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SEMANTICS OF THE NORTHERN KHANTY 2SG POSSESSIVE AND OF RELATED AND COMPETING MARKERS

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1. Introduction[1]

This paper continues the investigation into the extended uses of the Northern Khanty second-person possessive *-en* (and its plural variant *-ən*) started last year in (Mikhailov (manuscript))[2].

The investigation is set against the background of two kinds of accounts proposed for extended possessives in another dialect of Northern Khanty (Nikolaeva 1999, 2003) and in other related languages (Körtvély 2010, Simonenko 2017). The associative account, represented by Nikolaeva and Körtvély, states that extended uses of a possessive marker are essentially based on its basic possessive meaning, describing a relation between the NP referent and some other referent. The relational polysemy account of Simonenko states that in an extended use a possessive marker still denotes a relation between two referents, but the relation is specifically set to some discourse-based relation (*e. g.* identity, as opposed to a real-world knowledge based relation such as part-whole) and the set of relations available to a given marker is subject to cross-linguistic variation with the possessive markers of some languages only denoting proper possessive relation, of others also denoting identity in some contexts, and of yet others also denoting partitive specificity. The two accounts are critically presented in section 2 and contrasted to a third — radical polysemy — account which states that an extended use of a possessive marker is actually a use of another, homonymous marker.

While some of the shortcomings of the first two accounts are already apparent from the data discussed by the respective authors (and are presented in section 2), in (Mikhailov (manuscript)) I argued that all of the extended uses of the Northern Khanty POSS2 marker are problematic for the associative account[3]. Apart from the proper possessive use I

[2] Abridged version published as a preprint (Mikhailov (2020)).
[3] A relational account was not considered in (Ibid.), however, the Northern Khanty data discussed in that work is similarly problematic for it.

considered the use of POSS2 with unique objects in directives, the use with anaphorically-accessible referents and the use with proper names. It was argued that the morpheme *-en* (and its plural variant *-ən* relevant for the second use) stands in for four distinct markers: a proper possessive *-en*[I], a salient article *-en*[II] (cf. Barlew (2014)), an anaphoric article *-en*[III] (Becker (2019: 70)), and a proprial article *-en*[IV] (cf. Muñoz (2019)). (The superscripts aid distinguishing the four markers in print.)

The properties distinguishing the four markers considered in (Mikhailov (manuscript)) were: competence with POSS.1PL, which was argued to only be exhibited by the proper possessive, agreement with the addressee in number, only exhibited by the first two markers, and requirement of an anaphorically accessible NP, only exhibited by the third marker.

The current paper corrects several generalizations from last year and introduces a new diagnostic for distinguishing proper possessive markers from all the others which provides an argument for a complete revision of the analysis of the second marker. Here also data from the field texts is considered for the first time, which motivates a revision of the analysis of the third marker.

The aforementioned diagnostic consists in the possibility of explicit mention of a possessor in the POSS2 marked NP. To my knowledge this diagnostic has not been previously suggested in the literature but the data it provides are crucial for a complete rejection of both the associative and the relational polysemy accounts of extended possessive uses.

I now present the structure of the paper noting the novel contributions made in each section along the way.

As mentioned above, section 2 sets the background for the discussion to follow. In this section I present the associative and the relational polysemy accounts along with their criticisms and compare them to a radical polysemy account, which is pursued in this paper. In this section also I summarize the main properties distinguishing the four markers at the center of this paper according to (Mikhailov (manuscript)).

The following four sections are dedicated to each one of the markers. Each section opens with a discussion of the data and generalizations of (Mikhailov (manuscript)). This is followed by discussions of novel data collected in this year or obtained from the field

texts, which leads to significant revisions of the analyses of each marker except for the proprial article.

In section 3 the proper possessive -en[I] is discussed. The novel data considered include: (i) possibility of explicit mention of a possessor (which is trivial for this marker); (ii) lack of uniqueness inferences, which in comparison to the properties of English possessive phrases involving the Saxon genitive *'s* as discussed in (Coppock, Beaver 2015) leads to the hypothesis that Northern Khanty grammar unlike English grammar does not have the entity-deriving IOTA type-shift[4], (iii) presence of an existential presupposition, and (iv) restrictedness to expressing stereotypical relations derived from the meaning of the possessive-marked noun, which is the characteristic property of idiosyncratic possessive strategies in the cross-linguistic investigation of (Karvovskaya 2018).

In section 4 arguments to the extent that the second marker should be analyzed as an "associative possessive", not restricted to POSS2 but also having the full possessive paradigm like the first marker, are presented. The most crucial data here come from the explicit possessor diagnostic (presented in section 4.2.1) which, when applied in the contexts investigated in (Mikhailov (manuscript)), shows that a possessive marker in an NP with an explicit possessor can only be interpreted as a proper possessive (restricted to stereotypical relations). In the absence of an explicit possessor this marker is used with unique referents that stand in some salient relation to the addressee (in the case of POSS2). When applied to some uses of possessive markers beyond POSS2, it shows that the other possessives also have precisely this associative use which does not allow an explicit possessor and implies uniqueness of the NP referent. Thus, I argue that Northern Khanty has two different possessive marking strategies which are both expressed by the same set of morphemes but differ with respect to the possibility of an overt possessor expression, uniqueness inferences (only present in the associative strategy), and the range of relations expressible by this strategy (which is constrained to stereotypical relations in the case of the proper possessive strategy). The associative possessive is thus argued to correspond to Karvovskaya's non-idiosyncratic strategy. To my knowledge this is the first argument for the existence of two distinct but homonymous possessive marking strategies in a

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[4] Which is responsible for uniqueness inferences associated with Saxon genitive phrases in argumental positions according to (Ibid.).

single language [5] . In this section I also argue against the analysis of (Mikhailov (manuscript)), which crucially relied on this marker being restricted to POSS2, and in particular show that, in fact, the marker does compete with POSS.1PL, which is not observed in contexts considered in (Ibid.), since those contexts do not provide a salient relation which would motivate the use of POSS.1PL.

Section 4.3 presents a tentative analysis of the proper and the associative possessives and discusses the assumptions necessary for such an analysis. It must be noted that the main goals of the current paper are to revise and further strengthen the argument of (Mikhailov (manuscript)) for a radical polysemy account and to formulate better generalizations characterizing the four markers with novel data from elicitation and field texts. A fully explicit formal fragment concerning the relevant parts of Northern Khanty grammar along with a thorough investigation into the predictions made by the analyses of the four discussed markers must be left for another occasion.

Section 5 is concerned with *-en*[III] which is renamed to a "topic marker". The motivation for this name comes from textual data which show that the marker in question is much more restricted than expected of an anaphoric article (*e. g.* Arkoh, Matthewson 2013). In fact, it appears to be restricted specifically to topical salient subjects as discussed in section 5.2.2, but not restricted to anaphorically-given referents *contra* (Mikhailov (manuscript)). There I return to the salient article hypothesis, but this time applied to *-en*[III] instead of *-en*[II]. Section 5.2.3 presents a preliminary comparison to the data from the Bulu salient article analyzed in (Barlew 2014). In this section I also note that some speakers seem laxer in their use of *-en*[III] which is hypothesized to be due to the marker evolving into a general anaphoric article in their idiolects. In section 5.2.5 I argue that the topic marker appears to be restricted to subjects as in other positions it competes and loses to the associative possessive, due to the latter having a stronger presupposition. Section 5.2.6 presents the first piece of a new argument in favor of distinguishing the topic marker from the proprial article *-en*[IV], which is based on the fact that only the latter varies in reference in the presence of a higher quantifier. Finally, section 5.3 presents a tentative analysis of *-en*[III] which is essentially that of (Barlew 2014) provided for the Bulu salient article.

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[5] For references to data on morphological realizations of Karvovskaya's (2018) idiosyncratic *vs.* non-idiosyncratic (traditionally known as alienable *vs.* inalienable) strategies in a typological sample, see the original work.

Section 6 discusses the proprial article *-en*[IV]. In 6.1 I reproduce the argument of (Mikhailov (manuscript)) for its status as a proprial article, based on the proposal for English by (Muñoz 2019). Here I also note that the proprial article is distinguished from the topic marker in not being syntactically restricted like the former is. In 6.2 I present the explicit possessor diagnostic, which again shows that the marker is not a proper possessive, and show that *-en*[IV]-marked proper names do not vary in reference in the presence of a higher quantifier, which confirms the hypothesis that the marker is a proprial article and further distinguishes it from the topic marker *-en*[III].

Section 7 summarizes the finding of this paper.

The rest of the introduction gives a comment on the methodology employed in the current studies and notes some limitations connected to it, lists the glossing abbreviations used, and gives a brief introduction to the Northern Khanty possessive system.

1.1. Methodology

The current study is based both on elicitation data and on a preliminary sample of corpus data from the field project's field text collection. The elicitation data were collected during sessions with speakers of the Kazym dialect of Northern Khanty residing in the Kazym village of the Khanty-Mansi Autonomous Okrug in Russian Federation. Northern Khanty is a language of the West Khanty subgroup of the Khantyic group of the Finno-Ugric family.

The sessions took place in two fieldtrips to Kazym in the summer of 2018 and in the summer of 2019. More data were collected with two speakers via Skype and Viber in the spring of 2020, and with three speakers in the spring of 2021.

The elicitation mainly proceeded as a translation task. The speakers were presented with a Russian stimulus with a context and were asked to translate it to Northern Khanty. Then, several other translations with different forms were presented and the speakers provided their judgements. Sometimes, the speakers were also asked to comment on the differences between two translations. Judgements of constructed Northern Khanty sentences were also asked.

It is important to note that in some cases there was significant variation in speakers' judgement. In particular, one speaker often allowed all possible forms of interest, while the other speakers only allowed one form. This speaker, however, usually gave as the initial translation the same form that the other speakers chose. Some variation in

preference for a particular form is noted throughout this work, sometimes possible pragmatic explanations for this variation is provided.

