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Profile of reflexives in Hill Mari

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Abstract: The paper provides a detailed examination of reflexive strategies in the Kuznetsovo dialect of Hill Mari (Mari, Uralic) filling in an existing gap in the description of anaphoric elements in Uralic languages. Firstly, I focus on simple lexical reflexives derived from the stem (ä)škä-. Having examined their morpho-syntactic and binding properties, I adopt several typological classifications and approach the Hill Mari data from a cross-linguistic perspective comparing them to anaphors in other Uralic languages. Secondly, I consider other reflexive strategies employed in Uralic languages, such as complex (reduplicative) reflexive pronouns and reflexive detransitivization of a predicate, and I demonstrate that these scenarios are unavailable in the variety of Hill Mari under discussion.

Keywords: anaphors; Mari; reflexive pronouns; reflexivization; typology of pronouns; Uralic

1 Introduction

The present paper aims to provide a detailed examination of reflexive strategies in the Kuznetsovo dialect of Hill Mari (Mari, Uralic), contributing to the discussion of reflexivity in Uralic languages most prominently presented in Volkova (2014), where anaphors in Tegi Khanty, Meadow Mari, Komi-Zyrian, Besermyan Udmurt, and Shoksha Erzya are considered. With regard to Hill Mari, only a few sentences with reflexive (ä)škä- pronouns can be found in the existing grammars, such as Majtinskaja (1964), Savatkova (2002), Alhoniemi (2010), and Krasnova et al. (2017), and no thorough description of the properties of these items has yet been given. Hence, my goal is to close this gap in the exploration of anaphoric elements in Uralic languages, thereby making a step towards a comprehensive cross-linguistic study of reflexivity.

Firstly, I will discuss the morphosyntactic properties of dedicated reflexive pronouns built on the stem (ä)škä- as in (1), comparing them, on the one hand, to

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referential nominal phrases in Hill Mari and, on the other, to reflexive pronouns in other Uralic languages.¹

- (1) a. *Tän' škäm-et-äm jarat-et.*
 you REFL-POSS.2SG-ACC love-NPST.2SG
 'You love yourself.'
- b. *Tän' ške giš-än-et šajâšt-at.*
 you REFL about-LAT2-POSS.2SG talk-NPST.2SG
 'You talk about yourself.'

Secondly, I will consider other reflexive strategies employed in Uralic languages along with simple reflexive pronouns, such as complex reflexive pronouns and reflexive detransitivization of a predicate.² Complex reflexives, that is, reduplicative anaphors built on the model REFL/PRON + REFL,³ are attested in Meadow Mari, Erzya, Moksha, Nenets, i.a.;⁴ an example from Meadow Mari is given in (2).

- (2) *Kažne šken-žə-m ške jörat-a.*
 every REFL-POSS.3SG-ACC REFL like-NPST.3SG
 'Everyone likes himself.'
 (Volkova 2014: 66)

¹ Unless specified otherwise, all examples presented in this paper have been elicited from bilingual Russian – Hill Mari speakers living in Kuznetsovo village, the Mari El Republic, Russia, during my fieldwork in 2017–2019. Throughout the paper I use the term 'Hill Mari' to refer to this particular variety of the language. It should be noted that *äškä-/äške* and *škä-/ške* are variants of the same root. Since in the Kuznetsovo variety of Hill Mari under consideration *škä-/ške* are the more frequent forms, the examples presented in this paper include these anaphors.

² It is not uncommon for a language to employ several reflexivizing strategies; examples outside of the Uralic family include Turkic languages (e.g., Turkish, Chuvash; a reflexive suffix and lexical reflexive/emphatic pronouns), West and South Caucasian languages (e.g., Adyghe and Georgian; a reflexive prefix and lexical anaphors), Semitic languages (e.g., Arabic; verbal reflexivization and pronominal anaphors), i.a. (Geniušienė 1987; Testelefs 2014).

³ A reviewer suggested that the term 'complex' as used throughout the paper might appear to be misleading. 'One word' agreeing reflexive pronouns can also be considered complex, in comparison with, for instance, morphologically simple clitic anaphors since they bear possessive and case marking and behave similarly to referential DPs. However, to emphasize the difference between 'one word' and 'two word' anaphors, common in Uralic languages (reflexive clitics will not be in the center of the discussion) and to avoid further confusion, I chose the terms 'simple' and 'complex' and not, for instance, 'complex' and 'supercomplex'.

⁴ See Volkova (2014) on Meadow Mari and Erzya, Toldova et al. (2019) on Moksha, and Nikolaeva (2014) on Nenets.

The so-called reflexive Voice (i.e., syntactic reflexive detransitivization; see Section 5.2) can be found, for instance, in Estonian: compare the pairs *korduma* ‘repeat’ (intransitive) – *kordama* ‘repeat something’, *eemalduma* ‘withdraw’ (intransitive) – *eemaldama* ‘withdraw something’, etc., where reflexive variants are derived using the suffix *-u-* (Kask 1966). As will be shown in this paper, these two strategies are not attested in Hill Mari. Firstly, I will demonstrate that combinations of two juxtaposed *škä-/ške* pronouns that occasionally appear in Hill Mari texts and that may seem to be a complex reduplicative reflexive should, in fact, be analyzed as a chance co-occurrence of a reflexive pronoun and a lexical intensifier, often syntactically unrelated to each other. Secondly, following Belova and Dyachkov (2019), I will argue that Hill Mari intransitive verbs with reflexive interpretations are inherent and do not result from a productive syntactic derivation.

Before we proceed, a few words should be said about the framework adopted in the paper. As stated at the very beginning of this section, the main purpose of this work is to examine various properties of reflexives in Hill Mari. I adopt the general terminology coined by Chomsky (1981) within the Government and Binding framework and currently used within the Minimalist theory; however, I refrain from discussing the general nature of reference and mechanisms of binding attempting to remain as ‘theory-neutral’ as possible, but I believe that the Hill Mari data can further help to support and confirm particular formal analyses of anaphoric pronouns.

As I intend to incorporate the description of Hill Mari reflexives into the general discussion of reflexivity across the world’s languages, I adopt the following two typological classifications of anaphoric elements: (i) the formal typology of reflexives based on their morphosyntactic distribution developed by Déchaine and Wiltschko (2017), and (ii) the typology of pronouns based on their syntactic behavior and requirements imposed on antecedents proposed by Kiparsky (2002). The classifications will be described in more detail in Section 3.3 below.

The rest of the paper is structured as follows. Section 2 describes the morphosyntactic behavior of Hill Mari reflexives, while Section 3 focuses on their binding properties examining the antecedent and locality restrictions. Sections 4 and 5 discuss reflexivity in Hill Mari within a broader context, drawing data from other Uralic languages. In particular, Section 4 considers simple anaphoric

pronouns and Section 5 is devoted to complex reflexives and reflexive detransitivization. Section 6 concludes the paper.

2 Morphosyntactic properties of *ške/škä*-reflexives

This section describes the morphosyntactic properties of Hill Mari lexical *ške/škä*-reflexives and demonstrates that these items pattern with personal pronouns and possessed nominal phrases. This becomes relevant in the second part of the section, where I approach the Hill Mari data from the point of view of the Déchaine and Wiltschko's (2017) typology for reflexive markers.

2.1 Paradigm

Reflexive pronouns in Hill Mari are represented by the following items derived from the same lexical root: (i) the agreeing *škä(m)*- forms, which bear possessive and case morphology and are used in most of the argumental positions, and (ii) the non-agreeing invariant *ške*, often described as the nominative form (Alhoniemi 2010; Savatkova 2002), which appears with postpositions and as a prenominal possessive modifier (3).⁵

- (3) a. *Tän' škäm-et-äm už-at.*
 you REFL-POSS.2SG-ACC see-NPST.2SG
 'You see yourself.'
- b. *Män' mešäk-äm ške do-k-em šäpš-al-än-am.*
 I sack-ACC REFL to-ILL2-POSS.1SG pull-ATT-PST2-1SG
 'I pulled the sack towards myself.'

The paradigm of the reflexive forms is given in Table 1.

5 Aside from the reflexive use, both agreeing *škä*- forms and the invariant *ške* modifier can also serve as intensifying (emphatic) pronouns (i). A detailed examination of such examples lies beyond the scope of the paper and is not relevant to the issues under discussion.

- (i) a. *Maša dokument-vlä-m ške(=ok) podpisäj-ä.*
 Maša document-PL-ACC REFL=EMPH sign-NPST.3SG
 'Maša signs the documents herself.' (without help)
- b. *Tengecä män' načal'n'ik-äm škäm-žä-m už-än-am.*
 yesterday I boss-ACC REFL-POSS.3SG-ACC see-PST2-1SG
 'Yesterday I saw the boss himself.'

Table 1: The paradigm of *ške* / *škä*- forms.⁶

	Unmarked (nominative)	Accusative	Genitive	Dative
1SG	ške	škəm-em-əm	škəm-em-ən	š(kə)-län-em
2SG		škəm-et-əm	škəm-et-ən	š(kə)-län-et
3SG		škəm-žə-m	škəm-žə-n	š(kə)-län-žə
1PL		škəm-nä-m	škəm-nä-n	š(kə)-län-nä
2PL		škəm-dä-m	škəm-dä-n	š(kə)-län-dä
3PL		škəm-əštə-m	škəm-əštə-n	š(kə)-län-əštə

A few remarks should be made regarding the paradigm. First, as identified in the table above, the nominative form *ške* is always unmarked.⁷ Thus, when it is used as a complement of a PP, the possessive marker appears on the postposition (compare, for instance, [3b] and [4]).

