The reflexive cycle: From reflexive to personal pronoun in Uralic

Katalin É. Kiss, Nikolett Mus (Hungarian research Centre for Linguistics)

Abstract

Starting from a morphosyntactic puzzle of the Ugric and Samoyedig languages of the Uralic family (possessive agreement suffixes functioning as accusative allomorphs on pronominal objects), this paper identifies a pronoun cycle which leads from reflexives via intensifiers and via referentially independent intensive pronouns to neutral pronouns. In Tundra Nenets, evidence of three rounds of reflexive renewal is also pointed out, with the three sets of pronouns frozen at different stages of the cycle. The analysis has implications for debated issues of language change. It is shown that elements participating in cyclic changes not only suffer feature loss but also incorporate features. Based on the recurring cycle in Tundra Nenets, it is argued that the cyclicity of linguistic changes implies a notion of unidirectionality that also leaves room for unpredictable outcomes.

1. Introduction

Linguistic change has been argued to be cyclical (Hodge 1970; van Gelderen 2009; 2011) – though the view denying the unidirectionality of change implicit in the notion of the cycle also has strong support (e.g. Newmeyer 2001). The linguistic cycle involves grammaticalization and renewal in an area of grammar, i.e., the loss of morphosyntactic complexity, phonological weight and semantic specificity, followed by the introduction of new, morphosyntactically complex, phonologically salient, semantically specific material, whereby the cycle starts again.

The best studied cycles, among them the negative cycle (Jespersen 1917/1966; Givón 1978; É. Kiss 2015) etc.), the subject agreement cycle, the object agreement cycle, the copula cycle (van Gelderen 2011), the PP cycle (Hegedűs 2014) involve the evolution of lexical items into functional elements. In this paper, we present evidence of cyclic changes in the realm of pronouns in the Ugric and Samoyedic branches of the Uralic language family, involving (i) the evolution of reflexives (the equivalents of 'myself', 'yourself' ...) into intensifiers (corresponding to the reflexives in 'I myself', 'you yourself', ...); then (ii) the reinterpretation of the intensifiers as the intensive, i.e., emphatic, personal pronouns themselves (the equivalents of 'ME', 'YOU' ...); (iii) their evolution into neutral personal pronouns ('me', 'you' ...); and (iv) reflexive renewal.

The paper is structured as follows. Section 2 discusses a set of facts of the Ugric and Samoyedic languages that are inexplicable from a purely synchronic perspective: the presence of possessive agreement on accusative pronouns. Section 3 argues that the source of

possessive agreement is the former reflexive function of the possessive-marked pronouns. Section 4 outlines an evolutionary path from reflexives to intensifiers, and from intensifiers to intensive, i.e., emphatic, pronouns. Section 5 establishes a link between intensive pronouns and accusative marking in the clause structure of Proto-Ugric and Proto-Samoyedic. Section 6 discusses the evolution from intensive pronouns to neutral pronouns. Section 7 presents evidence of multiple rounds of reflexive renewal in Tundra Nenets. Section 8 is a summary.

2. Facts to explain: Possessive agreement qua accusative case

Ideally, a linguistic cycle is revealed by corresponding historical data from subsequent periods of a language. In languages with no historical records from before the middle of the 19th century, however, earlier stages of the grammar can only be reconstructed from comparative evidence from the sister languages, including linguistic fossils. Below we describe a set of phenomena that are present in slightly different forms in all of the the Ugric and Samoyedic languages, an eastern areal-genetic group in the Uralic language family according to Helimski (1982). Though the phenomena in question appear to be unmotivated linguistic fossils in some of the languages, e.g., in Hungarian, in others they are still related to active subsystems of grammar, which enables us to reconstruct their source and the grammaticalization process they have been involved in.

In the Ugric and Samoyedic branches of the Uralic languages (e.g., in the Ob-Ugric Khanty and Mansi, in Hungarian, and in the Samoyedic language Tundra Nenets), 1st and 2nd person personal pronominal objects, and, in several dialects, 3rd person pronominal objects, too, bear possessive agreement suffixes sharing the person and number features of the given pronoun. In these languages a possessive agreement suffix signals a pro-dropped pronominal possessor, hence a pronominal object bearing a 1st person singular suffix literally means ‘my I’, or a 1st person plural pronominal object literally means ‘our we’. The possessive agreement suffix also appears on pronouns merging with an oblique case suffix in the Ob-Ugric languages and on pronouns merging with a P in Tundra Nenets.

Observe the Northern Mansi pronominal paradigm, as described by Kálmán (1976). (The dual and plural 2nd and 3rd person forms not spelled out in the table display the same behavior as the 1st person forms.) The suffixes functioning as allomorphs of the accusative case marker, also appearing before the oblique case suffixes, are set in boldface. (The fact that the accusative suffix is also present in the oblique cases is not unexpected – in fact, it is capitalized on – in the theories of Caha (2009) and Smith et al. (2019), who assume that

morphological cases are internally complex with more complex cases containing less complex ones.)

(1) Partial paradigm of personal pronouns in Northern Mansi (Kálmán 1976: 50)

	1SG	2SG	3SG	1DU	1PL
NOM	*am*	*naŋ*	*taw*	*me:n*	*ma:n*
ACC	*a:n**ᵘm***	*naŋ**ən***	*taw**e***	*me:n**men***	*ma:n**aw***
DAT	*a:n**ᵘm**n***	*naŋ**ən**n***	*taw**e**n*	*me:n**men**n*	*ma:n**aw**n*
ABL	*a:n**ᵘm**nəl***	*naŋ**ən**nəl***	*taw**e**nəl*	*me:n**men**nəl*	*ma:n**aw**nəl*
COM	*a:n**ᵘm**təl***	*naŋ**ən**təl***	*taw**e**təl*	*me:n**men**təl*	*ma:n**aw**təl*