Regardless of the variation there was significant non-trivial agreement in judgements in most examples cited here, so I believe that the results presented in this work are licit.

Furthermore, the judgements obtained during elicitation sessions mostly agree with the distribution of the markers of interest in the field texts. The field texts were also recorded with Northern Khanty speakers of Kazym village and mostly contain stories from the speakers' childhood with some fairy tales and historical texts. The texts were recorded in Northern Khanty and later transcribed and translated with another speaker and then corrected with one more speaker. Currently, the texts are yet to be integrated in a single searchable environment, so due to this technical difficulty the amount of data from the texts appealed to in this study is limited.

In the future I plan to investigate the distribution of the markers of interest in an experimental setting as in the works of Maria Usacheva and colleagues (Usacheva 2019) when an offline fieldtrip becomes possible, as well as investigate more field texts.

1.2. Abbreviations

1	first person	IMPF	imperfective
2	second person	INDEF	indefinite
3	third person	INTERJ	interjection
3SG>SG	a third person singular subject is acting on a singular direct object	ITER	iterative
ACC	accusative	LAT	lative
ADD	additive particle	LOC	locative
ATT	attenuative	NEG	negation
AUGM	augmentative	NFIN	general non-finite form
CAR	caritive	NPST	non-past
CAUS	causative	NSG	non-singular number
COP	copula	OBJ	object conjugation

CVB	converb	OPT	optative
DAT	dative	PASS	passive
DETR	detransitive	PL	plural number

1.3. Northern Khanty possessive system and NP structure

The system of suffixes marking possessive relations in Northern Khanty includes markers for combinations of three persons and three numbers of the possessor (singular, dual, plural) and three numbers of the possessee, resulting in 27 markers presented in Table 1 below.

There is, however, a certain degree of syncretism. For instance, the suffix *-ən* functions as a POSS.2NSG marker used for dual and plural second person possessors and as a POSS.3DU marker used for dual third person possessors.

Note also that the number marker of the possessed noun undergoes an allomorphic alternation when a possessive suffix follows it. The non-possessed number suffixes are *-ŋən* for dual and *-ət* for plural and the possessed are *-ŋəλ* and *-λ*, respectively.

Combinations of a non-possessed number marker and a possessive are forbidden: *amp-ət-en [dog-PL-POSS.2SG].

	SG	DU	PL
1SG	-ɛm / -əm -POSS.1SG	-ŋəλ-am -DU-POSS.1SG	-λ-am -PL-POSS.1SG
2SG	-en -POSS.2SG	-ŋəλ-an -DU-POSS.2SG	-λ-an -PL-POSS.2SG
3SG	-əλ/-eλ -POSS.3SG	-ŋəλ-aλ / -ŋaλ -DU-POSS.3SG / -DU[POSS.3SG]	-λ-aλ -PL-POSS.3SG
1DU	-ɛmən -POSS.1DU	-ŋəλ-amən -DU-POSS. 1DU	-λ-amən -PL-POSS.1DU
2DU	-ən -POSS.2NSG	-ŋəλ-an -DU-POSS.2NSG	-λ-ən -PL-POSS.2NSG
3DU	-ən -POSS.3DU	-ŋəλ-an -DU-POSS.3DU	-λ-ən -PL-POSS.3DU
1PL	-ew	-ŋəλ-aw	-λ-aw

	-POSS.1PL	-DU-POSS.1PL	-PL-POSS.1PL
2PL	-ən -POSS.2NSG	-ŋəλ-an -DU-POSS.2NSG	-λ-ən -PL-POSS.2NSG
3PL	-eλ -POSS.3PL	-ŋəλ-aλ -DU-POSS.3PL	-λ-aλ -PL-POSS.3PL

Table 1. The system of Northern Khanty possessive markers (Kazym dialect, field data)

The morphosyntax of possessive noun phrases[6] is not the focus of this study, so I note some information made available by the field reports of my colleagues. These generalizations should be taken as preliminary as none of them have yet been published or subjected to a large-scale investigation.

With an explicit possessor in the noun phrase, possessive marking is obligatory in the case of pronominal possessors (Smirnova 2019). As for non-pronominal possessors, there seems to be a preference for marking relations with more animate ones such as kinship or body part relations and for not marking relations with less animate possessors such as part-whole (but also author and agent). I leave a deeper investigation of the issue for another occasion. For the current work, only pronominal possessors are important as they are used in the explicit possessor diagnostic (see sections 3.2.1, 4.2.1, 5.2.1, 6.2.1 for the application of the diagnostic to the markers discussed in this study).

Some preliminary information on constituent order in a Northern Khanty noun phrase is found in (Pleshak 2018).

While speakers' judgements vary as to the respective order of the possessor and the demonstrative (1), both appear on the left-most edge of a noun phrase before other modifiers such as numerals and adjectives. For some speakers Possessor > Demonstrative seems to be the unmarked order[7].

(1) **ma tăm χөλəm** / **tăm ma χөλəm** puχ-λ-ăm   armija-ja măn-s-ət

I   this three   /   this I   three son-PL-POSS.1SG army-DAT go-PST-3PL

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[6] Throughout this work I use "noun phrase" as a cover term for whatever nominal projection is presented in a given example, unless stated otherwise.

[7] The order Demonstrative > Possessor elicits a cleft-like reading similar to Russian cleft-like *eto* sentences as in

(i) eto   tri   mo-ix   syn-a   uš-l-i   v   armij-u

   this   three   my-GEN.PL son-GEN.SG leave-PST-PL to army-ACC

   'It's my three sons that left for the army' (own knowledge)

'These three sons of mine left for the army'. (Pleshak 2018: (6))

In my own data the unmarked order also seems to be the one with the possessor preceding to a demonstrative, so in the current work I assume the following NP structure:

(2)   Poss > Dem > Num > N, where N is the innermost projecting node and Poss is the outermost projecting node

The reader should bear in mind that this is by no means a final ruling, but merely a working assumption introduced for expository purposes.

Here I note also that the extended uses of the POSS2 marker which is the focus of this study are not described in the grammar of Kazym dialect of Northern Khanty by Andrej Kaksin (2010). In the descriptions of the marker for the Tegi dialect (Kashkin (2010)) and the Obdorsk dialect (Nikolaeva 1999, 2003) the distribution of the marker is significantly different from the Kazym data. Here I give an example from the Tegi dialect and the Obdorsk data is briefly discussed in the next section.

For the Tegi dialect Kashkin reports that only the 3SG possessive is used in anaphoric contexts and the 2SG possessive is infelicitous in this function. Furthermore, in his examples with directives the 2SG possessive marking is optional.

(3)   **ɔv-(en)**   pŭnš-e
       door-POSS2SG   open-IMP.OBJ
       'Open the door'. (adapted from Kashkin 2010: (5) with preserved transcription)

As will be shown in sections 4 and 5 the situation in Kazym is exactly the opposite: the 2SG possessive **is** used for anaphorically accessible referents and is obligatory in commands. In Tegi 2SG possessive marking is also optional as in Obdorsk and unlike Kazym.

2. Previous accounts of extended possessives

2.1. Associative account[8]

One common explanation for extended uses of possessive markers is that the possessive marker in question marks some sort of an association between another referent

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[8] This section is adapted with revisions from (Mikhailov (manuscript)) with added discussion of (Körtvély 2010).

or speech participant and the NP referent — I will refer to this as the "associative account".

In this section I discuss two instances of the associative account appealed to in discussions of extended uses of 2SG possessive markers: (Nikolaeva 1999, 2003) on Obdorsk dialect of Northern Khanty and (Körtvély 2010) on Tundra Nenets.

Irina Nikolaeva discusses the 2SG possessive marker's extended uses for the Obdorsk dialect of Northern Khanty (which she calls Ostyak) in her grammar (Nikolaeva 1999) and in a general paper on possessives in Uralic (Nikolaeva 2003).

In both works she develops an account of the fact that possessive markers are used much more often in (the Obdorsk dialect of) Northern Khanty than in English. She claims that apart from the two interpretations of a possessive construction introduced in (Barker 1995) — the "lexical" interpretation with relational nouns and the "extrinsic" interpretation with other nouns — there is a third interpretation — "associative" with non-relational nouns — which "deviate[s] in one respect or another from the [ownership] prototype" (Nikolaeva 1999: 82).

In English, the associative interpretation is only observed in 16% of cases as reported in a corpus study (Taylor 1996: 346-347, cited from Nikolaeva 1999: 82). In Nikolaeva's analysis of three texts in Ostyak the percentage of associative uses is 39%. This is said to be explained by the fact that in Ostyak "associative possessives are in fact the only way to express the relationship between two nouns" (Ibid.).

It isn't clear to me why such a relationship must indeed be expressed. It seems that the proper explanation of these frequency facts is yet to be provided.

In the traditional literature in Ostyak (cited in Ibid.) the possessive affixes are said to encode definiteness in such cases, which is at least partly true — according to Nikolaeva — since when a possessive marker is present, the referent of the marked NP is usually identifiable. However, the "definiteness" account fails to predict different choice of the possessive marker depending on the person-number features of the NP that the marked NP is associated with.

The "associative" account on the other hand correctly predicts that the person-number features should vary. Thus, in (4) the car is pointed out to the addressee and is thus associated with them: "because I am talking to you about it" (Nikolaeva 1999: 84). In (5) there is a situational relationship between the place and the subject which "the

speaker chooses to emphasize" (Ibid.: 83). According to Nikolaeva in these examples the possessive marker can be omitted without affecting the at-issue content of the sentences.