- (4) *Män' mešäk-əm **škəm-em** do-kâ šəpš-əl-ən-am.
I sack-ACC REFL-POSS.1SG to-ILL2 pull-ATT-PST2-1SG
'I pulled the sack towards myself.'

Second, *škəm-* is the morphologically marked non-nominative stem that is immediately followed by a possessive marker. A possessive suffix on reflexives obligatorily precedes accusative and genitive case markers and follows the dative

6 As mentioned above, the forms given in this table have been elicited from speakers of the Kuznetsovo variety of Hill Mari. In literary Hill Mari, the forms *äškä(m)-* are most commonly used. Furthermore, in literary Hill Mari shortened dative forms are reported only in the plural; cf. in Savatkova (2002) *äšlännä*, *äšländä*, *äšlänäštə*, but only *äškälänem*, *äškälänet*, *äškälänžə*. As for the Kuznetsovo variety under consideration, both full (i.e., *škälän-*) and shortened (*šlän-*) dative forms are judged as grammatical; they appear in texts with a similar frequency: in the corpus of the Kuznetsovo variety of Hill Mari (63,522 tokens) gathered by the Moscow State University Hill Mari field group we find 3 entries for *škälän-* vs. 3 entries for *šlän-*.

7 A reviewer notes that, in several varieties of Hill Mari, caseless forms with a third person possessive marker (*əškežə*, *əškeštə*) appear frequently. In the Kuznetsovo dialect under consideration possessed caseless forms are attested only as intensifiers, i.e., in emphatic contexts, and not as 'pure' anaphors.

- (i) a. Tən' ške giš-än-et kogo-n šukâ-n šajəšt-at.
you REFL about-LAT2-POSS.2SG big-ADV much-ADV talk-NPST.2SG
'You talk a lot about (you) yourself'.
b. ?Tən' škəm-et giš-än kogo-n šukâ-n šajəšt-at.
you REFL-POSS.2SG about-LAT2 big-ADV much-ADV talk-NPST.2SG
'You talk a lot about you yourself (and not about someone else)'.

marker; in this respect, reflexives resemble personal pronouns and possessed nominal phrases although the latter allow more variation in the dative (5).⁸

- (5) a. *Tən' škām-et-əm / *škā-m-et uʒ-at.*
 you REFL-POSS.2SG-ACC REFL-ACC-POSS.2SG see-NPST.2SG
 'You see yourself.'
- b. *Tən' š(kä)-län-et / *škām-et-län knigä-m näl-ən-ät.*
 you REFL-DAT-POSS.2SG REFL-POSS.2SG-DAT book-ACC take-PST2-2SG
 'You bought yourself a book.'
- c. *Tən' mām-nä-m / *mām-əm-nä / täng-et-əm /*
 you we-POSS.1PL-ACC we-ACC-POSS.1PL friend-POSS.2SG-ACC
**täng-əm-et uʒ-at.*
 friend-ACC-POSS.2SG see-NPST.2SG
 'You see us / your friend.'
- d. *Tən' mā-län-nä / *mā-nä-län / täng-län-et /*
 you we-DAT-POSS.1PL we-POSS.1PL-DAT friend-POSS.2SG-DAT
 täng-et-län knigä-m näl-ən-ät.
 friend-DAT-POSS.2SG book-ACC take-PST2-2SG
 'You bought us / your friend a book.'

Third, similarly to personal pronouns and animate nouns, reflexives prohibit locative and caritive markers, which can be used with referential inanimate nominal phrases (compare [6a] and [6b] to [6c]).⁹

⁸ 1PL and 2PL personal pronouns bear possessive markers in all case forms; 1SG and 2SG personal pronouns bear the corresponding possessive suffixes only in the dative. There are no dedicated third-person pronouns in Hill Mari, the demonstratives *tədä* 'that' and *nənä* 'those' are used instead.

⁹ It should be mentioned that locative markers can appear in non-locative contexts; in this case, they become allowed even with animate nouns, cf. examples in (i) where illative functions as transitive.

- (i) a. *Mən'i pr'incesä-š sär-n-ält-ən.*
 toad princess-ILL turn-DETR-MED-PST2
 'The toad turned into a princess.'
- b. *Pr'inc möskä-škä sär-n-ält-ən.*
 prince bear-ILL turn-DETR-MED-PST2
 'The prince turned into a bear.'
- However, even in such contexts it is impossible for a locative marker to appear on a reflexive pronoun, as in (ii).
- (ii) a. **Pr'inc škām-žä-š(kä) / škä-škä-žä sär-n-ält-ən.*
 prince REFL-POSS.3SG-ILL REFL-ILL-POSS.3SG turn-DETR-MED-PST2
 Intended: 'The prince turned (back) into himself.'
- b. *Pr'inc ugäc ške sän-žä-m näl-ən.*
 prince again REFL appearance-POSS.3SG-ACC take-PST2
 'The prince turned (back) into himself.' (Literally: 'The prince took his appearance again.')

- (6) a. **Pet'a škäm-äškä-zä / škäm-zä-škä kăzä-m šâr-al-ân.*
 Petja REFL-ILL-POSS.3SG REFL-POSS.3SG-ILL knife-ACC thrust-ATT-PST2
 Intended: 'Petja thrust the knife into himself.'
- b. **Pet'a Oleg-äš / šarâk-âš kăzä-m šâr-al-ân.*
 Petja Oleg-ILL sheep-ILL knife-ACC thrust-ATT-PST2
 Intended: 'Petja thrust the knife into Oleg / a sheep.'
- c. *Pet'a pušängä-škä kăzä-m šâr-al-ân.*
 Petja tree-ILL knife-ACC thrust-ATT-PST2
 'Petja thrust the knife into a tree.'

2.2 Reflexive pronouns vs. DPs

Building upon their (2002) discussion of various sub-types of personal pronouns distinguished by their structural size, Déchaine and Wiltschko (2017) propose that reflexive markers in the world's languages also form a heterogeneous group differing in terms of their morphosyntactic behavior and structural properties. The two most widespread types of reflexives are so called D-reflexives, whose distribution is similar to that of referential nominal phrases (DPs), and clitic-like *φ*-reflexives. DP-like reflexives can be found in Germanic languages (for instance, English *self* anaphors), while anaphoric clitics are common, for example, in Romance languages (for instance, *se* in French and Spanish and *si* in Italian).

Reflexive pronouns in Hill Mari pattern with English *self* reflexives in that their distributional properties are parallel to those of referential nominal phrases.¹⁰ Firstly, reflexives in Hill Mari can both saturate various arguments and function as predicates; compare (7a) to a similar example in (7b), where the predicate is a deictic pronoun.¹¹

¹⁰ A detailed discussion of the structural status of nominal phrases in Hill Mari (an article-less language) lies beyond the limits of this paper. I follow Pleshak (2019) and assume them to be DPs; see also Ljutikova (2017), who argues for the presence of DPs in other article-less languages.

¹¹ In (7a) the agreeing form is ruled out due to an independent restriction: an anaphor cannot bear a possessive marker without being overtly marked for case. Although most of the examples in this section contain *škä*- reflexives, I assume, by extension, that the properties under discussion are characteristic of *ške* as well. For instance, similarly to *škä*- anaphors in (13), *ške* can also be coordinated with a referential DP (i).

- (i) a. *Mân' [ške dä täng] do-k-em mešäk-äm šâpš-âl-ân-am.*
 I REFL and friend to-ILL2-POSS.1SG sack-acc pull-ATT-PST2-1SG
 'I pulled the sack towards myself and my friend.'
- b. *Mân' [Pet'a dä Maša] do-kâ mešäk-äm šâpš-âl-ân-am.*
 I Petja and Maša to-ILL2 sack-acc pull-ATT-PST2-1SG
 'I pulled the sack towards Petja and Maša.'

- (7) a. *Män' ške / *škām-em a-m âl.*
 I REFL REFL-POSS.1SG NEG.NPST.1SG be
 'I am not myself.'
- b. *Män' tən' âl-am.*
 I You be-NPST.1SG
 'I am you.'

Secondly, reflexives allow various kinds of modifiers, including postpositive adjuncts, appositive constructions, adjectival and nominal modifiers, as seen in (8).

- (8) a. *(Ti fotokartočka-štâ) už-am [škām-em-äm pi dono].*
 this photo-IN see-NPST.1SG REFL-POSS.1SG-ACC dog with
 '(On this photo) I see myself with a dog.'
- b. *Män' [škām-em-äm sāmäräk-äm] už-am.*
 I REFL-POSS.1SG-ACC young-ACC see-NPST.1SG
 'I see myself young.'
- c. *Män' [sāmäräk škām-em-äm] už-am.*
 I young REFL-POSS.1SG-ACC see-NPST.1SG
 (i) 'I see myself young.'
 (ii) 'I, being now young, see myself.'
- d. *Män' [škām-em-äm âžar platjê-n-äm] už-am.*
 I REFL-POSS.1SG-ACC green dress-GEN-ACC see-NPST.1SG
 'I see myself in a green dress.'
- e. *Män' [âžar platjê-n škām-em-äm] už-am.*
 I green dress-GEN REFL-POSS.1SG-ACC see-NPST.1SG
 (i) 'I see myself in a green dress.'
 (ii) 'I, in a green dress, see myself.'

Thirdly, a constituent headed by a reflexive can be independently negated (9); parallel examples with a sentential negation are given in (10). Note that, although *agâl* can appear in a broad range of contexts, it can only be used as a constituent negator and never accompanies finite verbs (except for desideratives; see Kirillova 2017 for discussion). Thus, the examples in (9) support the idea that anaphoric pronouns in Hill Mari do not form a morphosyntactic complex with the main predicate.

