is readily derived from the focus of the previous sentence (*cf.* Rueter 2013[48]). This seems to hold in Examples (10)–(11), where the Erzya item is definite declension ablative, and the Moksha item is in the basic declension. The category of number in Erzya makes reference to countability, such as when a plural indicates paucal quantification and a singular mass. Moksha does not make this distinction.

Of the sentences where both languages use the ablative + quantifier construction, ten pairs attested to a copula construction, six pairs attested to

[47] Jack Rueter – Olga Erina: Lexical quantifiers in Erzya, in: Suihkonen, P. – Solovyev, V. (eds.): *Typology of quantification: on quantification in Finnish and languages spoken in the Volga–Kama Region*, LINCOM Studies in Language Typology, Vol. 28, Helsinki, Lincom, 2013, 223.

[48] Jack Rueter: Quantification in Erzya, in: Pirkko Suihkonen – Valery Solovyev (eds.): *Typology of Quantification: On quantification in Finnish and languages spoken in the Volga–Kama Region*. LINCOM Studies in Language Typology Vol 28, Helsinki, Lincom, 2013, 111.

intransitive verb collocation ('gather', 'remain', 'fly around', 'perish'), one pair of transitive verbs showed a collocation ('collect'), and there was one odd pair where the Moksha used the verb 'give' but the Erzya parallel sentence, using different arguments, used the ambitransitive verb *pribavams* 'gain' and the ablative *źarodo* 'to what extent', see Examples (22a)–(22b) (*cf.* quantifying adverbial modifiers in Examples (13)–(14)).

(22) a. Erzya

možna	*lov-oms,*	*źaro-do*	*pribav-i*
possible	count-INF	how.much-ABL	gain-SG3
urožaj-eś	*mińek*	*mastor-ońt́*	*turtov.*
harvest-NOM.SG.DEF	PL1.GEN	country-GEN.SG.DEF	for

'We can count to what extent the harvest has gained for our country.'
(Tetûrev 1939: 6.97.5)

b. Moksha

možna	*luv-oms,*	*məźara*	*dopolńiteĺnaj*	*urožaj-da*
possible	count-INF	how.much	additional	harvest-ABL
maks-ı	*son*	*miń*	*strana-ńkə-ńd́i.*	
give-SG	SG3	PL1.GEN	country-PXPL1-DAT	

'We can count how much additional harvest it gives our country.'
(Tetûrev 1940: 6.97.5)

In Examples (12a) and (12b), the parallel sentences show only Moksha using the ablative + mass or paucal quantifier construction. In the Tetûrev parallel corpus, as stated above, there are 77 such sentences where the Erzya parallel sentences use nominative marking instead of ablative. Of these, thirty pairs have a Moksha sentence that attests a copula construction, 23 collocate with intransitive verbs and 24 with transitive verbs. It was noted that two Erzya intransitive verbs ('gather', 'remain') occurred both with and without ablative marking. This might indicate a new point of comparative research.

Above, we have discussed accumulated data on ablative + quantifier in Moksha, and showed where the parallel sentences in Erzya have it or do not. The next question then is what kinds of Moksha constructions have a paucal or mass quantifier but no collated ablative. Upon inspecting forty pairs we noted that 24 instances placed the paucal quantifiers as determiners modifying nouns in oblique cases, e.g., inessive and prolative, and there were 16 whose heads could be identified as nominative in form. Of these 16, seven could be equated with indefinite objects, and the remaining nine with subjects.

7. Conclusion

Nearly fifty percent of ablative marking in the Tetûrev parallel corpus is associated with the standard of comparison. The second most prevalent attestation of the ablative is associated with a quantification structure, which we have investigated here, using a subgroup, a set of paucal and mass quantifiers for each of the languages: *lamo* 'a lot', *alamo* 'little', *źńaro* 'a few', *źaro* 'how many, how much' in Erzya and their equivalents in Moksha *lamə* 'a lot', *af lamə* 'little', *kərža* 'few', *śńarə* 'so many', *məźarə* 'how many, how much'.

It was found that Moksha makes much more use of paucal and mass quantification than Erzya. Numerically, Erzya would seem to limit ablative marking to the quantification of topic elements with preceding focus, while Moksha uses ablative quantification with new information as well. Both languages attest ablative marking with a copula, intransitive and transitive verbs. The intransitive verb set shared by the two languages includes concepts such as: 'gather', 'remain', 'fly around', 'perish', while the transitive verb was 'collect'. In instances where Erzya used a nominative singular or plural instead of the ablative, the contextually intransitive verbs 'gather' and 'remain' were also attested.

There are also instances where the Moksha language does not attest ablative marking in collocation with paucal and mass quantification markers (*cf.* e.g. (14a) and (14b)). In these instances, the ablative is most frequently absent in Moksha when verbal government requires an object marker on the object NP head, i.e., nominative, genitive or even a genitive with subsequent inessive postposition. Needless to say, a small number of instances require further investigation.

Future research in this vein will require additional parallel corpora for the attestation of language variations. In the instance of comparative Erzya and Moksha studies, we need three types of parallel corpora in addition to native-language corpora. At present, the ERME corpus provides relatively extensive information for Erzya (over two million tokens), but requires work with Moksha (over 800,000 tokens). Only corpora which use Erzya and Moksha as the languages for the parallel texts are under development, i.e., the Tetûrev corpus, PaBiVUS and a few small other ones. So far, no extensive Erzya-to-Moksha or Moksha-to-Erzya translation corpora are openly available, whereas personal experience of the authors would indicate that translations between the sibling languages tend to retain high percentages of source language features in the target languages.

Work beyond the ablative, however, might be the investigation of the habitual aspect observed fleetingly in Examples (7b), (14b) and (15b), which might also be worked into the intersection of temporal quantification and regular inflection.

List of abbreviations

1 – first person
3 – third person
ABL – ablative
ADJ – adjective
ADV – adverb
CAU – causative (case)
CLT/ADD – additive clitic
COMP – comparative (case)
COP – copula
DAT – dative
DEF – definite
DEM – demonstrative
E. – Erzya
ELA – elative
GEN – genitive
HAB – habitual
ILL – illative
INDEF – indefinite
INE – inessive
INF – infinitive
INTENSE – intensive
LAT – lative
LOC – locative
M. – Moksha
NOM – nominative
NEG – negative particle
PASS – passive
POSTP – postposition
PRFPTC – perfect participle
PST – past
PX – possessive suffix
REL – relative
PL – plural
PL1>3 – 1st person plural suffix indicating a 3rd person object simultaneously
PRL – prolative
PRON – pronoun
REL – relative
SG – singular
TRA – translative
VNOUN – verbal noun

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