(4) OBDORSK DIALECT OF NORTHERN KHANTY

wanta #(**tăm)** **mašinaj-en** jowra mănəs[9]

see this car-2SG awry went.3SG

'Look, that car (lit. that your car) went awry'. (adapted from Nikolaeva 2003: (15a))

(5) ma **iśi** **taxa:j-e:m-na** il ko:ri-s-ə-m

me same place-1SG-LOC down fall-PAST-EP-1SG

'I fell down in the same place (lit.: at the same my place)'. (Nikolaeva 1999: 83)

Nikolaeva claims that the 2SG possessive indicates that the speaker somehow pragmatically associates the addressee with the referent of the corresponding noun (Nikolaeva 2003: §3.1). This is said to be the reason why the marker often figures with objects in commands (and, indeed, we observe the same behavior of the Kazym marker, see section 4).

However, the "associative" account seems to be too vague and unrestrictive. For instance, it isn't clear why the 1PL possessive marker isn't used in **Error! Reference s ource not found.** "because the speaker and the addressee are talking about that car together".

Regardless of whether the "associative" account is the correct understanding of the Obdorsk dialect data, it is clear that the Kazym marker is quite different. As will be shown in section 4 it is obligatory in several contexts and it bears certain inferences reminiscent of definite articles — both features are explicitly denied by Nikolaeva for the Obdorsk marker.

Erica Körtvély (2010) discusses extended uses of Tundra Nenets (< North-Samoyedic < Uralic) possessives in narrative texts as in (6)-(9).

In these examples, Körtvély suggests, person-number features of a given possessive marker indicate the participant or referent that the NP referent is associated with. In (6) it is the addressee (the listener of the story), in (7) the old man holding something, and in (8) the main hero of the story watching an automatic vessel. As for (9), Körtvély writes

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[9] The transliteration and the glosses in this section are retained from the original works.

that a small group of nouns of weather and nature phenomena recieve POSS.3SG marking specifically (Ibid.: 332).

(6)   TUNDRA NENETS

(the speaker to the audience)

ləx°nako-r°   puxacya-h   nyana   xəya.

story-POSS.2SG   old_woman-GEN   by   go.3SG

'The story continues with the old woman'. (Pushkareva & Khomich 2001: 92, cited in Körtvély 2010; here and below emphasis mine)

(7)   yiryike-y°q,   tyiki° pidər° nyəqm°bə-da-r°   əmke?

grandpa-VOC   this   your   hold-IMPF-POSS.2SG   what

əmke-myih   ŋæ-ŋku?

what-POSS.1SG be-FUT.3SG

'Grandpa, what is that you are holding in your hand? — What would it be?' (Lehtisalo 1947: 3, cited in Körtvély 2010)

(8)   o_da!   tyiki° **yed°-qya°-da**   xərta ya-n°h   ŋamti°q...

INTERJ   this   vessel-AUGM-POSS.3SG   itself ground-LAT   sit_down.3SG

'And look! This vessel got down to the ground by itself.' (Pushkareva & Khomich 2001: 96, cited in Körtvély 2010)

(9)   **num-ta**   yibyimtənə°

weather-POSS.3SG   get_warm.3SG

'The weather got warmer'. (Tereshchenko 1965: 133, cited in Körtvély 2010)

Körtvély makes a distinction between situational associative uses, whereby the referent is identifiable from the immediate speech situation and is, therefore, marked (as in the above examples), and non-situational uses, whereby the referent has a connection to another entity familiar to the addressee and this connection is marked. For (10) and (11) below it is suggested that the 2SG possessive marker signals precisely that such a connection to an entity known to the addressee exists.

(10) pərne   wæsako-h   ŋob   nye_nyú-dya. [...]

parne   old_man-GEN   one   daughter-POSS.3SG

pərne-nt°   pyíryibtya yet°h   xəli-kocy-i   ŋanyih

parne-GEN.POSS.2SG   girl   just   worm-DIM-PL.ACC   and

pyisya-kocy-i	məq°la°.
mouse-DIM-PL.ACC	collect.3SG

'The Parne-old had a daughter. [...] The Parne's daughter just collected worms and mice.' (Lehtisalo 1947: 109-110, cited in Körtvély 2010)

(11) ləx°nako wæsako-qya°-h nyana xəya. [...] wæsako-qyaə-r°
story old_man-AUGM-GEN by go.3SG old-AUGM-POSS.2SG

waqw°-xənta ŋamti°-q
bed-LAT.POSS.3SG sit_down-R.3SG

'The story continues with the old man ... The old man sat down on his bed'. (Pushkareva & Khomich 2001: 92, cited in Körtvély 2010)

Körtvély stresses that the marker in these examples does not mark definiteness, but is used for pragmatic association, because only some of definite noun phrases receive such marking. For example, in (10) above the old man in the first sentence is already known from preceding context, however, it is only marked in the second sentence. On the other hand, indefinite noun phrases are never marked with an associative possessive.

Körtvély, thus, concludes that although there is no one-to-one mapping between definiteness and extended possessive marking in Tundra Nenets, such possessives do function as "signals for the speaker to recognize known information" just like definite articles.

Under such a general formulation of the associative account it is yet again unclear what conditions the choice of a particular marker. For example, why must the 3SG possessive be used with weather phenomena, and not for example the 2SG possessive? To which entity is the referent linked to in such cases? It seems that unless a clearer formulation is provided, the associative account does not make clear predictions in many cases, but only gives an intuitive understanding of the data.

In the field texts of Kazym Khanty available to me similar patterns of extended possessive marking can be observed, however, I argue for the 2SG possessive that not all of its uses are amenable to such a treatment. Even if the associative account is on the right track for Obdorsk Khanty and Tundra Nenets possessives, it is not the full story for the data discussed here.

2.2. Relational polysemy account of Simonenko (2017)

Simonenko (2017) discusses extended uses of possessives and similar specific determiners for three Finno-Ugric languages (Komi (Izhem), (Meadow) Mari, and (Moksha) Mordvin) and for Buryat (< Mongolic) and Turkish (< Turkic).

She observes that there is crosslinguistic variation in what sorts of contexts these markers admit. In Komi, for example, the 3SG possessive marker appears in partitive specific (12), anaphoric (13), local uniqueness (14), and global uniqueness contexts (15) (discussed by Hawkins 1991).

(12) KOMI

lavka   təryt   va-i-sny   kuim   pyzan.
store   yesterday   bring-PRT-3PL   three   table
ton   mi   yti   **pyzan-#(se)**   n'eb-i-m.
today   we   one   table-3SG.ACC   buy-PRT-1PL
'Yesterday they brought three tables to the store. Today we bought one table'.

(13) me   mun-i   ul'iča kuz'a i   ad'd'-il-i   pon.
I   walk-PRT   street along and see-ITER-PRT dog
ponm-*(ys)   kuč'-i-s   uut-ny.
dog-3SG   start-PRT-3   bark-INF
'I was walking down the street and saw a dog. The dog started barking'.

(14) **əbes-*(se)**   s'ipt-i!
door-3SG.ACC   close-IMP
'Close the door!'

(15) **šond'-*(ys)**   dzeb-s-i-s.
sun-3SG   set-DETR-PRT-3SG[10]
'The sun has set'. (Kashkin 2008 cited in Simonenko 2017; emphases mine)

Table 2 gives a summary. Note that unlike Komi, the Buryat 3SG possessive suffix does not admit local and global uniqueness contexts (pattern D), and the Mari 3SG possessive does not admit both uniqueness contexts, as well as anaphoric contexts (pattern C), while differential object markers of Turkish and Buryat admit all contexts except the proper possessive ones.

Pattern		TUR	TUR OBJ	KOM	BUR	BUR OBJ	MAR	MOR	MOR "DEF"

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[10] (Simonenko 2017) appears to have a typo in this example with "dep" instead of "set".

A	x_i owned by x_j	OK	*	OK	OK	*	OK	OK	*
B-i	$x_i \subset x_j$ if x_i is PL	*	OK	OK	OK	OK	OK	*	OK
B-ii	$\{x_i\} \subset x_j$ if x_i is SG	*	OK	OK	OK	OK	OK	*	OK
C	$x_i = x_{j\text{CONTEXT}}$	*	OK	OK	OK	OK	*	*	OK
D	$x_i = x_{jd\text{DISC.SIT}}$	*	OK	OK	*	OK	*	*	OK
E	NARROW SCOPE	OK	*	*	*	*	OK	OK	*

Table 2. Adapted from (Simonenko 2017). x_i is the NP referent, x_j is the other referent to which x_i stands in a relation. Patterns B-i and B-ii stand for the partitive specific use (Enc 1991), C is the anaphoric use, and D is the local and global uniqueness uses. OBJ is the column for differential object markers, "DEF" is the column for the Mordvin "definite" marker.

The markers are analyzed as having the denotation in (16). The variation is said to derive from the different ranges of values for the relational R variable which indicates a relation between the NP referent and some other entity. The other entity is given via a silent individual pronoun in the NP structure with an index *i*, which depending on the value of R picks up either a possessor, a superset antecedent, a proper anaphoric antecedent, or a salient individual given in the situation.

(16) $\|det\| = \lambda P_{[e \to [s \to t]]}\lambda y_e\lambda x_e\lambda s_\sigma.\ P(x)(s)\ \&\ R(x)(y)$

where R = possession   Mordvin POSS, Turkish POSS

where R = inclusion, identity   Mordvin DEF, Buryat OBJ

where R = possession, inclusion   Mari, Buryat POSS

where R = possession, inclusion, identity   Turkish OBJ, Komi

(adapted from Ibid.)

A toy derivation for the case of Mari *pij-že* [dog-POSS.3SG] is given in (17) below. In this analysis interpretation proceeds relative to an assignment *g* and a context *c* with *i* the index of the silent individual pronoun, which supplies either a third person possessor or a superset for the partitive use (the inclusion relation). Person-number features are modeled as presuppositions about the entity assigned to *i* by *g* (cf. the treatment of pronouns in Heim, Kratzer 1998). (We might say then that under this view number features of the marker in question make a different semantic contribution, depending on the marker involved, as opposed to an analysis under which all of the markers stand in for an abstract morpheme POSS which is spelled out differently as a result of agreement

with the silent individual pronoun and are thus equivalent at the semantic level of Logical Form (LF).)