- (9) a. *Män' tægär-äštâ [škām-em-äm agâl] už-ân-am.*
 I mirror-IN REFL-POSS.1SG-ACC NEG see-PST2-1SG
 'In the mirror I saw not myself.'
- b. *Tən' olma-m [š(kä)-lân-et agâl] nâl-ân-ät.*
 you apple-ACC REFL-DAT-POSS.2SG NEG take-PST2-2SG
 'You took an apple not for yourself.'

- (10) a. *Män' tägär-äštä škäm-em-äm š-äm už.*
 I mirror-IN REFL-POSS.1SG-ACC NEG.PST1-1SG see
 'I did not see myself in a mirror.'
- b. *Tän' olma-m š(kä)-län-et š-əc näl.*
 you apple-ACC REFL-DAT-POSS.2SG NEG.PST1-2SG take
 'You did not take an apple for yourself.'

This property also unites reflexive pronouns and referential possessed DPs. In this, the anaphor *škä-* differs from reflexive clitics common in other languages: anaphor clitics in Spanish, for instance, form a single morphophonological unit with the predicate and cannot scope independently under negation, as shown in (11).

- (11) *Pedro no se vio en el espejo.*
 Pedro NEG REFL.3.ACC see.PST.3SG in DET mirror
 'Pedro did not see himself in the mirror.'
- Not available: 'In the mirror Pedro saw not himself.'

Further evidence that reflexive pronouns in Hill Mari are not clitics is provided by the fact that, similarly to other nominal arguments, they can be separated from the predicate and the rest of the clause in focus constructions, as in (12).

- (12) a. *Tän' [škäm-et-äm vele] jarat-et.*
 you REFL-POSS.2SG-ACC only love-NPST.2SG
 'You love only yourself.'
- b. *Tän' [Maša-m vele] jarat-et.*
 you Maša-ACC only love-NPST.2SG
 'You love only Maša.'

Finally, reflexives and referential nominal phrases in Hill Mari can be coordinated (13a). This provides additional support for the claim that *škä-* anaphors are full DPs since clitics and structurally smaller elements cannot coordinate with larger phrases (Kayne 1975); unsuccessful attempts to construct a parallel example in Spanish are provided for comparison in (13b) and (13c).

- (13) a. *Fotokartočka-štä Pet'a [škäm-žə-m dä vätə-žə-m]*
 photo-IN Petja REFL-POSS.3SG-ACC and wife-POSS.3SG-ACC
už-ən.
 see-PST2
 'In the picture Petja saw himself and his wife.'
- b. **Pedro se vio y {a su mujer / el gato}.*
 Pedro REFL saw and PREP his wife DET cat
 Intended: 'Pedro saw himself and his wife / the cat.'

- c. **Pedro vio se y {a su mujer / el gato}*.
 Pedro saw REFL and PREP his wife DET cat
 Intended: ‘Pedro saw himself and his wife / the cat.’

To summarize, *ške/škä-* anaphors are similar in their behavior to referential DPs and personal pronouns and are morphosyntactically independent from the predicate unlike reflexive clitics and affixes in many languages.¹² Although from a typological perspective it is rather common for reflexives that are derived using the pattern REFL + POSS to behave as full DPs, there is no strict one-to-one correspondence. For instance, the Russian reflexive pronoun *sebjä* also patterns with referential DPs in its behavior while morphologically it does not contain a possessive agreement marker (Testelefs 2001). At the same time, POSS-*i'* anaphors in Kaqchikel (a Mayan language spoken in Guatemala) resemble English and Uralic pronouns on the surface but are similar to Spanish reflexive clitics in their syntactic distribution (Burukina 2019). In the next section I focus on the binding properties of *ške/škä-* reflexives, that is the antecedent and locality restrictions. This will allow us to determine the status of Hill Mari reflexives according to the typology of reflexive pronouns developed by Kiparsky (2002) (discussed in detail in Section 3.3).

3 Binding properties of *ške/škä-* reflexives

3.1 Antecedents

In many genetically and geographically unrelated languages, including, for example, Inuit (Eskimo–Aleut; Bittner 1994), Shona (Atlantic-Congo; Storoshenko 2009), and Russian (Slavic; Testelefs 2001), reflexives are subject-oriented, that is, they can be bound only by a subject antecedent and are often restricted to the

¹² Additionally, it should be mentioned that reflexives in Hill Mari cannot be used as reciprocals; compare this restriction to the ambiguous behavior of Romance clitics or anaphoric morphemes in some polysynthetic languages (see, for instance, Labelle (2008) and Déchaine and Wiltschko (2017) on the clitic *se* in French and Letuchiy (2006) on the reflexive/reciprocal *zə* morpheme in Adyghe, i.a.). In Hill Mari, distinct lexical items are used to express reciprocity, namely, the agreeing compound *ikänä-iktä* (i), which resembles *each other* in English and *drug druga* in Russian.

(i) *Mä ikänäiktä-län-nä otkrytkä-m kolt-enä.*
 we each.other-DAT-POSS.1PL card-ACC send-NPST.1PL
 ‘We send each other postcards.’

direct/indirect object position (see, for example, the reflexive affix in Shona [Bantu] and reflexive clitics in French [Déchaine and Wiltschko 2017]). As will be demonstrated in this section, Hill Mari *škä-* reflexives can occur in all structural positions suitable for ordinary nominal phrases, except for the clausal subject position, and normally can be bound by any c-commanding co-argument. In exempt positions¹³ (i.e., where there is no c-commanding co-argument, as is the case within postpositional phrases or nominal phrases) reflexives allow co-reference with almost any locally available pragmatically suitable member in a sentence, the only restriction being the word order: the antecedent must linearly precede the anaphor.¹⁴ In what follows I will consider the reflexive-antecedent combinations in more detail one by one, providing examples.

3.1.1 Reflexives with co-arguments

The most typical context for a reflexive pronoun is when an internal argument syntactically realized as a direct or indirect object, is co-indexed with the external argument (the subject), as seen in (14).

- (14) a. *Mən' škäm-em-äm tägär-äštä už-am.*
 I REFL-POSS.1SG-ACC mirror-IN see-NPST.1SG
 'I see myself in a mirror.'
- b. *Mən' škä-län-em cüdej-em.*
 I REFL-DAT-POSS.1SG surprise-NPST.1SG
 'I am surprised by myself.'

The question arises whether a direct object can be an antecedent to an anaphoric indirect object or vice versa. Unfortunately, in Hill Mari there are no inherently ditransitive predicates suitable for examining the relation between these two arguments because the translation equivalents for such English ditransitive verbs as *show*, *demonstrate*, or *introduce* typically used in the diagnostic, are derived causative verbs. The one non-derived verb *puaš* 'give' is not typically used in situations where the Theme and the Recipient refer to the same person (as in *#I gave Mary to herself*); however, idiomatic examples with a reciprocal pronoun

13 The idea that some structural positions might be exempt from applying principles that control the distribution of anaphors was put forward by Pollard and Sag (1992) and Reinhart and Reuland (1993). I further adopt the distinction between binding and co-reference, following Grodzinsky and Reinhart (1993). I reserve the term 'binding' to refer, mainly, to bound variable uses of anaphors using the term 'co-reference' in all other cases.

14 The relevance of linear precedence alongside c-command has been emphasized by Langacker (1969), Jackendoff (1972), Lasnik (1976), Barss and Lasnik (1986), Kuno and Takami (1993), Bresnan (1998), Bruening (2014), among others.

suggest that co-reference can be established between a pronoun and a linearly preceding antecedent, with a direct object binding the indirect object evaluated as being more acceptable (15).

- (15) a. *Svjaščennik sāmāräk-vlä-m ikänäikt-äštä-län pu-en.*
 priest young-PL-ACC each.other-POSS.3PL-DAT give-PST2
 ‘The priest gave the young couple to each other.’
 b. *??Svjaščennik ikänäikt-äštä-län sāmāräk-vlä-m pu-en.*
 priest each.other-POSS.3PL-DAT young-PL-ACC give-PST2
 ‘The priest gave the young couple to each other.’
 c. *?Svjaščennik sāmāräk-vlä-län ikänäikt-äštä-m pu-en.*
 priest young-PL-DAT each.other-POSS.3PL-ACC give-PST2
 ‘The priest gave the young couple to each other.’
 d. **Svjaščennik ikänäikt-äštä-m sāmāräk-vlä-län pu-en.*
 priest each.other-POSS.3PL-ACC young-PL-DAT give-PST2
 ‘The priest gave the young couple to each other.’

As for derived predicates, both inherently intransitive and transitive verbs can be causativized. In the first case, the Causee is marked accusative and behaves as an ordinary direct object in that it can be bound by the subject, see (16).

- (16) *Vrač škām-žä-m älžž-t-en.*
 doctor REFL-POSS.3SG-ACC revive-CAUS-PST2
 ‘The doctor revived himself.’

If an inherently transitive verb is causativized, the dative Causee can be bound only by the subject (Causer) but not by the direct object,¹⁵ complying with the c-command requirement, as shown in (17).

- (17) a. *Ivan_k škä-län-žä_{*i/k} Maša-m_i anž-äkt-en.*
 Ivan REFL-DAT-POSS.3SG Maša-ACC look-CAUS-PST2
 ‘Ivan showed Maša to himself.’
 Not available: ‘Ivan showed Maša to herself.’
 b. *Ivan_k Maša-m_i škä-län-žä_{*i/k} anž-äkt-en.*
 Ivan Maša-ACC REFL-DAT-POSS.3SG look-CAUS-PST2
 ‘Ivan showed Maša to himself.’
 Not available: ‘Ivan showed Maša to herself.’