The “accusative” suffixes are, in fact, identical with the corresponding members of the paradigm of possessive agreement (except for the epenthetic vowel). Possessive agreement arises in possessive constructions with an overt or dropped pronominal possessor; it is a suffix on the possessum encoding the person and number of the possessor. Compare the accusative suffixes of the pronominal objects in (1) with the agreement suffixes triggered by pronominal possessors of the same person and number:

(2) Partial paradigm of possessive agreement in Northern Mansi (Kálmán 1976: 46)

1SG	2SG	3SG	1DU	1PL
*(am) kol-**ᵘm***	*(naŋ) kol-**ən***	*(taw) kol-**e***	*(mēn) kol-**men***	*(mān) kol-**uw***
(I) house-1SG	(you) house-2SG	(she) house-3SG	we_two house-1DU	(we) house-1PL
‘my house’	‘your house’	‘her house’	‘house of us two’	‘our house’

A similar resemblance is attested between the “accusative” case suffixes of personal pronouns and the corresponding possessive agreement suffixes in all persons in Northern Khanty. The impoverished case system of Northern Khanty only includes a single oblique case. The possessive suffix is also present on the stem when it combines with the oblique (locative) case suffix.

(3) Partial paradigm of personal pronouns in Northern Khanty (Nikolaeva 1999: 16)

	1SG	2SG	3SG	1DU	1PL
NOM	*ma*	*naŋ*	*luw*	*min*	*muŋ*
ACC	*ma:n**e:m***	*naŋ**e:n***	*luw**e:l***	*min**e:mən***	*muŋ**e:w***

LOC	*ma:n**e:m**na*	*naŋ**e:n**a*	*luw**e:l**na*	*mine:**mən**na*	*muŋe:**w**na*

(4) Partial paradigm of possessive agreement in Northern Khanty (Nikolaeva 1999: 14)

1SG	2SG	3SG	1DU	1PL
-e:m	***-e:n***	***-l***[1]	***-e:mən***	***-e:w***

Whereas Northern Mansi and Northern Khanty have no general accusative suffix appearing on full-nominal objects, Eastern Mansi has preserved the Proto-Ugric accusative *-m*; still, 1st and 2nd person singular and plural pronominal objects, and a variant of the 3rd person singular pronominal object bear the corresponding possessive agreement morphemes instead. (In the case of the dual and 3rd person plural pronouns, the accusative form is the same as the nominative form (Virtanen 2015: 34).) Compare the nominative and accusative forms of these pronouns with the corresponding possessive agreement morphemes:

(5) Partial paradigm of personal pronouns in Eastern Mansi (Kulonen 2007: 87)

	1SG	2SG	3SG	1PL	2PL
NOM	*om*	*näg*	*täw*	*möän*	*nöän*
ACC	*oånə**m***[2]	*nä:**n***	*tääw**ə***	*möänə**w***	*nö**ä**n*

(6) Partial paradigm of possessive agreement in Eastern Mansi (Kulonen 2007: 31)

1SG	2SG	3SG	1PL	2PL
-(ə)m	***-(ə)n***	***-ə***	***-əw***	***-ä:n***

Hungarian also has a general accusative marker, the suffix *-t*, nevertheless, 1st and 2nd person singular pronominal objects are marked by possessive endings. The possessive ending is also present on 1st and 2nd person plural pronominal objects, albeit it is followed by the accusative *-t* morpheme. (Oblique cases – in fact, postpositions – merged with personal pronouns also bear possessive suffixes, e.g.: *(én-)nek-em* (I-)DAT-1SG ‘to me’, but their possessive suffixes can be traced back to underlying possessive constructions – see Hegedűs 2014: 133).

1 I tentatively assume that the *-e:* preceding *-l* in the 3SG accusative suffix has been inserted analogically – since *-e:-* is present in the accusative forms of all the other pronouns.

2 So as to facilitate comparison, I have replaced Kulonen's (2007) *ø* character with *ə*.

(7) Partial paradigm of personal pronouns in Hungarian

	1SG	2SG	1PL	2PL
NOM	*én*	*te*	*mi*	*ti*
ACC	*en-g-e**m***	*té-g-e**d***[3]	*mi-**nk**-et*	*ti-**tek**-et*

(8) Partial paradigm of possessive agreement in Hungarian

1SG	2SG	1PL	2PL
-m	***-d***	***-nk***	***-tEk***

Eastern Khanty marks pronominal objects with a *-t* accusative suffix, similarly to Hungarian.[4] The possessive suffix only appears in the oblique (dative, lative, approximative, translative, instructive-final, comitative, and abessive) case forms – systematically in 1st and 2nd person, and less systematically in 3rd person. Only the singular pronominal paradigm is cited below, but the dual and plural forms, too, are constructed along parallel principles. The possessive suffixes *-əm*, *-ən* and *-əł*, cross-referencing a 1st, 2nd and 3rd person singular possessor, respectively, are set in bold-face:

(9) Partial paradigm of personal pronouns in Eastern Khanty (Csepregi 2017: 105–106)

	1SG	2SG	3SG
NOM	*mȧ*	*nüŭŋ*	*łüŭw*
ACC	*mȧnt*	*nüŭŋȧt*	*łüŭwȧt*
DAT	*mȧnt**em**, mȧn**em***	*nüŭŋȧti*	*łüŭwȧti*
LAT	*mȧnt**em**ȧ*	*nüŭŋȧt**en**ȧ*	*łüŭwȧt**iłȧ***
LOC	*mȧnə*	*nüŭŋnə*	*łüŭwnə*
ABL	*mȧnt**em**i, mȧn**em**i*	*nüŭŋȧt**en**i*	*łüŭwȧt**iłi***
APPR	*mȧnt**em**nȧm*	*nüŭŋȧt**en**nȧm*	*łüŭwȧt**iłn**ȧm, łüŭwȧtinnȧm*
TRA	*mȧnt**em**γə*	*nüŭŋȧtiγə, nüŭŋȧt**en**γə*	*łüŭwȧtiγə, lükkə*
INSF	*mȧnt**em**ȧt*	*nüŭŋȧt**in**ȧt, nüŭŋȧtiγȧt*	*łüŭwȧtiγȧt*
COM	*mȧnt**em**nȧt*	*nüŭŋȧt**en**ȧt*	*łüŭwȧtinȧt*
ABE	*mȧnt**em**łəγ*	*nüŭŋȧtiłəγ*	*łüŭwȧt**iłə**γ*

3 In some dialects, the accusative *-t* has also appeared on *engem* and *téged*.

4 Pronominal objects in Baltic Finnic languages bear the same *-t* morpheme. According to Kulonen (1999), the suffix *-t* marked pronominal objects in Proto-Finno-Ugric.