(17) $\|3sg\|^{g,c}(\|dog\|^{g,c})(\|i\|^{g,c})$ is defined if g(i) is not a speaker or hearer,

if defined, $\|3sg\|^{g,c}(\|dog\|^{g,c})(\|i\|^{g,c}) = \lambda x_e \lambda s_\sigma$. x is a dog in s & R(x)(g(i)), where R = possession, inclusion

Note that number features are not mentioned in this analysis which is a problem. Consider a partitive specific context as in (12) above: *Yesterday they brought three tables. Today we bought one table* [one of the set of three tables]. If the individual pronoun in such cases is coindexed with the antecedent superset NP, it is expected rather that a 3PL possessive would be used, since *g(i)* is a plural entity in this case. Suppose we also modelled number features as a presupposition ("defined if *g(i)* ... is atomic [*i. e.* a singular entity]"). Then, the function will be undefined with R set as an inclusion and a plural *g(i)*.

One might object that it is the superset as a singular entity that is referred to by *i* here, but unless it is an ad-hoc assumption about the interaction of the silent individual pronoun with the plurality of its referent, this would lead us to expect that anaphoric chains such as *three tables_i ... it_i* are licit, which strikes me as highly unlikely.

In the case of partitive specific uses the relational polysemy account, which assumes that the same possessive morpheme is used here, as in proper possessive uses, but with additional relations available to it, falsely predicts the use of the 3PL possessive, which is not the case. The only way to resolve the issue that I see is to adopt a **radical polysemy account**, which states that the 3SG possessive marker in such cases has a different meaning and the person-features are defective here (*i. e.* with no impact on definedness conditions on the function denoted by the marker).

Returning to table 2, Simonenko notes that there is a perfect negative correlation between the availability of a marker in anaphoric contexts and the possibility of it having narrow scope with respect to negation or an intensional operator.

The Mari 3SG possessive suffix does not appear in anaphoric contexts, while Mari possessives in general do scope below negation (illustrated for 1SG below).

(18) MARI

myj-yn   aka-m   uke.

I-GEN   sister-1SG   be.NEG

'I don't have a sister'. (adapted from (Ibid.))

On the other hand, Komi possessives can only have a wide scope existential interpretation with respect to negation and the narrow scope reading is only possible for an unmarked noun.

(19) menam   abu   pon-me.
     I.GEN   NEG   dog-1SG
     'My dog is not with me'.

(20) menam   abu   pon
     I.GEN   NEG   dog
     'I don't have a dog'. (adapted from (Ibid.))

Simonenko suggest the following explanation for this correlation. **If the anaphoric relation is a possible value for the R variable of a given determiner, then the determiner carries a presupposition that there exists an entity in the relevant domain bearing the property denoted by the noun phrase and standing in the R relation to the antecedent.** Since the antecedent and the NP referent are equivalent in this case, this presupposition boils down to the requirement that the antecedent have the property denoted by the NP, which, as Simonenko hypothesizes, explains the general unavailability of contradictory anaphoric chains (*#a pig ... That dog*).

The unavailability of narrow scope readings with respect to negation for such determiners results from the contradiction between the existential presupposition and the negation of existence in the assertion. Roughly, "**there exists no x, such that x is a dog** and stands in an R relation to me, **defined iff there exists an x, such that x is a dog** and x stands in an R relation to me".

Given what we glanced from the analysis of the Mari 3SG possessive above (each possessive marker represents a distinct entity at LF) and the fact that the narrow scope data were all illustrated with either a 1SG possessive marker or a 1PL marker (Simonenko 2017: exx. 30-38), one has to assume that all the possessive markers in languages with no narrow scope possible for POSS.1SG/PL may express an anaphoric R (the identity relation), which might be an undesirable consequence of the analysis. If not, why then is the narrow scope impossible for the POSS.1SG/PL, while the anaphoric use was only illustrated for the

POSS.3SG[11]. (The same problem occurs if one assumes that all possessives stand in for an abstract POSS morpheme at LF, as the reader may verify.)

In particular, this predicts that in case of an anaphoric use with a plural antecedent (*e. g.* in an example which translates to "I saw some dogs$_i$. The dogs$_i$ ..."), the POSS.3PL will be used[12]. While Simonenko does not provide such examples, in the literature on extended possessives in Finno-Ugric and Uralic languages that I am familiar with there are no such cases.

Of course, we might say that the possessive markers of Komi, for example, simply carry an existential presupposition regardless of whether an anaphoric relation is available to each of them. The problem is also naturally resolved if one completely abandons the relational polysemy account in favor of the less restrictive radical polysemy account.

2.3. Summary of approaches to extended possessive marking

To summarize, let us consider the different predictions made by the approaches to extended possessive marking introduced in this section.

Predictions	Account / Example	ASSOCIATIVE (Nikolaeva, Körtvély)	RELATIONAL POLYSEMY (Simonenko)	RADICAL POLYSEMY (introduced in this work)	Actual data
Preference of POSS.1PL over POSS.2SG	'Look, that (lit. your) car went awry' (4)	(Yes)	(No)	No	No (4)
POSS.3PL for partitive specific uses	'... three tables$_i$ ... one (lit. his$_i$) table (of the set)' (12)	Yes	Yes	No	No (see references above)
Ban on POSS.2SG for anaphoric uses	'... the old man$_i$ ... the (lit. your) old man$_i$' (10)	(Yes)	Yes	No	No ((10), (11) and section 5 of this work)

Table 3. Different predictions of the associative, relational polysemy and radical polysemy accounts of extended possessive marking.

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[11] And, in fact, in our data the anaphoric use is only available to the POSS.2SG marker, which again results in a contradiction between the person-number features of the marker and the person-number features of the referent of the silent pronoun (*I saw a dog$_i$. dog-POSS.2SG$_i$ ...*), see section 5.

[12] It isn't clear whether one can come up with representative examples for the other person-number combinations, as it is hard to construct an anaphoric chain of the type ... *N1$_1$* ... *N2$_1$* for N1 a pronoun referring to some first- or second-person entity, as such entities are usually referred to with pronouns in the languages in question to the best of my knowledge. For a case like *We* (N1) *were walking along the street and our group* (N2) *made it hard for cars to pass by* the expected possessive marking on N2 is most plausibly analyzed as proper possessive marking.

In (Mikhailov (manuscript)) I investigated four primary uses of the Kazym dialect of Northern Khanty second person possessive markers: *-en* [POSS.2SG] and its plural variant *-ən* [POSS.2NSG]. (Unless stated otherwise below I refer simply to POSS2 for brevity and *-en* is used as shorthand for "*-en*/*-ən* depending on the plurality of the addressee" in the case of the proper possessive and the associative POSS2.)

It has been argued that the marker represents four semantically distinct markers: a proper possessive marker, a salient article (cf. Barlew (2014)), an anaphoric article (Becker (2019: 70)), and a proprial article (cf. Muñoz (2019)). (The name of the second marker is revised in the current work to an "associative possessive", see section 4, the name of the third marker is revised to a "topic marker".) That is, (Mikhailov (manuscript) pursues a radical polysemy account of the extended uses of the Northern Khanty POSS2.

The differences between the four markers are summarized in table 4 below.

	1. PROPER POSSESSIVE *-en*$^{\text{I}}$	2. ASSOCIATIVE POSSESSIVE *-en*$^{\text{II}}$	3. TOPIC MARKER *-en*$^{\text{III}}$	4. PROPRIAL ARTICLE *-en*$^{\text{IV}}$
A. Competes with *-ew* [poss.1pl]	Yes	No	No	No
B. Agrees with the addressee in number	Yes	Yes	No	No
C. Requires an anaphorically accessible NP	No	No	Yes	No
D. Has uniqueness inferences	??	Yes	Yes	—

Table 4. Properties distinguishing the four Northern Khanty markers with the exponent -en. *Adapted from (Mikhailov (manuscript)). "Yes" means that this marker has the given property, "No" means that the marker doesn't have the property, "??" means that no data is available in (Ibid.) for this cell, "—" means that the property is irrelevant. Superscripts on the markers are used for distinguishing them in print.*

The proper possessive *-en*$^{\text{I}}$ is primarily distinguished from the other markers in pragmatically competing with the first-person plural possessive *-ew* [POSS.1PL], as an utterance with the latter ('our X is P') is pragmatically stronger than an utterance with the

latter ('your X is P'). In a context where the former is possible, the use of the latter generates an implicature that 'your X is P, but not ours'.

The same effect is not observed with the other three markers, which naturally suggests that they are semantically distinct from proper possessives such as -*en*[I] or -*ew*.

The proper possessive -*en*[I] and the associative -*en*[II] have the form -*ən* [POSS.2NSG] in a context with a plural addressee, which is not the case for the other two markers.

Only the topic marker -*en*[III] requires a linguistic antecedent introduced in prior context.

As per the final property — having uniqueness inferences characteristic of definite articles cross-linguistically (König 2018) — it has yet to be investigated for the proper possessive -*en*[I] and the proprial article -*en*[IV].

The relevant examples from (Mikhailov (manuscript)) for each of these properties are provided in the first subsections of the following sections 3 through 6. The other subsections introduce novel data further distinguishing the four markers and present their respective analyses. Both older and novel data are incompatible with either the associative or the relational polysemy accounts.

3. Proper possessive -*en*[I]

3.1. Data from (Mikhailov (manuscript))

The proper possessive -*en*[I] like the other possessive markers of Northern Khanty and cross-linguistically (Karvovskaya 2018) is used to mark some contextually retrievable relationship between the possessor (the addressee in the case of POSS2) and the possessee[13]. An example is provided in (21).

(21) **kăt´-en/-ən**   moś-λ
      cat-POSS.2SG/-POSS.2NSG   purr-NPST[3SG]
      'Your (sg./pl.) cat is purring'.