The dative DP referring to a Causee can itself be an antecedent to an anaphoric direct object, see (18). These examples are often ambiguous between the ‘Causee

¹⁵ For a discussion of non-periphrastic causative constructions in Hill Mari see Letuchiy and Kolomackij (2012).

antecedent' and the 'Subject antecedent' readings if a possessive marker on the reflexive matches both participants.

- (18) a. *Ivan_k Maša-lan_i škəm-žə-m_{i/k} anž-əkt-en.*
 Ivan Maša-DAT REFL-POSS.3SG-ACC look-CAUS-PST2
 'Ivan showed herself / himself to Maša.'
- b. *Ivan_k škəm-žə-m_{2i/k} Maša-lan_i anž-əkt-en.*
 Ivan REFL-POSS.3SG-ACC Maša-DAT look-CAUS-PST2
 Only: 'Ivan showed himself to Maša.'

3.1.2 Reflexives in exempt positions

The two typical contexts for a reflexive without a co-argument are in the complement position of a postposition and as a possessor within a nominal phrase; in the latter case, either a genitive- agreeing form *škəm-POSS-n* or the invariant *ške* can be used.¹⁶ An anaphor in an exempt position can be co-referent with any of the main predicate arguments; a few examples are given in (19)–(21). As further

16 All speakers of Hill Mari that I have consulted prefer to use the agreeing *škəm-POSS-GEN* in the possessive function although they also generally accept examples with the possessive invariant *ške*. In the latter case, a possessive marker on the head noun is required, (i)a; in the case of an agreeing reflexive possessor, the head noun can remain unmarked, (i)b.

- (i) a. *Mān' ške tāng*(-em)-əm už-am.*
 I REFL friend-POSS.1SG-ACC see-NPST.1SG
 'I see my friend.'
- b. *Pet'a škəm-žə-n rod'it'el'-vlä(-žə)-m jarat-a.*
 Petja REFL-POSS.3SG-GEN parent-PL-POSS.3SG-ACC love-NPST.3SG
 'Petja loves his parents.'

Note that, occasionally, a possessive reflexive may co-occur with another dependent of the head noun; in this case, co-reference is established between the two, complying with the linear order restriction (ii). As mentioned above, agreeing forms are preferable in such contexts.

- (ii) a. *Pet'a-n Tanja-n fotografij-žə*
 Petja-GEN Tanja-GEN photo-POSS.3SG
 'Petja's picture of Tanja'
- b. *Pet'a-n škəm-žə-n / ?ške fotografij-žə*
 Petja-GEN REFL-POSS.3SG-GEN REFL photo-POSS.3SG
 'Petja's picture of himself'
- c. **škəm-žə-n / #ške Pet'a-n fotografij-žə*
 REFL-POSS.3SG-GEN REFL Petja-GEN photo-POSS.3SG
 Only: 'the picture of Petja himself' (an emphatic interpretation)

illustrated in (21), potential interpretational ambiguity is usually resolved via the choice of the possessive marker on the anaphor.

(19) Subject antecedent

- a. *Măn' mešäk-äm ške do-k-em šâpš-al-ân-am.*
 I sack-ACC REFL to-ILL2-POSS.1SG pull-ATT-PST2-1SG
 'I pulled the sack towards myself.'
- b. *Ol'eg škäm-žă-n / ?ške sâravač-âm jam-d-en.*
 Oleg REFL-POSS.3SG-GEN REFL key-ACC be.lost-CAUS-PST2
 'Oleg lost his key.'

(20) Direct object antecedent

- a. *Măn' Pet'a-m ške giš-ân-žă a-m jaratâ.*
 I Petja-ACC REFL about-LAT2-POSS.3SG NEG.NPST-1SG like
 'I dislike Petja because of him.'
- b. *Maša-m škäm-žă-n äkä(-žă) saga už-ân-am.*
 Maša-ACC REFL-POSS.3SG-GEN older.sister-POSS.3SG near see-PST2-1SG
 'I saw Maša next to her older sister.'

(21) Indirect object antecedent

- a. *Măn' Pet'a-lan Ške giš-ân-žă/ giš-ân-em*
 I Petja-DAT REFL about-LAT2-POSS.3SG about-LAT2-POSS.1SG
šajâšt-ân-am.
 tell-PST2-1SG
 'I told Petja about him / myself.'
- b. *Maša-lan škäm-žă-n knigă(-žă)-m pu-en-âm.*
 Maša-DAT REFL-POSS.3SG-GEN book-POSS.3SG-ACC give-PST2-1SG
 'I gave Maša her (own) book.'

In addition to this, a reflexive pronoun in an exempt position can be co-referent with a DP within another postpositional/nominal phrase, see (22).

- (22) a. *Măn' Vanja_i giš-ân ške_i veldäk-šă šajâšt-ân-am.*
 I Vanja about-LAT2 REFL because.of-POSS.3SG tell-PST2-1SG
 'I told about Vanja because of him.'
- b. *Maša_i saga škäm-žă-n_i knigă(-žă)-m už-ân-am.*
 Maša near REFL-POSS.3SG-GEN book-POSS.3SG-ACC see-PST2-1SG
 'I saw her book next to Maša.'

- c. [Maša-*n_i* toštâ madâš-vlă(-žă)-*m*] [škäm-žă-*n_i*
 Maša-GEN old toy-PL-POSS.3SG-ACC REFL-POSS.3SG-GEN
 šâžar(-žă)-*lan*] *pu-en-ät*.
 younger.sister-POSS.3SG-DAT give-PST2-3PL
 ‘They gave Maša’s old toys to her sister.’
- d. [Maša-*n_i* šâžar(-žă)-*lan*] [škäm-žă-*n_i* toštâ
 Maša-GEN younger.sister-POSS.3SG-DAT REFL-POSS.3SG-GEN old
 madâš-vlă(-žă)-*m*] *pu-en-ät*.
 toy-PL-POSS.3SG-ACC give-PST2-3PL
 ‘They gave Maša’s sister her old toys.’

The only restriction in case of an exempt position is the linear precedence of an antecedent; compare for instance (22a) and the ungrammatical (23), where the antecedent follows a reflexive pronoun.¹⁷

- (23) *Män’ ške giš-än-žă Vanja veldäk šajâšt-ân-am.
 I REFL about-LAT2-POSS.3SG Vanja because.of tell-PST2-1SG
 Intended: ‘I told about Vanja because of him.’

3.2 Locality

The binding domain for škä- reflexives and their antecedents is restricted to a minimal clausal constituent with an overt subject. In Hill Mari, several types of clause-like constituents can be embedded: (i) finite complement clauses with overt complementizers, (ii) infinitival complement clauses, (iii) nominalized clausal

¹⁷ In the case of a possessive reflexive within the matrix subject, no linear precedence is required for the antecedent, (i)a. I assume that such examples involve pragmatic co-reference, which is supported by the fact that the antecedent for such anaphors does not have to be syntactically present at all, (i)b. Similar behavior has been attested for anaphors in Russian, where the possessive pronoun *svoy* is ambiguous and can be used either as a reflexive (bound variable) or as a non-anaphoric modifier synonymous with the adjective *sobstvennyj* ‘own’ (Paducheva 1983).

- (i) a. Škäm-žă-*n* / ?ške ät’ä-žă-ävä-žă
 REFL-POSS.3SG-GEN REFL father-POSS.3SG-mother-POSS.3SG
 Maša-*m* už-ân-ât.
 Maša-ACC see-PST2-3PL
 ‘Her parents saw Maša’.
- b. Škäm-ân / ?ške rod’it’el’-vlă fs’egda palš-at.
 REFL-GEN REFL parent-PL always help-NPST.3PL
 Literally: ‘Own parents always help.’

constituents with genitive or nominative embedded subjects, (iv) non-finite and finite adjunct clauses. Among them, argumental infinitival constituents with a covert subject are transparent, that is a reflexive in an embedded clause can have its antecedent in the matrix clause. Constituents that have an overt subject – embedded finite clauses, nominalizations, and adjunct clauses – are opaque. This is illustrated below.

A reflexive pronoun embedded in a non-finite clause can be bound either by the local (implicit) subject, denoted here as $\emptyset$, or the matrix (explicit) one (24).

- (24) a. *Pet'a_k Maša-lan_i [$\emptyset_i$ škäm-žă-m_{i/k} anž-al-aš]*
 Petja Maša-DAT REFL-POSS.3SG-ACC see-ATT-INF
razrešāj-en.
 permit-PST2
 'Petja permitted Maša to look at herself/him.'
- b. *Pet'a_k Maša-lan_i [$\emptyset_i$ škäm-žă-n_{i/k} / ?ške_{i/k}*
 Petja Maša-DAT REFL-POSS.3SG-GEN REFL
täng-vlă(-žă)-m sägär-ăl-ăs jad-ân.
 friend-PL-POSS.3SG-ACC call-ATT-INF ask-PST2
 'Petja asked Maša to call her/his friends.'

Nominalized and adverbial clauses with an overt subject are opaque for anaphor binding; thus, in (25) the matrix subjects cannot be antecedents for the embedded reflexives and the sentences receive unambiguous interpretations.