(10) Partial paradigm of possessive agreement in Eastern Khanty (Csepregi 2017: 77)

1SG	2SG	3SG
-əm	***-ən***	***-əɬ***

The Samoyedic Tundra Nenets has preserved the Proto-Uralic *-m* accusative suffix; nevertheless pronominal objects derived from the stem *śi* bear suffixes cognate with the corresponding possessive agreement suffixes instead of *-m* (Hajdú 1988: 14–15). More precisely, the initial *d* in some of the possessive suffixes is evidence of a preceding nasal according to Hajdú (1968), which suggests that the possessive suffixes may initially have followed the *-m* accusative suffix, which later disappeared. (In Tundra Nenets possessive constructions, the possessor agreement suffix follows the case suffix of the possessum, whereas in the Ugric languages it precedes the case suffix.)

(11) Accusative personal pronouns in Tundra Nenets (Nikolaeva 2014: 47)

1SG	2SG	3SG	1DU	2DU	3DU	1PL	2PL	3PL
*śiʔ**m'i***	*ś**it***	*ś**ita***	*śid**ńiʔ***	*śid**(ă)d'iʔ***	*śid**(ă)d'iʔ***	*śid**naʔ***	*śid(ă)**daʔ***	*śid(ă)**doʔ***[5]

(12) Possessive agreement suffixes in Tundra Nenets (Nikolaeva 2014: 66)

1SG	2SG	3SG	1DU	2DU	3DU	1PL	2PL	3PL
-w/-m'i	***-r***	***-da***	***-m'iʔ***	***-ŕiʔ***	***-ťʼiʔ***	***-waʔ***	***-raʔ***	***-doʔ***

In Tundra Nenets, unlike in the Ugric languages, nominative personal pronouns also bear suffixes that are cognate – in fact, identical – with possessive agreement. Notice that the nominative and the accusative pronouns are derived from different stems. Compare with (12):

(13) Nominative personal pronouns in Tundra Nenets (Nikolaeva 2014: 47)

1SG	2SG	3SG	1DU	2DU	3DU	1PL	2PL	3PL
*mă**ń***	*pidă**r***	*pi**da***	*mă**ńiʔ***	*pidă**ŕiʔ***	*pi**ďiʔ***	*mă**ńaʔ***	*pidă**raʔ***	*pi**doʔ***

[5] 'For the sake of consistency, the Tundra Nenets language examples cited throughout this paper are uniformly transcribed in the way used by Hajdú (1968), Salminen (1993; 1998), Staroverov (2006), and Kavitskaya & Staroverov (2008).

Tundra Nenets postpositions complemented by personal pronouns also bear possessive suffixes, but these suffixes encode underlying possessive relations – as discussed in connection with Hungarian by Hegedűs (2014: 133).

The Ugric and Samoyedic data in need of explanation are summarized in Table 1:

Table 1: Case-like use of possessive suffixes on personal pronouns

	Northern Mansi	Northern Khanty	Eastern Mansi	Hungarian	Eastern Khanty	Tundra Nenets
POSS suffix qua ACC on 1,2 person pronouns	+	+	+	+	–	+
POSS suffix qua ACC on 3rd person pronouns	+	+	+SG/-PL	–	–	+
POSS suffix with oblique case suffix	+	+	+		+	
POSS suffix on nominative pronouns	–	–	–	–	–	+

The data show that Ugric and Samoyedic pronominal objects tend to be marked by a variable suffix that is identical or cognate with the possessive agreement suffix encoding the phi-features of the pronominal stem. In some languages, this only holds for 1st and 2nd person objects; in others it is also true for 3rd person pronominal objects. The possessive agreement suffix also appears on pronouns supplied with an oblique case marker. In Eastern Khanty, pronominal objects bear the general accusative suffix; possessive agreement only appears before oblique case markers. In Tundra Nenets, not only object pronouns bear possessive agreement but subject pronouns, too.

The possessive agreement suffixes of these pronouns do not fulfil their canonical function; they do not encode a possessive relation between a possessor and the pronoun. The question arises what accounts for their presence.

3. The source of possessive agreement on object pronouns: Reflexives in Ugric and Samoyedic

In the Uralic languages, the possessive agreement suffix serves to cross-reference the phi-features of a pronominal possessor on the possessum, as illustrated in (2) above. The pronominal possessor bears no overt case suffix (it is in the nominative), and it can be pro-dropped.

The possessive agreement suffix of a pronominal object does not cross-reference a possessor; its interpretation as an accusative allomorph must be due to function change (exaptation). As for its original role, a clue is provided by the fact that the accusative personal pronouns of the Ob-Ugric languages and dialects also function as bound reflexives (see Volkova 2014). Reflexives are often represented by, or derived from, a possessive construction (as is the case with the English *my self, your self* etc.). What is unclear at first sight in the case of Uralic reflexives is whether the pronoun bearing the possessive agreement suffix is the possessor of an implicit possessum in the string '**pronoun**$_i$ + null possessor + AGR$_i$' or it is the possessum, and the agreement suffix cross-references a null pro possessor in the string 'pro$_i$ + **pronoun** + AGR$_i$'. Majtinskaya (1964) and Helimski (1982) argued for the former structure. They claimed that the empty head was originally *-ki,* a Proto-Uralic noun meaning 'shape, form, soul'. Helimski (1982) traced back the middle morpheme of Selkup reflexive pronouns to *-ki,* and claimed that the *-g-* morpheme intervening between the pronominal stem and the possessive suffix in the Hungarian *en-g-em* 'me', *té-g-ed* 'you-ACC' is also a residue of it.