Naturally, in case the addressee is plural, the corresponding second person **plural** marker -*ən* is used.

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[13] In what follows I assume that all proper possessives only differ w. r. t. person-number features of the possessor and are otherwise equivalent.

For a proper second person possessive it is expected that it will pragmatically compete with the 1PL possessive as the utterance with the latter ('our X') entails the utterance with the former ('your X'). In case the former is used in context where, for all we know, the latter could have been used, a Q-implicature that the utterance with the POSS.1PL is false is expected to arise ('your X, but not ours'; Horn 2006).

This expectation is borne out for the proper possessive *-en* (22) (cell A1 in table 4 above).

(22) **χot_λaŋəλ-ew/#-en/#-∅**   pos-ijəλ

house_roof-POSS.1PL/-POSS.2SG   drip-FREQ[NPST.3SG]

{Vasya tells his wife:} '(Our) roof is leaking'.

Speaker comment on *-en*: "then it's only his wife's roof, this is wrong [in this situation]".

In (22) both Vasya and his wife stand in an ownership relationship to the roof, so **an utterance with POSS2 generates the implicature that the roof belongs only to Vasya's wife** as the speaker comment indicates, which is false, so POSS.1PL must be used instead.

As is clear from the above examples, **proper possessive markers do not require anaphorically accessible NPs**, the given NP referent need not be introduced in prior context.

Importantly, **it is yet unclear whether proper possessive marked NPs carry uniqueness inferences** typically attributed to the English Saxon genitive possessive construction in argumental positions (Coppock, Beaver 2015: §4). If not, this will make another argument for distinguishing the proper possessive *-en*[I] from the other POSS2 markers.

3.2. Novel data

In this section I present novel data on the proper possessive *-en*[I] further distinguishing it from the other markers.

The properties now considered include possibility of expression of an overt possessor in a marked NP — the explicit possessor diagnostic — and uniqueness inferences. As will be shown in the sections on other markers, these two properties distinguish the proper possessive *-en*[I] from all three of them. In this section I also show

that proper possessive cannot scope below negation and as such carry an existence presupposition as suggested in (Simonenko 2017).

3.2.1. Explicit possessor

In the texts from our field collection both explicit and omitted possessors are attested with no clear difference semantic, syntactic or other. Below I give two relatively similar illustrative examples for *-ɛm* [POSS.1SG] (recall that I assume that proper possessives only differ with respect to person-number features).

Example (23) comes from a story about the speaker's parents and grandparents working in a sovkhoz (a state-owned farm). She first describes her grandparents, and then starts talking about her father with (23). The noun phrase in question contains an explicit possessor. The brackets with an "OK" sign in this example indicate that when presented with the same sentence, but without the overt possessor during elicitation, the speakers judged it as acceptable, also commenting that this option is preferred if it is not the first mention of the referent.

(23) i   ma aśi-ɛm.   ^{OK}**(ma)**   **aśi-ɛm**
       and I   father-POSS.1SG I   father

       sovxoz-ən   ripak-a   rəpit-əs
       sovkhoz-LOC   fisherman-DAT   work-PST[3SG]

'And my father. My father worked as a fisherman in the sovkhoz'. (field text)

Speaker comment on possessor omission: "this is possible, yes, for example, if the father has previously been mentioned".

In the corpus, however, there are several examples with a POSS-marked NP without an overt possessor on the first mention, as in (24) below.

Example (24) is from a text in which the speaker describes her childhood. First, she describes what chores her family were doing in the summer and then she utters (24) which contains the first mention of her grandfather in the text. Unlike (23) in (24) the possessive marked NP does not contain an overt possessor.

(24) ma   <vse vremya vse>¹⁴ isa   **deduška-jɛm**   piλa
      I   all   time   all   always   grandfather-poss.1sg   with

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¹⁴ Angle brackets indicate code-switching to Russian.

'I am always with my grandfather'. (field text)

More examples like these are found in the field texts for different possessive markers. In elicitation sessions speakers sometimes produced and always allowed the omitted possessor option for proper possessives. The explicit possessor option was sometimes judged as contrastive (*e. g.* "OUR roof is X, while the neighbors' roof is not X" for (22)), but never gave rise to comments signaling infelicity which abound in section 4 with associative possessives. For the other two markers an explicit NP internal possessor was also never allowed (as shown in their respective sections). This constitutes another piece of evidence in favor of distinguishing the proper possessive *-en*[I] from the other three markers.

3.2.2. Uniqueness

In this section I reproduce Elisabeth Coppock and David Beaver's (2015) data involving the English Saxon genitive construction (as in *John's house*), which show that the construction does not inherently imply uniqueness of the NP referent.

Coppock and Beaver consider the traditional assumption that the genitive construction is definite, based on the observation that in an argumental position with a definite possessor this construction typically behaves like a constant term (as having a denotation of type *e*). In (25) this is illustrated using the negation test of Löbner (1985, 2011).

An utterance ascribing two contradictory properties to a Saxon genitive NP entails that the same referent (in this case Mary's pet rabbit) has both properties, which makes the utterance infelicitous. Cf. (25) which involves the existential quantifier *some* and is not contradictory.

(25) (Ibid.: 417)

a. #Mary's pet rabbit is in the cage and Mary's pet rabbit is outside the cage. (contradictory)

b. Some rabbit is in the cage and some rabbit is outside the cage. (not contradictory)

Importantly, in case the construction is in a predicative position, it does not give rise to a contradiction as (26) shows. Here a Saxon genitive NP behaves just like an indefinite NP (26) and unlike a definite NP (26), which does give rise to a contradiction.

(26) (Ibid.: 418)

a. The rabbit in the cage is Mary's pet and the rabbit sitting just outside the cage is Mary's pet. (not contradictory)

b. The rabbit in the cage is a pet Mary owns and the rabbit sitting just outside the cage is a pet Mary owns. (not contradictory)

c. #The rabbit in the cage is the pet Mary owns and the rabbit sitting just outside the cage is the pet Mary owns. (contradictory)

To account for these data Coppock and Beaver propose that a Saxon genitive NP by itself denotes a property (type $[e \rightarrow t]$ in an extensional framework). In an argumental position as in (25) it undergoes type-shifting to type e via the IOTA type-shift which takes a property and returns the unique individual bearing that property[15]. In a predicative position no type-shift applies since the NP must be of type $[e \rightarrow t]$ to combine with the denotation of the subject NP and, therefore, the NP does not imply uniqueness.

Perhaps strikingly, this pattern is not reproduced in the Northern Khanty data.

First, let's consider an example where the context establishes multiple referents satisfying the description 'your book'. In (27), in a context that explicitly states that the addressee has written several books, one can felicitously use a POSS2 marked singular NP to refer to one of the books. This suggests that the proper possessive NP does not require uniqueness.

(27) **(năŋ)** **kiniškaj-en** λɰŋət-s-ɛm
     you   book-POSS.2SG   read-PST-1SG>SG
     {I haven't seen my classmate Lena for several years. She became a writer and wrote several books. Now I meet her, greet her and say:} 'I read your book. {You wrote it well. I want to read all of your books}'.

Example (28) reproduces the negation test for the proper possessive. Here 'your bicycle' is attributed two contradictory properties of standing here and standing there, but no contradiction arises. The noun phrases are interpreted as referring to two different bicycles[16].

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[15] Coppock and Beaver do not attempt to integrate some solution to the issue of incomplete descriptions such as "the cat", which obviously does not presuppose that there exists only one cat in the world. See (Schwarz 2009, Elbourne 2013) for a treatment of domain restriction in a situation semantic framework.

[16] The use of the additive particle *pa* is also suggestive, since we would expect that the particle implies anti-uniqueness ('there is at least one more x which is P, beyond the NP referent') which is in direct contradiction with uniqueness and would result in infelicity if the NP here required uniqueness.

(28) **nǎŋ welik-en** tăm λoλ´,
you bicycle-POSS.2SG this stand[NPST.3SG]

tʉta-šk pa **nǎŋ welik-en** λoλ´
there-ATT ADD you bicycle-POSS.2SG stand[NPST.3SG]

{A child asks "where are my bicycles?". Answer:} 'Your bicycle is standing here, and another bicycle of yours (lit. more your bicycle) is standing there a bit further'.

In a predicative position the proper possessive similarly does not imply uniqueness as (29) shows.

(29) mašaj-en **nǎŋ ewij-en**, kat'aj-en pa **nǎŋ ewij-en**
M.-POSS.2SG you daughter-POSS.2SG K.-POSS.2SG ADD you daughter-POSS.2SG

'Masha is your daughter and Katya is your daughter'.

These data suggest two things. Firstly, since in a predicative position proper possessive marked noun phrases do not appear to carry uniqueness inferences, the proper possessive does not lexically encode any uniqueness requirements. Secondly, since in an argument position the same is observed, it is natural to assume that Northern Khanty does not have a uniqueness-based entity-type deriving type-shift like IOTA unlike English (Coppock, Beaver 2015)[17]. I hope to carry out an extended investigation of the range of interpretations available to different kinds of Northern Khanty NPs in future work.

3.2.3. Existence

Example (31) shows that it is impossible for a possessive marked NP to scope below negation. The only available interpretation for this sentence is that the addressee does not currently have their bike (for whatever reason). The only way to express that the addressee does not have a bike is to use the unmarked form as in (30).

(30) **nǎŋ welik** ănt tăj-λ-ən
you bike NEG have-NPST-2SG

'You don't have a bike'.

(31) **nǎŋ welik-en** ănt tăj-λ-ən
you bike-POSS.2SG NEG have-NPST-2SG

_____

[17] Which is in agreement with Heim's (2011) hypothesis that all articleless NPs are interpreted as existentially-quantified and not of type *e*. See also (Šimik, Demian (to appear)) for experimental evidence supporting Heim's hypothesis, contra the proposals of (Chierchia 1998, Dayal 2004, Geist 2010) who in one way or another assume that articleless NPs might have maximality-based readings.