- (25) a. *Ivan_k äšändär-ä [Pet'a-n_i / Pet'a_i*
 Ivan remember-NPST.3SG Petja-GEN Petja
škäm-žă-m_{i/*k} uvažajă-mâ(-žă)-m].
 REFL-POSS.3SG-ACC respect-NMLZ-POSS.3SG-ACC
 'Ivan remembers that Petja respects himself.'
 Not available: 'Ivan remembers that Petja respects him.'
- b. *[Maša_i škäm-žă-m_{i/*k} šel-mäkă] Ol'ga_k*
 Maša REFL-POSS.3SG-ACC hit-CVB Olga
sägär-ăl- $\emptyset$ kolt-en.
 cry-ATT-CVB send-PST2
 'Olga cried out when Maša hit herself.'
 Not available: 'Olga cried out when Maša hit her.'
- c. *%Ol'ga_k sägär-ăl- $\emptyset$ kolt-en [Maša_i škäm-žă-m_{i/*k}*
 Olga cry-ATT-CVB send-PST2 Maša REFL-POSS.3SG-ACC
šel-mäkă].
 hit-CVB
 'Olga cried out when Maša hit herself.'
 Not available: 'Olga cried out when Maša hit her.'

The same is true for all finite clauses: arguments, adjuncts, and relative clauses, which are also opaque for binding, see (26).

- (26) a. *Pet'a_k Jura-lan_j keles-en [što Maša_i škäm-žä-m_{i/*j/*k}*
 Petja Jura-DAT say-PST2 that Maša REFL-POSS.3SG-ACC
vele jarat-a].
 only love-NPST.3SG
 'Petja said to Jura that Maša loves only herself.'
- b. *Maša_k sögär-äl-Ø kolt-en [känam Pet'a_i*
 Maša cry-ATT-CVB send-PST2 when Petja
škäm-žä-m_{i/*k} sev-äl-än].
 REFL-POSS.3SG-ACC hit-ATT-PST2
 'Maša cried out when Petja hit himself.'
- c. *Tän' ädärämäs-äm už-än-at [kädä tän'-ä-m /*
 you woman-ACC see-PST2-2SG that you-ACC
**škäm-et-äm päl-ä].*
 REFL-POSS.2SG-ACC know-NPST.3SG
 'You saw a woman who knows you.'

It may appear that occasionally Hill Mari reflexives, similarly to *self* reflexives in English, may allow co-reference with a non-local overt subject; consider, for instance, (27), where the matrix subject binds the embedded pronoun despite the presence of the local overt subject.

- (27) *Män' keles-en-äm što Pet'a jarat-a män'-äm /*
 I tell-PST2-1SG that Petja love-NPST.3SG I-ACC
škäm-em-äm (vele).
 REFL-POSS.1SG-ACC only
 'I said that Petja loved only me.'

Note however, that in sentences parallel to (27), the pronoun *škä-* should be analyzed as emphatic (an intensifier) rather, and not as anaphoric. In (28) the emphatic pronoun *škäm-em-äm* is a focused constituent and can be accompanied by the particle *vele* 'only'. If another constituent is focused, the pronoun *škä-* can no longer be used; for instance, in (28), the constituent 'only Petja' is emphasized as the only focus and, thus, *škäm-em-äm* cannot be interpreted as an intensifier; the anaphoric reading is also unavailable in this case.

- (28) *Män' keles-en-äm što Pet'a vele män'-äm /*
 I say-PST2-1SG that Petja only I-ACC
**škäm-em-äm jarat-a.*
 REFL-POSS.1SG-ACC love-NPST.3SG
 'I said that only Petja loves me.'

3.3 *ške/škä*- in the typology of pronouns

To address the Hill Mari data from a typological perspective, I adopt the typology of pronouns based on their syntactic properties developed by Kiparsky (2002). Kiparsky follows Faltz (1977) and suggests that the binding properties of reflexives and reciprocals vary along at least the following two dimensions: (i) the size of the domain within which they must be bound, and (ii) the nature of the antecedent in the clausal domain. Importantly, these two characteristics are *lexical* properties of individual anaphors, not a syntactic parameter of the language as a whole, and thus may differ for distinct groups of pronouns.

As for the first parameter, Kiparsky identifies a hierarchy of five successively more inclusive antecedent domains; the category of a pronoun is determined by the maximum domain in which its antecedent may be found. Firstly, there are referentially independent vs. referentially dependent pronouns. The former can introduce a new entity into the discourse, for instance via deictic use (as in *It is me!*), while the latter must have at least a discourse antecedent. Secondly, referentially dependent pronouns are divided into reflexives and non-reflexives, depending on whether they require a syntactic antecedent. Thus, non-reflexives are allowed with a context antecedent in such examples as *John_i is here. I saw him_i*. Thirdly, reflexive pronouns may be finite-bound, that is, requiring an antecedent within the same finite clause, or non-finite-bound, that is, allowing an antecedent beyond the finite clause they are located in. Finally, among the finite-bound pronouns locally vs. long-distance bound are distinguished. The former must be bound by a constituent in the first accessible subject domain while the latter are not subject to this requirement.

In addition to this, the second parameter – the nature of the antecedent – splits each of the above mentioned categories in two, based on the obviation property [+/- Obviative] ([+/- O]). The Obviation principle is formulated as follows: “coarguments have disjoint reference” (Kiparsky 2002: 180); see also similar definitions in Hellan 1983, 1988; Sells 1986; Farmer and Harnish 1987). For instance, English personal pronouns are [+Obviative] since in examples similar to *John_k hit him_{i/*k}*, the pronoun and the co-argumental DP cannot share the referent. In contrast, English reflexives are [-Obviative]: co-reference between arguments of a predicate is enforced if one of them is a reflexive pronoun (*John_k hit himself_{+i/k}*). This yields altogether 10 types of pronominal elements (29).

(29) The typology of pronouns (Kiparsky 2002: 205)

Within this typology, Hill Mari *škä*- reflexives occupy the same position as the Russian reflexive *sebja*. On the one hand, they are referentially dependent, reflexive, finite-bound but long-distance, in a sense that non-finite clauses with an obligatorily implicit subject are transparent for binding. On the other hand, Hill Mari agreeing *škä*- anaphors are non-obviative, i.e., they allow co-reference between co-arguments, for instance, a Causee and a Theme in ditransitive constructions (see [18] above). The invariant *ške* reflexive is almost impossible to characterize in terms of obviation since it is used mostly in exempt positions, without co-arguments; see, however, an example in footnote. 16, reproduced in (30), where a possessive *ške* is bound by another dependent of the same head noun.

(30) Pet'a-n škäm-žä-n / ?ške fotografij-žä
Petja-GEN REFL-POSS.3SG-GEN REFL photo-POSS.3SG
'Petja's picture of himself'

Having established this, I will proceed by comparing the properties of *škä*- reflexives to those of anaphors in other Uralic languages, expanding the cross-linguistic comparison of reflexive strategies presented in Volkova (2014).

4 Simple anaphoric pronouns in other Uralic languages

The purpose of this section is to provide a brief yet thorough overview of anaphoric pronouns used in Uralic languages of different branches. The next section is devoted to the two other reflexive strategies, namely complex reflexives and verbal reflexivization.

4.1 Morphosyntax

Agreeing reflexives are common in Uralic languages. Consider, for example, *es*-POSS reflexive forms in Erzya and Moksha (the two Mordvin languages), *maga*-POSS reflexive pronouns in Hungarian, *itse*-POSS reflexives in Finnish, *xər* °*q*-POSS anaphoric items in Nenets, *ač*°/*aš*°/*as*-POSS reflexives in Udmurt.¹⁸ A common belief is that reflexives in different Uralic languages are often derived from similar lexical roots that can be traced back to a proto-Uralic word meaning ‘shadow, soul’ (Majtinskaja 1964). This pattern is not unique among the world’s languages: as pointed out by König and Siemund (1999), most lexical reflexives stem from words denoting different body parts and related notions. A similar observation has also been made by Schladt (2000), whose typology distinguishes between eight main lexical sources for reflexives, including body-part nouns, nouns denoting a person or personality and nouns meaning ‘soul, spirit’. In Table 2, I provide partial paradigms of agreeing reflexives in several Uralic languages belonging to different branches to bring out the general pattern and to capture the cross-linguistic microvariation within the language family.

As evident from the data presented above, Hill Mari anaphors closely follow the general pattern: REFL + POSS + CASE. One easily perceived language-specific parameter is the number of cases and availability of number marking (consider, for instance, the absence of dative and partitive in Sami).

Further microvariation is attested with regard to morpheme ordering. As discussed in Section 2 of this paper, Hill Mari anaphors require a strict order of morphemes: agreement markers must precede accusative/genitive case markers but obligatorily follow the dative marker. At the same time, as shown in the table above, in Meadow Mari (the Sernur-Morkin variety) reflexive pronouns are reported to allow some variation in morphemic order in the dative (Volkova 2014). I do not have an immediate explanation for this variation, but it is important to acknowledge it. It should also be noted that the microvariation in the ordering of morphemes in anaphors matches that of the ordering of morphemes in personal pronouns. As was shown in (5d), 1PL and 2PL pronouns in Hill Mari do not allow the POSS-DAT/DAT-POSS alternation. However, in Meadow Mari such pairs of forms as *mə-lan-na* we-DAT-POSS.1PL / *mem-na-lan* we-POSS.1PL-DAT and *tə-lan-da*

¹⁸ See Majtinskaja (1964), Volkova (2014), and Toldova et al. (2019) on the Mordvin languages; Kenesei et al. (1998) on Hungarian; Trosterud (1993) on Finnish; Nikolaeva (2014) on Nenets; and Volkova (2014) on Udmurt.