Northern Mansi reflexives contain a *-ki-* morpheme optionally followed by a *-na-* derivational suffix (Riese 2001: 32):

(14) *Jura ta-**k^{w}i**-(na)-te-n jil'pi pisal' wis.*
Jura he-self-NA-3SG-DAT new rifle bought
'Jura bought a new rifle for himself.'

Riese (2001: 32), in fact, identifies *-ki* as an emphatic suffix because it can also combine with the base forms of pronominal subjects, deriving *amki* from *am* 'I', *naŋki* from *naŋ* 'you', *tak^{w}i* from *taw* '(s)he', etc., rendering the pronouns emphatic. As will be argued below, reflexives can also be used as intensive, i.e., [+contrastive, +prominent], pronouns. Emphatic personal pronouns may have been derived from reflexives used as intensive pronouns via backformation, by the removal of the possessive suffix interpreted as an acccusative case marker.

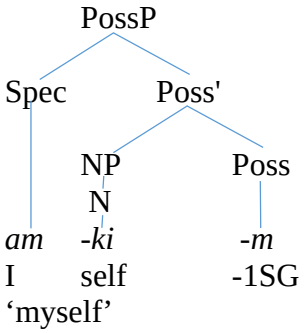
In the reflexives of the Vasyugan dialect of Eastern Khanty, a *-ti-* morpheme intervenes between the pronoun and the agreement suffix (Filchenko 2007: 130–132):

(15) *män-ti-m nöŋ-ti-n joɣ-ti-l / loɣ-ti-l*
I-self-1SG you-self-2SG he-self-3SG / he-self-3SG

‘myself’ ‘yourself’ ‘himself, herself’

The existence of obsolete morphemes intervening between the pronouns and the possessive suffixes supports the assignment of structure (16) to reflexives. In this structure, the personal pronoun is a possessor cross-referenced on the possessum, an eroded or implicit NP meaning ‘self’ .

(16)



With the phonological erosion of the possessed noun, and the fade-out of the meaning ‘shape, form, soul’, the inner structure of the possessive construction has presumably become obsolete for the native intuition. The obsolescence of the inner structure of (16) must have facilitated the ensuing sequence of changes.

4. From reflexives to intensifiers; from intensified pronouns to intensive pronouns

As observed by the grammatical descriptions of Eastern Uralic languages, reflexive forms can be used not only as anaphors but as referentially independent, free pronouns, too. They are ambiguous in object position (17a), and they can only be interpreted as free pronouns in subject position (17b):

(17)a. *Utłtiteχo*$_i$ *łuv-eł*$_{i/j}$ *išək-s-əlle.*[6] (Northern (Tegi) Khanty)
teacher he-3SG praise-PST-SG.3SG
‘The teacher praised himself/him.’ (Volkova 2014)

b. *Joγ-t-il* *küm* *lüγt-əs.* (Eastern (Vasyugan) Khanty)

6 In (17a), the object elicits verbal agreement, which is licensed by its [+given] feature. The lack of object-verb agreement would enforce the referentially free interpretation of the object, as an anaphoric object is inherenly [+given]. The gloss SG.3SG means that that the suffix cross-references a singular object and a 3rd person singular subject.

he-self-3SG out exit-PST.3SG
'He himself went out.' (Filchenko 2007: 130–132)

Reflexives used as intensifiers ('John **himself** came') or as intensive non-anaphoric pronouns ('**Himself** came') have been pointed out in many languages from different language families, among them English, Hungarian, Turkish, and Persian (Moyne 1971; Baker 1995; König & Siemund 2000). Intensification by means of a reflexive is claimed to render the target [+prominent] and [+contrastive] (Baker 1995), and to introduce alternatives to the target of intensification, similarly to such focusing particles as *even, only, also, too* (König and Siemund 2000). In Modern English, reflexives can function as intensifiers of overt NPs – see (18a,b). In Early Modern English, they could also be intensive pronouns on their own, and marginally this is still possible in Modern English, too – see (18c), an example of Ross (1970). In cases like (18c), the intensifier is assumed to have incorporated the pronominal target of intensification.

(18)a. Lucy's sister is more intelligent than **Lucy herself**.
b. **She herself** had no such fears.
c. Tom believed that the paper had been written by Ann and **himself**.

The Khanty example in (17b) is presumably of the same type as (18c), where the pronoun to be intensified is incorporated into the intensifying reflexive. In Khanty (and in the other Uralic languages discussed in this paper) the subject and object pronouns are often represented by silent *pro*s, which must have facilitated the analysis of the intensified 'reflexive + pro' complex as a simple intensive pronoun formally identical with the reflexive.

Whereas the evolutionary link between reflexives and intensifiers/intensives is widely accepted, the direction of the evolutionary path is debated. Van Gelderen (1996) and König and Siemund (2000) assume that anaphoric reflexive forms may have evolved from intensified personal pronouns, because anaphors represent the more grammaticalized form. Old English used personal pronouns both in locally free and in locally bound contexts, and it distinguished anaphorically bound pronouns from free pronouns by the use of the intensifying *self*. Eventually, the pronoun and the intensifier merged into a single phonological word, which assumed the function of a reflexive anaphor. Van Gelderen (2019), however, has found in the Northumbrian Lindisfarne Gospels from the 8th century, the time of the incipient use of *self*, evidence that suggests that the change could have gone the other way. *Self*-marked bound

pronouns are used by the glossators of all four of the Gospels to translate the Latin *se* pronoun, but only the glossators of *Luke* and *John* translate the intensifying *ipse* by *self*, and use *self*-pronouns in subject position, which seems to indicate that the intensive use is the more recent development. We tentatively assume a development from reflexives via intensifiers to intensive pronouns in the Ugric and Samoyedic branches of Uralic, too.