'You don't have your bike (*e. g.* it is broken)'.

#You don't have a bike.

Recall, that scoping below negation was similarly impossible for Komi possessives, but possible for Mari possessives (Simonenko 2017, and section 2.2 of this paper). This difference was attributed by Simonenko to an existential presupposition present only in Komi possessives. In the same vein I analyze the proper possessive as triggering an existential presupposition (see section 4.3) which gives rise to the temporary absence reading of the negated *tăjti* 'have' verb in (31) to avoid contradiction.

3.2.4. Relations available to the proper possessive

Lena Karvovskaya (2018) investigates the semantics of adnominal possessive constructions cross-linguistically. She distinguishes two main types of strategies of possessive marking: idiosyncratic and non-idiosyncratic. (This roughly corresponds to the traditional "alienable *vs.* inalienable" distinction, see (Ibid.: §1.2.2) on why this distinction is not workable.)

An idiosyncratic strategy is necessarily semantically marked or restricted. It is "predetermined to mark a limited set of relations that are systematically derived from the semantics of the possessed noun" (Ibid.: 24).

A non-idiosyncratic strategy is not semantically restricted and can pick up virtually any relation from the context (see the detailed discussion in Ibid.: §2).

The two strategies are illustrated in (32) for Adyghe (< Northwest Caucasian), respectively.

(32) ADYGHE

    a. s-ŝha

       1SG-head

       'my head'

    b. s-jə-ŝha

       1SG-POSS-head

       'my head' (said by a zoologist about a dog's head) (Gorbunova 2009: 153-154 cited after Karvovskaya 2018: 24)

Karvovskaya analyzes the two strategies as involving to different possessive operators: one restricted to possessive relations derived from the head noun's meaning

(intension), the other unrestricted, picking up whatever relation is salient in a given context. For a discussion of how the first operator — MaxSpec$_i$ — might derive such a relation, see (Ibid.: §2.2.2). Importantly for us, the relations in question must be stereotypically associated with a given noun in this culture[18]: for example, part-whole for a body part like 'head' in the above example, but also part-whole for the noun 'person' (*i. e.* as a part of the community of a village) in Tawala (< Austronesian; Ezard 1997: 98 cited after Karvovskaya 2018: 44, see Ibid. for more examples of non-trivial stereotypical possessive relations).

In (Mikhailov (manuscript)) I analyzed Northern Khanty proper possessives as corresponding to the unrestricted MinSpec$_i$ operator of (Karvovskaya 2018), because of the frequently encountered associative interpretations as in (33), where the possessive marker expresses a 'standing in the same village as' relation.

(33) was'a-jen   mănεm-a   **cerkow-əλ**   wan-əλt-əs-λe

     V.-POSS.2SG   I-DAT   church-POSS.3SG   see-CAUS-PST-3SG>SG

     '{Me and Vasya were walking around Kazym village.} Vasya showed me the church'.

However, while applying the explicit possessor diagnostic I discovered that associative interpretations are unavailable with an explicit possessor. While it is always possible to express a possessor in the preceding examples of this section, in (33) speakers comment that *λɨw cerkow-əλ* [he church-POSS.3SG] means that it is specifically Vasya's church that he owns. It cannot be the church standing in the same village that Vasya lives in. More examples like this are found in the following section. The analysis of the proper possessive is presented together with the associative one in section 4.3.

4. Associative possessive -en^{II} (ex-salient article)

For reasons that will become clear in section 4.2 I revise the name of the *-en*^{II} marker to the "associative possessive *-en*^{II}" (which is different from the proper possessive *-en*^{I}). Based on the explicit possessor diagnostic it will be shown that the other possessive

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[18] For a discussion of the methodological problems associated with this analysis, see (Ibid.: §2.2.3). It is hard to know which relations are stereotypical to a given culture without a separate cultural study, which is beyond the scope of a typological work and of the present work.

marker also have associative variants. To my knowledge no argument for distinguishing homonymous proper and associative possessives has been made before in the literature.

4.1. Data from (Mikhailov (manuscript))

According to (Mikhailov (manuscript)) the associative *-en*[II] is mostly found in directive speech acts (Searle 1969). It is used with unique familiar objects, while with non-unique novel objects its use is barred (unlike the proper possessive *-en*[I]).

In (34) the use of POSS2 is obligatory with a unique cup in the context. In (35), on the other hand, **with several cups on the table POSS2 marking is infelicitous** (cf. speaker's comment). Note that in both examples it is irrelevant who is the lawful owner of the cup (be it the speaker, the addressee, or another person, as the context indicates), POSS2 does not mark ownership here.

(34) **an-#(en)/#-ew**   mi-je[19]

   cup-POSS.2SG/-POSS.1PL   give-IMP.SG.SG

   {At my place / Speaking to a friend at another friend's place. There's only one cup on the table.} 'Pass me the (lit. your) cup'.

(35) **an-(#en)**   mi-ja

   cup-POSS.2SG   give-IMP[SG]

   {At my place / Speaking to a friend at another friend's place. There's several cups on the table.} 'Pass me a cup'.

   Speaker comment on *-en*: "[the addressee] will then ask 'which cup?'".

 Note that the use of POSS.1PL in (34) is infelicitous as there are no grounds for claiming that the cup is 'ours'. If one were to claim that POSS2 marking is due to an associative relationship between the addressee and the cup ('your cup, because I am talking to you about it') naturally expressible by a proper possessive, it wouldn't be clear why an associative relationship with both interlocutors cannot be construed ('our cup, because we are talking about it'). If the associative account were on the right track for such cases, we would expect the use of POSS2 to generate the already familiar implicature 'yours, but not mine', which is not the case for these examples.

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[19] POSS2 marked objects in such cases occur with objective conjugation on the verb and vice versa for unmarked NPs. The notation *an-#(en)* thus means that the unmarked form is infelicitous in this context even given subjective conjugation on the verb.

Example (36) illustrates the impossibility of the associative *-en*[II] with novel referents. As the hole has not been mentioned in prior context and does not yet exist, the unmarked form must be used. (Cf. (37).)

(36) **mɨw lot-(#en)** χir-a

earth hole-POSS.2SG dig-IMP[SG]

{Working in the garden.} 'Dig a hole'.

(37) **mɨw lot-#(en)** lăp χir-e

earth hole-POSS.2SG tight dig-IMP.SG.SG

{Working in the garden.} 'Fill up the hole'.

In (38) again the associative *-en*[II] is again preferred over the unmarked form in a context with a unique object, although unlike in (34) POSS.1PL marking is also possible (as the black board belongs to the same class as the teacher and her student). However, just like in (34) **POSS2 does not compete with POSS.1PL here**, as its use does not generate the implicature 'yours, but not ours'. This is the only difference between *-en*[I] and *-en*[II] discussed in (Mikhailov (manuscript)).

(38) was'a, **soχλ-en/**[OK]**-ew/#-∅** məŋχ-λi

V. board-POSS.2SG/-POSS.1PL wipe[IMP]-SG.NSG

{A teacher is telling her student.} 'Vasya, wipe the / our board!'

For all cases of the associative *-en*[II] use, **if the addressee is plural, then *-ən* [POSS.2NSG] is used accordingly**, as in (39).

(39) ńawrɛm-ət, **soχλ-#(ən)** məŋχ-a-λən

child-PL board-POSS.2NSG wipe-IMP-NSG.NSG

{A teacher is telling her students.} 'Children, wipe the board!'

Finally, just like the proper possessive, **the associative *-en*[II] does not require an antecedent NP**, as all of the examples in this section were uttered out of the blue.

As per its restriction to directive speech acts, note that in (40) the use of POSS2 is infelicitous with a unique kettle, which (Mikhailov (manuscript)) suggested is due to it not being a directive, but a constative speech act. Because the marker here appears to compete with POSS.1DU[20], it was analyzed as the proper possessive *-en*[I]. However, given

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[20] An attentive reader might notice that in the roof example (22) POSS.1PL was used. For some speakers it appears that POSS.1DU is drifting towards being lost, while some other speakers prefer to use it

new data, below (section 4.2.2) I make an argument to the extent that both the POSS.1PL and the POSS.2SG are associative possessives in this example.

(40) **šajpuɨ-ɛm/-ɛmən/#-en/#-Ø**   sora   kawərm-əλ

kettle-POSS.1SG/-POSS.1DU/-POSS.2SG   quickly   boil-NPST[3SG]

{The speaker and their friend are sitting in the speaker's kitchen, tired after a bath. They just put the kettle on fire and are waiting for it to boil in silence. The speaker says:} 'The kettle is boiling quickly!'

Speaker comment on *-en*: "is it the case that only he [the addressee] needs the kettle or was it only him who put the kettle on the stove".

This example was compared to (41) to the conclusion that in the latter POSS2 marking is obligatory, unlike the former, since only the latter conveys a directive speech act. Again, this argument is to be revised in section 4.2.3.

(41) **an-#(en)**   χăś   śi   răkn-əλ,   ajəλta

cup-POSS.2SG almost   EMPH   fall-NPST[3SG]   carefully

{The speaker's friend helps them take care of the mess in the kitchen. Among the things on the table there's a cup just on the edge. The speaker says:} 'Careful, the cup is about to fall!'

In (Mikhailov (manuscript)) it was hypothesized that the associative *-en*[II] is a salient article — it conveys that the NP referent is salient to the addressee. A similar kind of marker has been described for the Bantu language Bulu in (Barlew 2014). Below, however, I will provide a different explanation for its seeming preference for referents salient to the addressee, as other possessive markers are also found in this use, which was not noticed in (Mikhailov (manuscript)). (See, however, section 5 in which the salient article hypothesis again becomes relevant.)

4.2. Novel data

4.2.1. Explicit possessor

Unlike the proper possessive *-en*[I], the associative possessive *-en*[II] does not allow an explicit possessor as shown below.