Table 2: Reflexive pronouns in Uralic languages.¹⁹

	1SG.NOM	1SG.ACC	1SG.DAT/PART
Hill Mari (Mari)	<i>ške</i>	<i>škəm-em-əm</i>	<i>š(kə)-län-em</i>
	REFL	REFL-POSS.1SG-ACC	REFL-DAT-POSS.1SG
Meadow Mari (Mari) ²⁰	<i>ške(n-em)</i>	<i>ške-m-əm</i>	<i>ška-lan-em</i>
	REFL-POSS.1SG	REFL-POSS.1SG-ACC / <i>šken-em-əm</i>	REFL-DAT-POSS.1SG / <i>šken-em-lan</i>
		REFL-POSS.1SG-ACC	REFL-POSS.1SG-DAT
Erzya ²¹ (Mordvin)	<i>es'</i>	–	<i>es'-t'e-n'</i>
	REFL		REFL-DAT-POSS.1SG
Finnish (BF)	<i>*itse-</i>	<i>itse-ni</i>	<i>itse-ä-ni</i>
	REFL	REFL-POSS.1SG	REFL-PART-POSS.1SG
Hungarian (Ugric)	<i>maga-m</i>	<i>maga-m-at</i>	<i>maga-m-nak</i>
	REFL-POSS.1SG	REFL-POSS.1SG-ACC	REFL-POSS.1SG-DAT
Komi-Zyrian (Pechora)(Permic)	<i>ač'-ym</i>	<i>as'-ym-əs</i>	<i>as-ly-m</i>
	REFL-POSS.1SG	REFL-POSS.1SG-ACC	REFL-DAT-POSS.1SG
Besermyan Udmurt ²² (Permic)	<i>ač'-im</i>	<i>as-â-m-e</i>	<i>as-lâ-m</i>
	REFL-POSS.1SG	REFL-POSS.1SG-ACC / % <i>as-lâ-me</i>	REFL-DAT-POSS.1SG / % <i>as-mâ-lâ</i>
		REFL-ACC-POSS.1SG	REFL-POSS.1SG-DAT

19 The data are taken from the following sources: Sammallahti (1998), Kenesei et al. (1998), Trosterud (1993), Prozorova (2002), Idrisov (2013), Nikolaeva (2014), Volkova (2014).

20 A few important remarks should be made regarding the Meadow Mari forms.

According to Volkova (2014), in Sernur-Morkin Mari possessed nominative forms are allowed. However, these forms are not listed in traditional grammars, such as Alhoniemi (2010), and only caseless anaphors with third person possessive markers – *škež* and *škešt* – are reported in Krasnova et al. (2017). Furthermore, the form *škenem*, for instance, does not appear in the corpus of literary Mari and only three entries are found in the Meadow Mari Social Media Corpus. In contrast, *škež* has 372 and 417 occurrences, respectively (although those, without a doubt, include uses of *škež* as an emphatic pronoun).

Similarly, even though all the ACC/DAT forms listed in the table are judged as grammatical by native speakers (as reported by Volkova 2014 and as I confirmed with a native speaker of the same dialect), they appear in corpora with drastically different frequencies (the numbers correspond to the corpus of literary Mari and the media corpus, respectively): *ške-m-əm* 167/279 vs. *šken-em-əm* 0/3; *ška-lan-em* 46/36 vs. *šken-em-lan* 0/0.

21 In the Mordvin languages the unmarked *es'* reflexive is used as a possessive pronoun or a dependent of a postposition; marked (agreeing) forms of *es'* are available only in the dative case.

22 The form *as-lâ-me* REFL-ACC-POSS.1SG is given in Volkova (2014); it is not recognized by other specialists on the dialect that I consulted. The form *as-mâ-lâ* REFL-POSS.1SG-DAT is normally analyzed as first-person plural, '(to) us'; however, it can also appear referring to a single speaker. The form *as-â-lâ* REFL-POSS.1SG-DAT, which is expected considering the paradigm of possessive markers, does not appear in texts. I am grateful to Vladimir Ivanov for his invaluable help ining the Besermyan Udmurt data presented in the paper.

Table 2: (continued)

	1SG.NOM	1SG.ACC	1SG.DAT/PART
Sami (Sami)	<i>*iehča-</i> REFL	<i>ieža-n</i> REFL-POSS.1SG	–
Tundra Nenets (Samoyedic) ²³	<i>xəɾəq-n°</i>	<i>(xəɾ°q-n'i) pix°də-m'i</i>	<i>xəɾ°q-n'i n'a°n'i</i>
	<i>~ xəɾ°q-n'i</i>	REFL-1SG REFL-ACC /	REFL-1SG I.DAT.1SG
	REFL-1SG	<i>(xəɾ°q-n'i) s'iqm'i</i> REFL-1SG I.ACC	

you.PL-DAT-POSS.2PL / *ten-da-lan* you.PL-POSS.2PL-DAT are attested.²⁴ The three languages that stand out from the general system are Estonian and two Ugric languages – Mansi and Khanty. Estonian makes no person distinction and exploits no possessive markers for reflexives; for instance, the forms *enese* GEN.SG, *ennast* PART.SG, *eneste* GEN.PL, and *endid* PART.PL can be used with any singular / plural antecedents, respectively, regardless of their person characteristic. As to Mansi and Khanty, neither has dedicated lexical reflexives. In Mansi, intensified forms of personal pronouns can be used as anaphors bound by a local antecedent; consider the following paradigms as an example (Table 3).

Khanty also allows locally bound pronominals; in contrast to Mansi, no emphatic marker is present (Nikolaeva 1995; Rombandeeva 1973; Volkova 2014).

Table 3: Mansi personal/emphatic pronouns.

Personal pronoun	Emphatic pronoun	Emphatic as reflexive
<i>a:m</i>	<i>am-ki</i>	<i>am-ki-na-m</i> ²⁵
1SG	1SG-EMPH	1SG-EMPH-na-POSS.1SG
'I'	'I myself'	'(me) myself'
<i>ta:n</i>	<i>ta:n-ki</i>	<i>ta:n-ki-na-nəl</i>
3PL	3PL-EMPH	3PL-EMPH-na-DAT
'they'	'they themselves'	'to (them) themselves'

²³ The forms are reproduced from Nikolaeva (2014: 48, 49, 184); I preserve the original glosses.
²⁴ For a discussion of the variation in morpheme ordering in nominal groups, see Simonenko and Leontjev (2012).
²⁵ While *ki* is described as an emphatic suffix, the morpheme *na:* is not glossed separately in the source (Riese 2001).

- (31) a. *Učitel_i huvel_{i/k} išək-s-əlle.*
teacher he.ACC praise-PST-SG.3SG
‘The teacher praised him/himself.’
- b. *Nemxojat_i huvel_{i/k} ənt išək-t-əlle.*
no.one he.ACC NEG praise-NPST-SG.3SG
‘No one praises himself/him.’ (Volkova 2014: 24)

The exact reasons behind this variation remain to be adequately addressed in future work. For the purposes of the present research it suffices to emphasize that the reflexive pronouns in Hill Mari fall in with the general Uralic pattern and to mention the exceptions among Uralic languages.

4.2 Binding properties

In Section 3.2 I discussed syntactic properties of Hill Mari *škä*- reflexives and demonstrated that they are long-distance non-obviative anaphors requiring a syntactic antecedent within the minimal clause containing an overt subject. Since most traditional grammars of Uralic languages do not consider reflexives in detail, it is hard to provide a comprehensive comparison of anaphors in Hill Mari with their counterparts in terms of their syntactic properties. Fortunately, there exists a study by Volkova (2014), which compares reflexives in five Uralic languages within the formal generative framework; those are Khanty (the Shuryskhary dialect), Komy-Zyrian (the Pechora dialect and the Izhma dialect), Udmurt (the Besermyan Variety), Meadow Mari (the Sernur-Morkin dialect), and Erzya (the Shoksha dialect). Volkova’s findings alongside with information on the Hill Mari data are summarized in Table 4.

As can be seen in the table, Hill Mari mostly patterns with other Uralic languages with respect to the binding properties of its lexical reflexives, with two differences. Firstly, in (32) and (33) I reproduce Volkova’s examples for Meadow

Table 4: Binding properties of reflexive pronouns in Uralic languages.

	Hill Mari	Meadow Mari	Komi Zyrian	Besermyan Udmurt	Erzya
Reflexive stem	<i>škä(m)-</i>	<i>ške(n)-</i>	<i>as-</i>	<i>as-</i>	<i>es’-</i>
Subject- oriented	No	Yes	Yes	Yes	Yes
Binding domain	Clause with an overt subject	Finite clause	Finite clause	Clause with a subject	Clause with a subject
Exempt positions	Allowed	Allowed	Allowed	Allowed	Allowed

Mari and Besermyan Udmurt showing that reflexives in these languages, unlike in Hill Mari, can only have subject antecedents.

(32) Meadow Mari

- a. ^{??}*Petr* *mem-na-m* *ška-lan-na* *onč-əkt-a*.
 Peter we-POSS.1PL-ACC REFL-DAT-POSS.1PL look-CAUS-NPST.3SG
 Intended: ‘Peter shows us to ourselves.’
- b. ^{??}*Petr* *mə-lan-na* *ške-na-m* *onč-əkt-a*.
 Peter we-DAT-POSS.1PL REFL-POSS.1PL-ACC look-CAUS-NPST.3SG
 Intended: ‘Peter shows us to ourselves.’
- c. *Petr* *mem-na-m* *mə-lan-na* *onč-əkt-a*.
 Peter we-POSS.1PL-ACC we-DAT-POSS.1PL show-NPST.3SG
 ‘Peter shows us to ourselves.’
 (Volkova 2014: 71)

(33) Besermyan Udmurt

- a. *Ataj_i* *vož'ma-t-i-z* *văn-ez-lă_j* *aš'-s-e_{i/*j}*.
 father watch-TR-PST2-3 brother-POSS.3-DAT REFL-POSS.3-ACC
 ‘The father showed himself to the brother.’
- b. *Ataj_i* *vož'ma-t-i-z* *văn-ez-lă_j* *so-je_{i/j}*.
 father watch-TR-PST2-3 brother-POSS.3-DAT he-ACC
 ‘The father showed to the brother himself.’
 (Volkova 2014: 119)

Secondly, recall that *ška-* reflexives in Hill Mari are finite-bound but non-local. This is also true for reflexives in Meadow Mari (34) and Komi-Zyrian while anaphors in Besermyan Udmurt (35), a language closely related to Komi-Zyrian, and in Erzya have a smaller binding domain – that is a minimal clause with any (overt or covert) subject.