The analysis of Ugric and Samoyedic pronominal objects as intensive pronouns deriving from reflexives explains why they bear possessive morphology – but it still leaves several questions open, namely: i. Why do only 1st and 2nd person pronouns have the morphological make-up of reflexives in some languages? ii. Why do these pronouns have no neutral, non-intensive versions? iii. Why have the possessive suffixes of the pronouns been reinterpreted as accusative case markers? The answers to these questions will be derived from the clause structure reconstructed for Proto-Ugric (É. Kiss 2013; 2017).

5. The distribution of intensive pronouns in the Ugric and Samoyedic sentence

The Eastern Uralic languages have been subject to increasing Slavic dominance; still, the syntactic properties that are shared by most Ugric and Samoyedic languages and dialects, or have been preserved in the form of linguistic fossils, provide sufficient evidence for us to reconstruct the sentence structure of their proto-languages (É. Kiss 2020).

The word order of Proto-Ugric and Proto-Samoyedic must have been SOV, where the subject is also topic. The requirement of subject topicality still tends to be observed in Khanty and Mansi. Non-topical, i.e., non-referential and/or focused constituents are demoted from the subject position via passivization, e.g.:

(19) a.**Xoj tam xu:j an wa:nt-əs /wa:nt-əs-li.* (N Khanty)
who this man not see-PST.3SG/see-PST-SG.3SG
'Nobody saw this man.'

b. *Tam xu:j xoj-na an wa:n-s-a.*
this man who-LOC not see-PST-PASS.3SG
'This man was not seen by anybody.' (Nikolaeva 2001: (28))

NP-movement targets the most topical constituent of the clause, whether it is a theme, goal, or location (20a,b). A non-topical subject can be demoted even in presentative sentences (21).

(20) a. *Nare:-l* *ńoxəs-na* *xu:j-l-a* (N Khanty)
bench-3SG sable-LOC lie-PRS-PASS.3SG
'There are sables lying on his bench.' *Lit.*: 'His bench is lain by sables.'

b. *Kul-na* *joxət-s-a.*
devil-LOC come-PST-PASS.3SG
'A devil came to him.' *Lit.*: 'He was come by a devil.' (Nikolaeva 1999: 31)

(21) *Puwləpsi-na* *e:t-s-a.* (N Khanty)
tumor-LOC enter-PST-PASS.3SG
'A tumor appeared.' *Lit.*: '(pro) was entered by a tumor.' (Nikolaeva 1999: 32)

(For further data, see Kulonen 1989; for analyses, see Kiparsky 2013; É. Kiss 2020).

The Ugric and Samoyedic languages used to have, and in various forms still have, differential object marking. Topicalized objects are generally marked by verbal agreement, and in some languages also by accusative case (Nikolaeva 2001; Dalrymple and Nikolaeva 2011), whereas VP-internal, focal objects are unmarked. Compare the Northern Khanty (22a) and (22b). In (22a), *this reindeer* is focal new information, triggering no agreement. In (22b), it is a contextually given topic, and as such it is cross-referenced by verbal agreement.

(22) a. What happened?
Ma tam kalaŋ *we:l-s-əm* */*we:l-s-e:m.* (N Khanty)
I this reindeer kill-PST-1SG/kill-PST-SG.1SG
'I killed this reindeer.'

b. What did you do to this reindeer?
Ma tam kalaŋ **we:l-s-əm* */we:l-s-e:m.*
I this reindeer kill-PST-1SG/kill-PST-SG.1SG
'I killed this reindeer.' (Nikolaeva 2001: 18)

The VP-internal position of focal, non-agreeing objects, and the VP-external position of topical, agreeing objects can be shown by distributive evidence. For example, focal, non-agreeing objects follow VP-adjuncts (23a), whereas topical, agreeing objects precede them (23b):

(23) a. *Petra* [VP *u:r-na* [VP *mo:jper wa:nt-es*]] (N Khanty)
Peter forest-LOC bear see-PST.3SG
'Peter saw a bear in the forest.'

b. *Petra mo:jper* [VP *u:r-na* [VP *wa:n-se-lli*]]
Peter bear forest-LOC see-PST-SG.3SG
'Peter saw the bear in the forest.' (Nikolaeva 1999: 59; 2011: 18)

In Eastern Mansi, topical objects are also marked by an accusative case suffix. In (24a), the object is contextually new, and, accordingly, it is caseless, triggering no verbal agreement. The object of (24b) is a case-marked topic, cross-referenced by verbal agreement. Its topic status is shown not only by its presuppositionality (revealed by the context) but also by the fact that it precedes the floating quantifier.

(24) a. (pro) *Toonøtäätøl* ***såjrøng påly-låpsyøx*** *sågrøp-øs*. (E Mansi)
then white wood-chip split-PST.3SG
'Then he split a white chip of wood.'

b. (pro) ***Jiiw-ty-mø*** *sok juw-tåt-øs-te*.
wood-PL-ACC all home-bring-PST-SG.3SG
'He brought all the wood home.' (Virtanen 2014: (8), (1))

In the Samoyedic Tundra Nenets, accusative marking has been generalized to all objects, but only topical objects elicit verbal agreement.[7] In Hungarian, the topicality requirement of object–verb agreement has been replaced by a definiteness requirement.

In Proto-Ugric and Proto-Samoyedic, differential object marking must have been subject to the Inverse Topicalization Constraint, which is still attested as an active condition or as a linguistic fossil in Eastern Khanty, Eastern Mansi, Hungarian, and the Samoyedic languages (É. Kiss 2013; 2017).

(25) *Inverse Topicalization Constraint*

[7] For finer details, see Nikolaeva (2014: 206–2010).