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when appropriate. Whatever the choice of the number for this marker, the competition argument I make remains valid.

Example (42) (based on (34)) shows that in a directive speech act a POSS2 marked object noun phrase cannot contain an explicit possessor (in this case the second person pronoun). The speaker's comment suggests that with an explicit possessor the POSS2 marker is interpreted as a proper possessive denoting the stereotypical relation for this noun, which is ownership in the case of *an* 'cup'.

(42) **(#năŋ)** **an-en** mij-e
you.SG cup-POSS.2SG give-IMP.SG.SG
{There's one cup on the table:} 'Give me the cup'.
Speaker comment on *năŋ*: "it's like 'give me your cup, don't touch grandma's cup', it should really be your cup".

Example (43) similarly shows that an explicit possessor in a POSS2 marked NP requires that the marker be interpreted as a proper possessive. If there is no possessive relationship between the addressee and the NP referent, explicit mention of the possessor is infelicitous.

(43) was'a, **(#năŋ)** **m'ačok-en** mij-e
V. you.SG ball-POSS.2SG give-IMP.SG.SG
{The child picked up a dirty ball from the ground. His parent says:} 'Vasya, give me the ball'.
Speaker comment on *năŋ*: "this won't do if it's a dirty ball from the street, [*năŋ*] works if it's his ball".

Example (44) shows the same for an indirect speech act, and (46) shows the same for a plural addressee (here speakers provided comments similar to (44)).

(44) was'a, **(#năŋ)** **χur-en** iλ χaś śi pit-λ
V. you.SG image-POSS.2SG down almost EMPH become-NPST[3SG]
{At the speaker's house, rearranging the furniture, the speaker:} 'Vasya, the picture [next to you] is going to fall! {Catch it!}'.
Speaker comment on *năŋ*: "it's your [*i. e.* SM's] picture, not Vasya's, this won't do"

(45) want-a-ti, **(#nin)** **χur-ən** iλ χaś śi pit-λ
look-IMP-PL you.DU image-POSS.2NSG down almost EMPH become-NPST[3SG]
{At the speaker's house, rearranging the furniture, the speaker:} 'Vasya, the picture [next to you] is going to fall! {Catch it!}'.

Example (46) shows that it is impossible to use the associative possessive *-en*[II] if there is another NP internal possessor. In this case the NP may be either unmarked, as in this case, or marked with POSS.3SG (see section 1.3 on optionality of possessive marking with non-pronominal possessors). I take this as evidence that **the associative possessive *-en*[II] is in complementary distribution with possessive markers** due to it occupying the same syntactic projection.

(46) **kat'a-jen**   **an-(*en)**   mi-je

K.-POSS.2SG   cup-POSS.2SG   give-IMP.SG.SG

'Give me Katya's cup'.

The readings available to the associative possessive seem less restricted than those available to the proper possessive, which is correlated to the possibility of overt possessor expression. I propose that these data indicate that the associative possessor corresponds to Karvovskaya's (2018) MinSpec$_i$ operator, which is unrestricted in the kinds of relations that it may express, given that the intended relation is salient enough in the given context that the addressee might decode it, unlike the MaxSpec$_i$ operator, which corresponds to the proper possessive and is restricted to stereotypical noun-based relations (see section 3.2.4, the analysis is presented in 4.3).

4.2.2. Other possessives

In this section I consider contexts where a directive is intended for persons other than the second person. The data presented here show that the sorts of uses of POSS2 that (Mikhailov (manuscript)) took to be those of a salient article are really available to the other possessives also, and, therefore, it is more appropriate to speak of another possessive beyond the proper one rather than of a salient article.

In (47) in a jussive context, requiring the addressee to ask some third person to do something, the unique pot in this situation is marked with POSS.3SG. Two speakers have commented, suggesting that the rationale behind the POSS.3SG use here is that this is the unique pot standing in some relationship to Vasya ('being spatially close to' in this case). The unmarked form here is impossible as it suggested that some non-unique pot is meant.

(47) was'a-jen   **put-#(əλ)**   at   mă-λ

V.-POSS.2SG   pot-POSS.3SG OPT   give-NPST

{The speaker is doing the dishes in the kitchen. There's a single pot left on the table, where Vasya is. Another person asks:} '— {How should we help you?} — Let Vasya give me the pot'.

Speaker comment: "[əλ is used] because it's the single pot standing near Vasya, [with ∅] it can't be this pot that is standing here, it's some pot that we don't even know [with ∅]".

Example (36) shows that if the subject is plural, the marker is accordingly POSS.3PL.

(48) ńawrɛm-λ-an   **put-#(eλ)**   at   mă-λ

child-PL-POSS.2SG   pot-POSS.3PL   OPT   give-NPST

{Same as (47), but with children instead of Vasya:} '{— How should we help you?} — Let the children give me the pot'.

Examples (49)-(50) show for a hortative context, prompting the addressees to do something together with the speaker, that there POSS.1PL marking appears expectedly, and it also requires uniqueness of the NP referent. (Example for a similar use of POSS.1SG is given in section 4.2.4 below.)

(49) oλəŋ-əλ-ən   χʉλ-əŋ   **ńań-#(ew)**   λɛ-λ-ew

beginning-POSS.3SG-LOC fish-PROP   bread-POSS.1PL   eat-NPST-1PL.SG

{There's a fish pie and other dishes on the table.} 'Let's first eat the fish pie'.

(50) oλəŋ-əλ-ən   χʉλ-əŋ   **ńań-(#ew)**   λɛ-λ-əw

beginning-POSS.3SG-LOC fish-PROP   bread-POSS.1PL   eat-NPST-1PL

{There's several fish pies and other dishes on the table.} 'Let's first eat a fish pie'.

4.2.3. Restriction to directives

Contra (Mikhailov (manuscript)) it appears that associative possessives are not restricted to directives.

Consider (51) (repeated from (40)). (Mikhailov (manuscript)) attributed the infelicity of POSS2 marking here to it being a proper possessive in this example. Importantly, however, the use of an NP with an overt possessor is impossible here with POSS.1DU marking: *min šajpʉt-ɛmən* [we.DU kettle-POSS.1DU] is inappropriate if the speaker is talking about his kettle that he and the addressee will drink tea from, as in (51). This means that POSS.1DU is an associative possessive in this example. Since POSS2

competes with it here yielding the familiar Q-implicature ('yours, but not ours'), I conclude that associative possessives are not restricted to directives.

(51) **šajput-ɛm/-ɛmən/#-en/#-Ø**   sora kawərm-əs

   kettle-POSS.1SG/-POSS.1DU/-POSS.2SG quickly boil-PST[3SG]

   {The speaker and their friend are sitting in the speaker's kitchen, tired after a bath. They just put the kettle on fire and are waiting for it to boil in silence. The speaker says:} 'The kettle boiled quickly!'

   Speaker comment on *-en*: "is it the case that only he [the addressee] needs the kettle or was it only him who put the kettle on the stove?".

What associative possessives do require, is that there be a retrievable salient relation in the context. If POSS2 is used in (51), the speakers accommodate such a requirement, which results in the inference that it was the addressee who put the kettle on the stove or that only the addressee needs the kettle.

 Note the infelicity of unmarked forms in the above examples. For the unmarked form in such examples speakers comment: "is this nobody's kettle then? that won't do". It seems that for Northern Khanty it is strongly expected that, if a relationship of the NP referent with some other discourse referent is conceivable and sufficiently salient in this context, the corresponding possessive marker will be used. As noted in section 2.1 for the Obdorsk dialect possessive marking is much more common in Northern Khanty than in European languages such as English or Russian. The same is true for the Kazym data discussed here.

 I hypothesize that the higher frequency of possessive marking in Northern Khanty is due to the associative possessives bearing a uniqueness presupposition that the NP referent bears the property denoted by the NP and stands in a contextually-retrievable relation to the possessor. Assuming that bare NPs simply denote properties and undergo the EX type-shift to compose with the verb, which existentially binds their argument (see Coppock, Beaver 2015 and section 4.3 of this paper), the infelicity of bare forms in the above examples and the higher frequency of possessives in the corpus can both be attributed to pressure from *Maximize Presupposition!* (Heim 1991, Coppock, Beaver

2015 and references therein) to choose the expression bearing the stronger presupposition out of two otherwise equivalent expressions[21].

The reason why POSS2 marking appeared to be restricted to directives (Mikhailov (manuscript)) is because a directive that requires the addressee to interact with some object usually implies the addressee stands in some salient relation to the object. For example, if I'm asking you for the cup that stands on the table, or if I'm saying that the cup is about to fall, implying that you catch it, it is quite natural to suppose that you are closer to the cup than I am and, therefore, uniquely standing in the 'being spatially close to' relation to it.

Crucially, however, other contexts beyond the ones requiring the addressee to interact with the object make associative possessive marking possible. For example, consider (52) where the relation in question is 'being usually played with by'.

(52) **m´ačok-#(ən)**   pet´aj-en-ən   wu-s-i
      ball-POSS.2NSG P.-POSS.2SG-LOC   take-PST-PASS[3SG]
      {Vasya and Katya are looking for the ball they usually play with at the kindergarten. The teacher says:} 'The ball has already been taken by Petya'.

More examples of different associative possessive marking outside of directives are discussed in section 5 where corpus data is considered.

4.2.4. Variation in speakers' judgements

Given the fact that the marker's use depends on a contextually-retrievable associative relation it is expectable that some variation might be found in speakers' judgements regarding whether an associative possessive might be used in the given context.

During elicitation sessions it was sometimes the case that one speaker provided an associative possessive, whereas the other couldn't retrieve the required relation in this context and found the associative possessive infelicitous.