(34) Meadow Mari non-local reflexives

- Ůdăr_i* *rveze_j* *de-č'* [*Ø_j* *ška-lan-že_{i/j}* *pört-əm*
 girl boy near-EL REFL-DAT-POSS.3SG house-ACC
 ašt-aš] *jod-ən*.
 make-INF ask-PST2
 ‘The girl asked the boy to build her/himself a house.’
 (Volkova 2014: 71)

(35) Besermyan Udmurt local reflexives

<i>Ivan_i</i>	<i>kos-i-z</i>	<i>kâšno-jez-lâ_j</i>	[Ø] _j	<i>*asâ-z-e_i</i> /
Ivan	tell-PST2-3	wife-POSS.3-DAT		REFL-POSS.3-ACC
<i>so-je_i</i>	<i>sajka-t-ânâ_j</i>			
he-ACC	rise-CAUS-INF			
'Ivan told his wife to wake him up.'				
(Volkova 2014: 120)				

Thus, we have observed that Hill Mari, on the one hand, follows the pattern of binding behavior most common within the Uralic language family; on the other, the behavior of reflexive pronouns in Hill Mari still differs from that of lexical anaphors in several other Uralic languages, including Meadow Mari (the sister language), which suggests an important direction for future research.²⁶ In the next section I continue comparing Hill Mari to other Uralic languages, focusing on the

26 Developing a formal analysis for reflexive strategies in Meadow Mari, Volkova (2014) builds heavily upon Reuland's (2011) idea that, if two co-arguments of a predicate are co-referent, this either happens as the result of valence reduction and consequent bundling of the thematic roles or becomes possible if one of the arguments (the variable) is made formally distinct from the first one, being 'protected' by some extra morphology. While it is beyond the limits of the paper to present an argumentative response to Volkova's analysis, a few words could be said about Reuland's original approach, which, in turn, can be traced back to earlier work by Reinhart and Reuland (1993). Regarding reflexivization strategies, Hill Mari turns out to be quite similar to English: (i) simple (one-word) anaphors are built based on the pattern REFL-POSS (cf. in English *your-self* and *my-self*); (ii) no reduplicative reflexives are attested (see Section 5.1), and (iii) valency reduction, while possible, happens in the lexicon and is not a productive syntactic operation (see Section 5.2). As mentioned above, Reuland proposes that locally bound anaphoric pronouns must include additional 'protective' morphology. In Hill Mari, *škă-* can be assumed to perform this function, and there would be no need for additional 'layers', hence, no reduplicative reflexives. The distribution of simple anaphors in Hill Mari also closely resembles that of English reflexives (cf. Sections 2 and 3); possibly, the two are regulated by the same mechanism. In particular, it may be assumed that *škă-* undergoes (covert) head movement to the verb wherever possible, thus reflexivizing the predicate and indicating that two of its arguments are co-referential. When such movement is not possible (i.e., in an exempt position), reflexivity is not enforced and the anaphor can be co-indexed with almost any other nominal phrase in a clause. Hill Mari and English anaphors differ in the size of their binding domains: non-finite clauses without an overt subject are transparent for *škă-* pronouns (see Section 3.2) but not for *self* reflexives (**Mary_i persuaded John to kiss herself_i*). One possible explanation for this is that, while the movement of *self* is preferable in English, the movement of *škă(m)* is merely optional in Hill Mari. Assuming that reflexives can be co-referential not only with the arguments and adjuncts of the same clause but also with the contextual variable ADDRESSEE and SPEAKER, projected in the left periphery (cf. Landau 2015 and references therein) and that non-finite clauses with an obligatorily null subject are anaphoric in their nature (that is, their contextual variables are valued by the participants of the matrix clause; cf. Sundaresan and McFadden 2009), it follows that an anaphor in such a context can have, for instance, the matrix subject as its antecedent.

two reflexive strategies reported as being common for the family: complex reflexives and reflexive detransitivization.

5 Other reflexivizing strategies

5.1 Complex reflexives

According to Volkova (2014), Meadow Mari (the closest relative of Hill Mari) allows complex (reduplicative) reflexive pronouns, derived using the pattern *ške(n)-ške* (36).²⁷

- (36) *Student-vlak ška-lan-ašt ške kusarəše-vlak-əm*
 student-PL REFL-DAT-POSS.3PL REFL interpreter-PL-ACC
ojər-en nal-ən-ət.
 choose-CVB take-PST2-3PL
 ‘The students chose the interpreters for themselves.’ (Volkova 2014: 66)

The complex anaphor *ške(n)-ške* is subject-oriented; unlike simple anaphors (*škenže*) it is strictly local and must always be bound by a co-argument (37). In addition to this, the reflexive *ške(n)-ške* cannot be used in non-co-argument position, for instance in a postpositional phrase.

- (37) *Üdər_i rveze_j de-č’ [Ø_i ška-lan-že*
 girl boy next-EL REFL-DAT-POSS.3SG
ške_{+i/j} pört-əm ašt-aš] jod-ən.
 REFL house-ACC make-INF ask-PST2
 ‘The girl asked the boy to build himself/*her a house.’ (Volkova 2014: 68)

At the same time, speakers of Hill Mari always interpret sentences with the equivalent sequence *škə(m)-ške* as a combination of an agreeing reflexive and an invariable *ške* intensifier (38).

- (38) a. *Män’ mešäk-əm ške do-k-em ??(ške)*
 I sack-ACC REFL to-ILL2-POSS.1SG REFL
šəpš-al-ən-am.
 pull-ATT-PST2-1SG
 ‘I pulled the sack towards myself.’
 Commentary: ‘A weird example. It is obvious that the speaker pulled the sack himself, and there is no need to emphasize this.’

²⁷ Complex reflexives are also found in the Izhma dialect of Komi Zyrian (*ač’ys as’sē*) and the Mordvin languages (*es’pr’et’*) (Volkova 2014). Outside of the Uralic language family, complex reflexives are used, for instance, in Icelandic (Germanic) and Telugu (Dravidian), cf. Haspelmath (2008).

- b. *Män' škām-em-ām ške tągär-äštä už-âm.*
 I REFL-POSS.1SG-ACC REFL mirror-IN see-PST1.1SG
 'I myself saw myself in the mirror.'
 Commentary: 'As if I used to be blind and now I can see.'

Note that the reverse sequence *ške škä(m)-* is allowed and should also be analyzed as an occasional combination of the emphatic pronoun and an agreeing reflexive, each of them interpreted separately. This is shown by ambiguous readings of examples similar to (39): here, an invariant intensifier can be interpreted either as adverbial, related to the matrix subject, or as adnominal with the anaphor as an antecedent.

- (39) a. *Män' (ške) škām-em-ām tągär-äštä už-âm.*
 I REFL REFL-POSS.1SG-ACC mirror-IN see-PST1.1SG
 (i) 'In the mirror I MYSELF saw myself.'
 (ii) 'In the mirror I saw ME MYSELF.'
- b. *Tän' (ške) ške giš-än-et kogo-n*
 you REFL REFL about-LAT2-POSS.2SG big-ADV
šukâ-n šajâšt-at.
 much-ADV talk-NPST.2SG
 (i) 'YOU YOURSELF talk a lot about yourself.'
 (ii) 'You talk a lot about YOU YOURSELF.'

Volkova demonstrates that, in the case of Meadow Mari, *ške(n)- ške* is indeed a single anaphoric unit without an additional emphatic meaning; this is further confirmed by the fixed order and obligatory adjacency of the parts of an item. The word order issue has already been addressed above; both *škä(m)- ške* and *ške škä(m)-* receive similar interpretations: reflexive + intensifier. As for the adjacency, both sequences can be discontinuous (40) with no change in meaning.

- (40) a. *Män' škām-em-ām tągär-äštä ške už-Ø-âm.*
 I REFL-POSS.1SG-ACC mirror-IN REFL see-PST1-1SG
 'In the mirror I MYSELF saw myself.'
- b. *Män' ške tągär-äštä škām-em-ām už-Ø-âm.*
 I REFL mirror-IN REFL-POSS.1SG-ACC see-PST1-1SG
 'In the mirror I MYSELF saw myself.'

The only context where *ške škä(m)-* is opaque for intervention is when the intensifier is interpreted as adnominal since in such cases it generally serves as a modifier within a nominal phrase while it cannot be separated from its head by a matrix constituent, as shown in (41).

- (41) a. *Män' ške* (*tägär-äštä) *škäm-em-äm* už-Ø-äm.
 I REFL mirror-IN REFL-POSS.1SG-ACC see-PST1-1SG
 'I saw ME MYSELF.'
- b. *Män' ške* (*tägär-äštä) *načal'n'ik-äm* už-Ø-äm.
 I REFL mirror-IN boss-ACC see-PST1-1SG
 'I saw the boss HIMSELF.'

Taking these data into account, I argue that, unlike in Meadow Mari, in Hill Mari neither the sequence *škä(m)-ške* nor *ške škä(m)-* can be analyzed as a complex reduplicative anaphor; both sequences should be decomposed into a reflexive and an intensifier, each pertaining its normal distribution and contributing its meaning. Thus, only simple reflexive pronouns are available in this language.