In a construction with two topics, the structural hierarchy of the topics (subject-topic > object-topic) must match their ranking in the Animacy/Topicality Hierarchy.

The Animacy/Topicality Hierarchy, versions of which have been proposed by Moravcsik (1974), Givón (1975, 1983), Comrie (1980), Aissen (1999), Kiparsky (2008), and others, establishes a person hierarchy among referents. It ranks persons according to their activity in the discourse:

(26) *Animacy Hierarchy* (Comrie 1980)
1SG > 1PL > 2SG > 2PL > 3SG > 3PL

Languages adopt various simplified versions of this articulated hierarchy. Eastern Khanty and Eastern Mansi use a two-level hierarchy, with participants (1st and 2nd person) ranked higher than non-participants (3rd person).

The Inverse Topicality Constraint is assumed to be a wellformedness filter operating at the syntax-semantics interface. In the SOV Eastern Uralic languages it filters out sentences where the subject topic is of a lower person than the object topic, whereby it has the following consequence:

(27) An object ranking higher in the Animacy Hierarchy than the subject of the same clause can only be construed as a focus.

Thus in Eastern Khanty, 1st and 2nd person objects cannot be topicalized lest they outrank the subject topic; they are always foci, never eliciting agreement. (Accusative marking has been generalized to all objects in Eastern Khanty.) Compare (28a,b) and (28c). In (28a,b), containing 1st and 2nd person objects, the verb form showing object agreement is ungrammatical:

(28) a. *łüw mān-t wū-ł /*wū-ł-təɣ.* (E Khanty)
he I-ACC see-PRS.3SG/know-PRS-SG.3SG
'He sees/knows me.'
b. *łüw nüŋ-at wū-ł /*wū-ł-təɣ.*
he you-ACC see-PRS.3SG/know-PRS-SG.3SG
'He sees/knows you$_{SG}$.'

c. *łüw mā āŋke-m. Vera łüw-at wū-ł-təɣ.*
she I mother-1SG Vera she-ACC know-PRS-SG.3SG
'She is my mother. Vera knows her.' (Márta Csepregi p.c.)

Hungarian has also preserved relics of the Inverse Topicalization Constraint: a 1st or 2nd person object elicits no agreement in the presence of a 3rd person subject, and bears no accusative case, either (29a) – unlike a 3rd person object (29b):

(29) a. *Ő lát-Ø /*lát-ja en-g-em/té-g-ed.* (Hungarian)
he see-3SG see-SG.3SG I-G-1SG/you-G-2SG
'He sees me/you.'

b. Péter lát-ja ő-t.
Peter see-SG.3SG he-ACC
'Peter sees him.'

The Samoyedic languages of the Uralic family, among them Tundra Nenets, display both differential object–verb argeement, and the Inverse Topicality Constraint (Dalrymple and Nikolaeva 2011; Nikolaeva 2014) (even if there is no clear correlation between object–verb agreement and the position of the object any more). Tundra Nenets differential object–verb agreement is illustrated by the minimal pair in (30). In (30a), the object is part of the information focus; in (30b), it is topic, and it triggers agreement only in the latter sentence:

(30) a. *ńiśa-m'i ŋăno-m śerta?* (Tundra Nenets)
father-1SG boat-ACC do.3SG
'Did my father make a boat?'

b. *ńiśa-m'i ŋăno-m śerta-da?*
father-1SG boat-ACC do-SG.3SG
'Has my father finished making the boat?' (Nikolaeva 2014: 207)

As follows from the Inverse Topicality Constraint, verbal agreement is blocked in the case of 1st and 2nd person objects. Compare (31a), which contains a dual 3rd person object triggering

verbal agreement, with (31b), which contains a dual 1st person object triggering no agreement:

(31) a. *ŋăno-xoʔ* *măńijeŋa-xăjun*. (Tundra Nenets)
boat-DU.ACC see-DU.1SG
'I see the (two) boats.'

b. *pida* *śidńiʔ* *ladă*.
he we.DU hit.3SG
'He hit the two of us.' (Nikolaeva 2014: 202)

The situation is similar in the other Samoyedic languages, e.g., in Selkup. In the Selkup example in (32a), the verb optionally agrees with the 3rd person object. In (32b), where the object is 2nd person, object–verb agreement is impossible.

(32) a. *Təp* *kanap* *qontyrtɛnta/qontyrtɛntyŋyty*. (Selkup)
he dog.ACC see.FUT.3SG/see.FUT.SG.3SG
'He will see a/the dog.'

b. *Təp* *šįnty* *qontyrtɛnta/*qontyrtɛntyŋyty.*
he you.ACC see.FUT.3SG/see FUT.SG.3SG
'He will see you.'
(Kuznecova et al. (1982: 235), cited by Dalrymple & Nikolaeva (2011: 199-201))

In sum: Based on the system of differential object marking attested in present-day Ugric and Samoyedic languages, and on the relics of the Inverse Topicalization Constraint preserved in them, we assume for the Proto-Ugric and Proto-Samoyedic branches of the Uralic family the following basic clause structures:

(33) a. [$_{\text{TopP}}$ Subject$_i$ [$_{\text{VP}}$ t_i Object Verb]]
b. [$_{\text{TopP}}$ Subject$_i$ [$_{\text{TopP}}$ Object$_j$ [$_{\text{VP}}$ t_i t_j Verb]]]

The subject is topic in both clause types. The two clause types differ as regards the structural position and discourse function of the object. In the structure in (33a), the object is in the VP;

it is part of the focal domain. It is not case-marked and triggers no verbal agreement. In structure (33b), the object is a second topic; it bears accusative case and triggers verbal agreement. 1st and 2nd person objects are barred from topic position by the Inverse Topicality Constraint; hence they can only occur in structure (33a), where they are not case-marked and trigger no verbal agreement.

These assumptions allow us to answer the questions asked at the end of Section 4 concerning the distribution of intensive pronouns. Intensive pronouns are [+prominent, +contrastive], and these features, associated with the focus role, confine them to the focus domain, i.e., the VP. 1st and 2nd person pronominal objects, barred from topic position by the Inverse Topicality Constraint, are – or at least used to be – always part of the VP, hence they are always represented by their possessive-marked intensive forms. Subject pronouns, by contrast, are – or at least used to be – always topics, hence they are always represented by their base forms. Since a 1st or 2nd person object pronoun is distinguished from a subject pronoun of the same person and number by its possessive agreement suffix, its possessive suffix has taken on the function of object marking, i.e., exaptation happened. Oblique cases are merged with the intensive forms of personal pronouns because oblique complements cannot be topicalized; they are always part of the focal VP.

6. From intensive pronouns to neutral pronouns

In Eastern Mansi, the possessive-marked intensive form has also replaced the neutral base form of the 3SG pronominal object. In Northern Mansi and Northern Khanty, the intensive forms have taken the place of the neutral forms of dual and plural 3rd person pronominal objects, as well. Notice that these northern dialects do not display the Inverse Topicalization Constraint any more. If the reconstruction of Proto-Ugric object marking by É. Kiss (2017; 2020) is tenable, then in these dialects the loss of the Inverse Topicalization Constraint, i.e., the extension of topicalization to 1st and 2nd person pronouns, went hand in hand with the reinterpretation of the possessive-marked 1st and 2nd person pronouns as the non-focussed, neutral forms. What is more, the paradigm of neutral pronominal objects has been homogenized: the use of possessive-marked intensive forms has been extended to every person and number. As a result, the possessive marked forms have lost their “intensive” character, i.e., their [+prominent, +contrastive] features. Compare the following minimal pair:

(34) a. Ma naŋ-e:n wa:n-s-əm. (N Khanty)
I you-2SG see-PST-1SG

b. Ma naŋ-e:n wa:n-s-e:m.
I you-2SG see-PST-SG.1SG
'I saw you.' (Nikolaeva 1999: 65)

Both (34a) and (34b) mean 'I saw you'; but in (34a) *you* is (part of) the focus, whereas in (34b) it is a topic eliciting verbal agreement.

The facts surveyed in sections 2–6 suggest the grammaticalization path 'reflexive > intensifier > intensive pronoun > neutral pronoun'. In the Ugric languages, the attainment of a new stage in the grammaticalization path has not obliterated the former stages; we attest layering, i.e., formally reflexive pronouns simultaneously have the functions of reflexive anaphors, intensifiers, intensive pronouns, and in some dialects also neutral pronouns.

A fact observed by Nikolaeva (1995) and Volkova (2014) may actually indicate the beginning of a reflexive renewal in Northern Khanty. Namely, some speakers can double the pronoun before the possessive agreement suffix, which is said to be a new development, never attested in earlier recordings:

(35) *Utłtiteχo$_i$ łuv łuv-el$_i$ išək-s-əlle.* (N (Tegi) Khanty)
teacher he he-3SG praise-PST-SG.3SG
'The teacher praised himself.' (Volkova 2014: 49)

Crucially, a pronoun strengthened in this way can only be understood as an anaphoric reflexive. The new form may be the result of the reanalysis of the right-hand side *łuv* as the head of the possessive construction, the equivalent of 'self', with the left-hand side *łuv* spelling out the possessor.

In the Samoyedic languages, the grammaticalization process from reflexives to neutral pronouns has clearly led to reflexive renewal (in fact, multiple rounds of renewal), i.e., we have evidence of the linguistic cycle in (36):

(36) The Reflexive Cycle
i. reflexives > ii.intensifiers > iii. intensive pronouns > iv. neutral pronouns >v. new reflexives

7. Evidence of multiple cycles and lexical renewal in Tundra Nenets

The Samoyedic language Tundra Nenets has three pronouns of the structure 'self-POSS.AGR', with different lexical stems corresponding to *self* – which suggests that the reflexive cycle has been completed with the lexical renewal of the reflexive more than once. Unlike in the Ugric languages, the three pronouns have not preserved every function that they assumed in the course of the grammaticalization process; they reflect different stages of the cycle in (36).

Current reflexives involve the stem *pixidă* 'body' (37a) supplied with possessive agreement. They also function as referentially independent subject pronouns in a slightly modified form (37b). Though the coincidence of the subject and topic roles is not a requirement in Tundra Nenets anymore, it is still a strong tendency (Nikolaeva 2014: 214), which means that the subject pronouns derived from *pixidă* mostly function as topics, i.e., *pixidă*-reflexives have reached the stage of neutral pronouns in the cycle.

reflexive (37a) > intensifier > intensive pronoun > **neutral pronoun** (37b):

(37) a. pro ***pixidă-xădăni*** *p'ină-dm.* (Tundra Nenets)
body-ABL.1SG be.afraid-1SG
'I am afraid of myself.' (Nikolaeva 2014: 48)

b. ***pidă-r*** *śiʔ-m'i* *măneŋa-nă-ś.* (Tundra Nenets)
you-2SG I-1SG see-2SG-PST
'You saw me.' (Labanauskas 1995)

In the pronominal system of Tundra Nenets, only the 1st person subject pronouns are descendants of the corresponding Proto-Uralic pronouns; the 2nd and 3rd person pronouns all derive from *pixidă* (cf. Lehtisalo 1939; Siegl 2008):

(38) Subject pronouns in Tundra Nenets

1SG	*măń*	2SG	*pidăr*	3SG	*pida*
1DU	*măńiʔ*	2DU	*pidăŕiʔ*	3DU	*piďiʔ*
1PL	*măńaʔ*	2PL	*pidăraʔ*	3PL	*pidoʔ*