5.2 Reflexive detransitivization

Another reflexive strategy common among Uralic languages is to detransitivize a verb to create a reflexive predicate; that is, to assign two of the thematic roles of the verb to one of its arguments. This technique is exploited, for instance, in Estonian, Khanty, Mansi, Komi Zyrian, and Besermyan Udmurt;²⁸ several examples are given in (42).

- (42) a. Estonian
kordama 'repeat something' – *kord-u-ma* 'repeat' (intransitive)
eemaldama 'withdraw something' – *eemald-u-ma* 'withdraw' (intransitive)
- b. Khanty
l'oxätti 'wash something' – *l'oxät-ijl-ti* 'wash oneself'
enxästi 'undress someone' – *enxäs-ijl-ti* 'undress oneself'
- c. Komi-Zyrian (Izhma dialect)
os'kyny 'praise someone' – *os'-j-ys'-yny* 'praise oneself'
br'it'itny 'shave someone' – *br'it'-č'-yny* 'shave oneself'
- d. Besermyan Udmurt
kal'l'anâ 'hang something' – *kal'l'a-š'k-ânâ* 'hang oneself'
kâl'ânâ 'undress someone' – *kâl'-iš'k-ânâ* 'undress oneself'
âbânâ 'shoot someone' – *âb-iš'k-ânâ* 'shoot oneself'

²⁸ Shoksha Erzya is exceptional in this respect: it encodes reflexivity by omitting the object and having only subject agreement on the verb. Nenets is another well-known exception as it exploits a special reflexive conjugation.

As reported by Volkova (2014), this detransitivizing strategy is also used in Meadow Mari; the suffixes *-əlt-* and *-alt-* serve as morphological exponents of reflexivity. Compare (43a) and (43b): unlike in the first case, where the Agent and the Theme are distinct, in the second case, both roles are assigned to the same argument, ‘Ivan’.

- (43) a. *Ivan el-na-m aral-en.*
 Ivan country-POSS.1PL-ACC defend-PST2
 ‘Ivan defended our homeland.’
 b. *Ivan saj-ən aral-alt-ən.*
 Ivan good-ADV defend-DETR-PST2
 ‘Ivan defended himself well.’ (Volkova 2014: 63)

The question arises whether a similar syntactic strategy is productive in Hill Mari. At first glance, the answer seems to be positive: similar pairs of transitive – reflexive predicates can be found in Hill Mari, as seen in (44).

- (44) a. *Vas’a m̄šk-əlt-ən.*
 Vasya wash-MED-PST2
 ‘Vasya washed himself.’
 b. *Vas’a od’ejal dono leved-əlt-ən.*
 Vasya blanket with cover-MED-PST2
 ‘Vasya covered himself with a blanket.’

Despite the surface similarity between the Hill Mari and Meadow Mari examples above, I follow Belova and Dyachkov (2019) and contend that syntactic reflexive detransitivization is not operative in Hill Mari and that verbs similar to those in (44) should be considered inherently reflexive (i.e., their intransitive nature is determined in the lexicon and is not a product of a syntactic derivation).

Several facts support this claim. First, note that the marker *-alt-* is ambiguous between the following interpretations: middle/decausative, reflexive, and reciprocal (Galkin 1996; Salo 2015; Savatkova 2002). Only the middle (decausative), as illustrated in (45), can be considered a productive derivation.

- (45) a. *M̄nd̄ara kenvac-maš-eš šūt-əlt-ən.*
 ball fall-NMLZ-LAT unwind-MED-PST2
 ‘The ball (of thread) unwound from falling.’
 b. *Ti kn’igä kušt̄əlḡə-n l̄əd-alt-eš.*
 this book easy-ADV read-MED-NPST.3SG
 ‘This book reads easily.’

Using a wide range of examples similar to those in (45), Belova and Dyachkov (2019) demonstrate that the central meaning of *-alt-* is decausative. Reflexive and

reciprocal verbs, in turn, are not numerous and can be derived only from a limited number of (Hill Mari) stems. For instance, although (44) are grammatical, *-alt*-variants as given in (46) are totally unacceptable even though the so-called verbs of grooming are generally considered to be prototypically reflexivizable (Kemmer 1993).

- (46) a. *Vas'a tægär-äškä anž-a / *anž-alt-eš*
 Vasya mirror-ILL look-NPST.3SG look-MED-NPST.3SG
 'Vasya looks at himself in the mirror.'
- b. *Vas'a čī-ä / *čī-alt-eš*
 Vasya dress-NPST.3SG dress-MED-NPST.3SG
 'Vasya dresses himself.'
- c. *Vas'a pandaš-äm năž-eš / *năž-alt-eš*
 Vasya beard-ACC shave-NPST.3SG shave-MED-NPST.3SG
 'Vasya shaves his beard.'

Other verbs that we would expect to have reflexive counterparts but which, in fact, prohibit such a derivation include *âdâraš* 'scratch' (**âdâr-alt-aš* 'scratch oneself'), *păčkedăš* 'cut' (**păčked-alt-ăš* 'cut oneself'), i.a.

Productivity is assumed to be the central property of syntactic reflexivization, attested, for instance, in the Romance languages including Spanish and French (Labelle 2008). The fact that the number of reflexive predicates in Hill Mari is so limited strongly suggests that they are not derived in syntax but come 'premade' from the lexicon (see Reinhart and Siloni (2005), who discuss the differences between syntactic vs. lexical reflexivization). With this consideration in mind, I maintain that, unlike in many other Uralic languages, the only productive reflexive strategy available in Hill Mari is to use a simple anaphoric pronoun.²⁹

It might be suggested that the lexicalization of reflexivized predicates with *-alt/alt* in Hill Mari happens under the influence of Russian. As shown in Belova

29 A reviewer pointed out that, compared to its counterparts in Meadow Mari, the suffixes *-ält* and *-alt* in Hill Mari generally have a rather limited distribution. For instance, these markers can appear in Meadow Mari in truly impersonal sentences with an accusative object but without a nominative nominal subject (i); similar constructions are prohibited in Hill Mari (ii). I express my gratitude to the reviewer for the Meadow Mari example.

- (i) *Sar godəm šüjšö pareŋə-m=at kočk-alt-ən.*
 war during rotten potato-ACC=and eat-REFL-PST2
 'During the war, people (= we) are even rotten potatoes.'
- (ii) *Käver / *käver-äm stroj-alt-eš.*
 bridge bridge-ACC build-MED-NPST.3SG
 'The bridge is being constructed.'

and Dyachkov (2019), Hill Mari closely follows the Russian pattern. In the case of lexical borrowing, for instance, the suffix *-alt* appears in Hill Mari predicates whenever there is the suffix *-sja* in a Russian translation equivalent: *zan'imajaltaš/zanimat'sja* 'to occupy oneself with something', *ubirajaltaš/ubirat'sja* 'to clean', etc. Reflexive *-sja* verbs in Russian are argued to be derived in the lexicon and not in syntax (Pesetsky 1995; Say 2005). Unlike, e.g., *-sja* (medio-)passivization, *-sja* reflexivization is non-productive and many of such predicates have acquired non-compositional meanings (cf. *strič'sja* cut.hair-sja 'to have a haircut', not 'to cut one's own hair'; *ubirat'sja* 'to clean', not 'to clean oneself'; *sadit'sja* 'to sit down', without a counterpart **sadiť*, etc.).

6 Conclusion

In this paper I examined reflexive strategies in Hill Mari in great detail, comparing it to other Uralic languages. The first part of the paper focused on dedicated reflexive pronouns. I first discussed the morphosyntactic properties of the reflexive derived from the stem *škä-*: adopting Déchaine and Wiltschko's (2017) typology of reflexives; I demonstrated that Hill Mari anaphors pattern with referential nominal phrases and should be considered full DPs. Next, I considered the binding properties of *škä-* reflexives and classified them as non-subject-oriented non-obviative long-distance anaphors in terms of the typology of pronouns developed by Kiparsky (2002). Comparing Hill Mari reflexives to those in other Uralic languages I showed that Hill Mari anaphors closely follow the general pattern, but some microvariation is attested and deserves consideration.

In the second part of the paper I focused on other reflexive strategies employed in Uralic languages, such as complex reflexive pronouns and reflexive detransitivization of a predicate. I provided evidence that what appears to be a complex reflexive should, in Hill Mari, be analyzed as a combination of a reflexive pronoun and a lexical intensifier, often syntactically unrelated to each other. Subsequently, following Belova and Dyachkov (2019), I argued that Hill Mari intransitive verbs with reflexive interpretations, in contrast with those in other Uralic languages, are inherent and do not result from a productive syntactic derivation.

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Glossing abbreviations

ACC	accusative
ADV	adverb
ATT	attenuative
CAUS	causative
CVB	converb
DAT	dative
DET	determiner
DETR	detransitive
GEN	genitive
EL	elative
EMPH	emphatic
ILL / ILL2	illative
IN	inessive
INF	infinitive
LAT / LAT2	lative
MED	middle
NEG	negation
NMLZ	nominalization
NPST	non-past
PART	partitive
PL	plural
POSS	possessive
PREP	preposition
PST	past
PST1	past (aorist)
PST2	past (preterite/perfective)
REFL	reflexive
SG	singular
TR	transitive

Corpora

The corpus of the Kuznetsovo variety of Hill Mari: <http://hillmari-exp.tilda.ws/en/corpus> (accessed 03 July 2020).

The corpus of literary Mari (demo version): http://gtweb.uit.no/u_korp/?mode=mhr (accessed on 03 July 2020).

The Meadow Mari Social Media Corpus: http://meadow-mari.web-corpora.net/index_en.html (accessed on 03 July 2020).

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