Object pronouns consist of the stem *śiʔ* (*śid-*) 'shape, form' supplied with possessive agreement (cf. Hajdú 1968; Hajdú 1988). Though they have the inner structure of reflexives, they function as accusative pronouns in present-day Tundra Nenets. They must be intensive

pronouns, for the following reason: Topics in Tundra Nenets trigger object–verb agreement, which licenses object pro-drop; in fact, topical pronominal objects are always dropped. Overt pronominal objects do not trigger agreement (Nikolaeva 2014: 202), which indicates that they are part of the focal domain (39a). Nikolaeva also notes that "for some speakers of the Western dialect agreement is allowed", and cites (39b) as a marginal example, which may indicate that *śiʔ*-pronous have also started developing from intensives into neutral pronouns.

reflexive > intensifier > **intensive pronoun** (39a):

(39)a. *ńiśa-da* ***śi-ta*** *ladă.* (Tundra Nenets)
father-3SG he-3SG hit.3SG
'His father hit HIM.'

b. ? *ńiśa-da* ***śi-ta*** *ladă-da.* (Tundra Nenets)
father-3SG he-3SG hit-SG.3SG
'Her father hit him.' (Nikolaeva 2014: 203)

The assumption that *śiʔ*-pronouns were originally reflexives is supported by the fact that they can regain their reflexive function if they are strengthened by another reflexive derived from the stem *xăr* 'self':

(40) *xărʔ-ńi śiʔ-m'i xamcă-dm.*
self-1SG I-ACC love-1SG
'I love myself.' (Nikolaeva 2014: 49)

A reflexive derived from *pixidă* can also be strengthened by a *xăr*-reflexive; but in the case of *pixidă*-reflexives, the use of the *xăr*-pronoun is optional:

(41) pro (*xăr-ta*) *pixidă-xănta* *ma* (Tundra Nenets)
self-3SG body-DAT.3SG speak.3SG
'He spoke to himself.' (Nikolaeva 2014: 48)

Xăr-reflexives can also stand on their own as bound pronouns, and they can also function as intensifiers. Notice that the intensifier in (42b) is not adjacent to the intensified subject pronoun, which occupies the preverbal focus position.

reflexive (42a) > **intensifier** (42b):

(42) a. Maša ***xăr-ta*** *ńamna-nda* *laxana-ś.* (Tundra Nenets)
Masha self-3SG about-3SG talk-3SG.PST
'Masha talked about herself' (Khadry Okotetto p.c.)

b. ***xără-n*** *ťiki-m* *măń* *teńewă-dm.*
head-1SG this-ACC I know-1SG
'I know this myself.' (Nikolaeva 2014: 184)

The fact that *xăr*-reflexives are used for the strengthening of the lost or weakened reflexive function of *śiʔ* and *pixidă* pronouns, and the fact that *xăr*-reflexives have not evolved into insensive pronouns yet suggest that they represent the most recent lexicalization of reflexive pronouns, which are still in an early phase of the reflexive cycle.

The intensifier *xăr,* assigning the features [+prominent, +contrastive] to its target, has also developed into a further new direction; it has become a focusing suffix:

(43) ***t'ańo-xort*** *tudako-m* *ńī-dăm-ć* *xo-ʔ* (Tundra Nenets)
little-FOC mushroom-ACC NEG-1SG-PST find-CONNEG
'I didn't even find a FEW mushrooms.' (Pushkareva & Chomich 2001)

8. Summary: the linguistic cycle

Although the Eastern Uralic languages other than Hungarian have no historical records from before the middle of the 19th century, the comparison of the data of the different languages and dialects, and the analysis of linguistic fossils have enabled us to reconstruct the evolutionary path of their reflexive pronouns. We have argued for a series of changes in the course of which reflexive pronouns assumed an intensifying role; intensifiers modifying silent *pro*s were reanalyzed as intensive pronouns; intensive pronouns became neutral pronouns; and, in some languages, new reflexives were introduced.

The possessive morphology of reflexives has been preserved throughout the cycle. The possessive suffixes of pronominal objects have been reinterpreted as allomorphs of the accusative case. This step has been derived from the interaction of differential object marking and the Inverse Topicality Constraint reconstructed for Proto-Ugric and Proto-Samoyedic. In

these languages, subjects were always topics, whereas objects could be V-internal foci or second topics. They were case-marked only in the latter case. The Inverse Topicality Constraint blocked the topicalization of 1st and 2nd person objects, which could, therefore, only be construed as foci, represented by the possessive-marked intensive forms. Subject pronouns, by contrast, could not be focused, hence they always occurred in their neutral base forms. With the loosening of the strict SOV word order and the above distributional constraints, the possessive suffixes of pronominal objects began to mark object function rather than focus role, as a result of which they came to be extended to 3rd person pronouns, as well.

Our observations also have theoretical implications. Cyclic changes have been claimed to be driven by Economy Principles resulting in feature loss (van Gelderen 2004; 2007; 2011). Feature loss is indeed present in every phase of the reflexive cycle. At the same time, however, additional elements bringing in new features have also entered the grammaticalization path, i.e., we attest a dynamic interaction of loss and gain. In the course of the change from reflexive to intensifier, the reflexive underwent structural simplification, i.e., its complex internal structure became obsolete. Its new adjunct role resulted in the loss of (bound) reference, but it assumed the features [+prominent, +contrastive]. The change from intensified pronoun to intensive pronoun, involving the incorporation of *pro*, also involved structural simplification. At this step, no semantic feature was lost; and the intensive pronoun incorporating the intensified *pro* also incorporated the referentiality of *pro*. The change from intensive pronoun to neutral pronoun brought about the loss of the features [+prominent, +contrastive]. With reflexive renewal, the process started anew.

The three rounds of the reflexive cycle pointed out in Tundra Nenets have also provided evidence against a simplistic view of the unidirectionality of linguistic changes. The three cycles that can be reconstructed in Tundra Nenets display changes that point to the same direction but are SSnot uniform. In the most recent cycle the development has diverged into a new direction, with the reflexive-turned-intensifier evolving into a focusing suffix. That is, the cyclicity of linguistic changes involves a notion of unidirectionality that also leaves room for unpredictable outcomes.

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