One such example is (53), whereby a mother is telling her children to leave the kettle home. Two speakers opted for POSS.1PL in this example and commented on POSS.2SG like "then it's only the children's kettle, only the children use it", while the other

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[21] The availability of POSS.1SG marking in (51) is also in line with this hypothesis, it being used as a proper possessive, it is not expected to compete w. r. t. *Maximize presupposition!* with the POSS.1DU as the two differ both in their at-issue content and in their presuppositions, see section 4.3.

speaker allowed both options, but gave the same comment for POSS.2NSG with an explicit possessor as in *nin šajpʉt-ən* [you.DU kettle-POSS.2NSG]. That is, this latter speaker allowed a use of an associative possessive here with a relation like 'being carried by', while for the other two speakers this relation wasn't sufficiently salient and only the proper possessive ownership interpretation of POSS.2NSG was available to them.

(53) ńawrɛm-ət, **šajpʉt-ew/%-ən**   juʌən   at   woʌ
      child-PL   kettle-POSS.1PL/-POSS.2SG at.home OPT be[NPST.3SG]
      {A mother says to her children before going out (on a picnic) about the only kettle that they have:} 'Let the kettle remain home'.

Example (54) presents the possibility of POSS.1SG in context where the speaker declares their actions that the decided upon right now ('I'll eat the fish pie out of the two dishes that we have to finish'). Two speakers initially provided the POSS.2SG option (this use will be discussed in section 5.2.4) and gave different comments for the POSS.1SG option. The comments seem to suggest that the analysis suggested here is on the right track as the availability of POSS.1SG relies on the presence of a salient relation between the NP referent and the speaker in this context. For the first speaker, having decided to eat the cake provides enough basis for construing such a relationship, while the second speaker could only construe a more tangible relation, that of having already started eating this dish.

(54) ma   χʉʌ-əŋ   **ńań-en/-ɛm**   λɛ-λ-em
      I   fish-PROP bread-POSS.2SG/-POSS.1SG eat-NPST-1SG.SG
      {There's fish pie and soup left after the dinner. The interlocutors should finish the food or it will go spoiled.} 'I'll eat the fish pie.'
      Speaker 1 comment on *-ɛm*: "this is also acceptable, since I already decided to eat the pie".
      Speaker 2 comment on *-ɛm*: "this works if I already started eating the pie and I'm saying that I decided to finish it".

The preference of associative possessives for direct objects is further discussed in 5.2.5 where their competence with the topic marker *-en*[III] is discussed. For now, I turn to the analysis of the proper and associative possessives.

4.3. Proper and associative possessives

Given that the current work is mostly concerned with empirical facts found in the data available to me and does not attempt an entirely explicit analysis with an investigation of its consequences I limit the discussion to providing the lexical entries of the discussed markers which account for the generalizations presented in preceding sections, as well as mention the assumptions necessary for implementing a full analysis along the lines suggested here.

It should be noted that the analyses presented in this and later sections are preliminary in that some of the aspects of the data discussed in this paper are ignored as well as the entirety of syntax, which must be properly investigated and analyzed in the future. I note the points that require further refinements throughout.

My analysis requires a system in which expressions are interpreted by the interpretation function $\|.\|^{g,c}$ relative to an assignment function g that maps natural numbers (presented as indices) to relations or individuals and relative to a context c, which model the context-dependent nature of pronouns and relations in the denotations of proper and associative possessives.

The following rules and semantic principles (adapted from Coppock, Beaver 2015: 429-430) must be noted in addition to the standard Functional Application (FA, which applies an expression of type $[\sigma \rightarrow \tau]$ to an expression of type σ and returns an expression of type τ; Heim, Kratzer 1998).

The Shifting Rule (55) applies a given type-shift to an expression of an appropriate type. Recall that based on the absence of uniqueness inferences in proper possessives (section 3.2.2), I assume that Northern Khanty, unlike English, only has the EX type-shift which derives existential generalized quantifiers from predicates, which is necessary for the composition of predicate-denoting NPs with the verb, and does not have the entity-deriving IOTA type-shift[22].

(55) **Shifting Rule**

If $\delta \in \Delta$ (where Δ is the set of shifting operations in the language), and δ is of type $[\sigma \rightarrow \tau]$, and $\|\alpha\|^{g,c}$ is of type σ, then $\delta(\|\alpha\|^{g,c})$ is of type τ.

(56) **Inventory of shifting operations Δ**

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[22] As for the other two type-shifts that Coppock and Beaver introduce (OR and R), they are irrelevant for the data discussed here. I remain neutral as to whether these two type-shifts are present in Northern Khanty grammar.

$\Delta_{\text{Northern Khanty}} = \{\text{EX}\}$

(57) **Meaning shift: EX**

EX $\equiv \lambda P \lambda Q. \exists x[P(x) \wedge Q(x)]$

(58) **Maximize Presupposition[23]**

Among a set of alternatives, use the felicitous sentence with the strongest presupposition.

In addition to the expressions overtly present in the examples analyzed here, I assume the existence of null pronouns like *pro₃SGi* for pro-dropped arguments for each person-number combination, with the subscripts indicating: *i* — a numerical index assigned the referent of the pronoun by the assignment function, 3SG (and so on) — the syntactically represented person-number features relevant for the possessives as well as presuppositional constraints on the possible values of *i*. I assume that a possessed noun phrase involves a PossP shell, which minimally consists of a possessor nominal (*i. e.* an NP or a larger projection), a head of category Poss (which corresponds to the markers discussed here) and a possessed nominal smaller than PossP.

(59) **The structure of PossP**

[NP [Poss NP]Poss']PossP

For both the proper and the associative possessive I assume that they correspond to abstract operators POSS and ASSOC respectively and the particular person-number features spelled-out as a possessive in a given example are a result of agreement between the head corresponding to a given operator and the possessor NP. (I leave an explicit formulation of the agreement process for future work.)

The denotation of the POSS operator corresponding to a proper possessive is given in (60) which is based on Karvovskaya's (2018: 62) MaxSpec*i* operator which is restricted to stereotypical relations derived from the meaning of the noun phrase with the addition of an existential presupposition (discussed in sections 3.2.4 and 3.2.3, respectively). Following standard practice (Heim, Kratzer 1998), the existential presupposition is modelled as a domain restriction on the function denoted by the POSS operator. The

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[23] For the purposes of the current paper, I assume a simpler formulation of *Maximize Presupposition!* than that of (Coppock, Beaver 2015), also assuming that sentences minimally differing with respect to the particular Poss head present in the structure of a noun phrase qualify as alternatives for this principle. A precise formulation and an investigation of predictions of such an analysis must be left for another occasion.

contextual dependence of the relation is modelled through the index i on the operator which is assigned some contextually salient relation by the assignment function g.

(60) $\|POSS_i\|^{g,c} = \lambda P \lambda y \lambda x: \exists z[P(z) \wedge g(i)(z)(y). P(x) \wedge g(i)(x)(y)$ defined iff $g(i)$ is a stereotypical P-based relation

In prose, the POSS operator takes the denotation of a noun phrase, the individual in the denotation of the possessor NP and another individual and states that the latter individual is in the extension of the NP and stands in a contextually-salient relation to the former individual just in the case there exists at least one such individual and the relation is stereotypical and based on the intension of this NP. Importantly, bare noun phrases and noun phrases with POSS are of type $[e \rightarrow t]$ and must undergo type shifting for further composition.

The denotation of the ASSOC operator is given in (61) based on Karvovskaya's (2018: 62) MinSpec$_i$ operator. The ASSOC operator differs from the POSS operator in presupposing uniqueness of the NP referent in addition to existence and in returning that referent, that is, a noun phrase with the ASSOC operator is of type *e*.

(61) $\|ASSOC_i\|^{g,c} = \lambda P \lambda y: \exists !x[P(x) \wedge g(i)(x)(y)]. \iota x[P(x) \wedge g(i)(x)(y)]$

An additional assumption is required to account for the fact that associative possessives do not admit overt possessors. This can be modelled either by assuming that ASSOC requires the possessor NP to be phonologically null and the possessor NP undergoes NP-deletion (as proposed in Elbourne 2013: §10.2 for the case of NP complements of personal pronouns) or by assuming that ASSOC specifically selects for *pro* pronouns as possessors. I leave the comparison of the two analytical options for future work.

(62) **Syntactic requirement on possessors with ASSOC**

ASSOC requires that the possessor NP occupying the Spec,PossP position be phonologically null.

5. Topic marker *-en*[III] (ex-anaphoric article)

5.1. Data from (Mikhailov (manuscript))

The topic marker *-en*[III] is used with discourse referents introduced in prior linguistic context and it is barred with novel referents.

In (63) **upon first mention the soldier must be unmarked**. In the continuation in (64) upon second mention the soldier is optionally marked with POSS2, while upon third mention he is necessarily marked (subscripts indicate order of mention).

(63) ma χot-a λuŋ-s-əm. śăta **šăldat-(#en)₁** oməs-əλ.

I house-DAT enter-PST-1SG there.LOC soldier-POSS.2SG sit-NPST[3SG]

'I entered a house. A/#the (lit. your) soldier was sitting there. ...'

(64) ma **šăldat-%(en)₂** χuśa wana măn-s-əm, puškan-ən

I soldier-POSS.2SG to closer come-PST-1SG gun-LOC

šăš-s-ɛm. **šăldat-#(en)₃** pakn-əs.

show-PST-1SG>SG soldier-POSS.2SG become.scared-PST[3SG]

{Cont'd from (63)} 'I came closer to the soldier₂ and aimed at him with my gun. The (lit. your) soldier₃ got scared'.

Example (65) is another case in point. Here the use of the bare form upon second mention of the dog implicates that it is not the same dog as in prior context. The use of POSS2 with a familiar referent is necessary in this example. Note also that the use of POSS.1PL is infelicitous here, which again shows that **POSS2 does not compete with POSS.1PL in this example** and must not be a proper possessive marker but is rather some semantically distinct marker.

(65) **amp-en/#-ew/#-Ø** ma pɛλ-am-a χurət-ti pit-əs

dog-POSS.2SG/-POSS.1PL I at-POSS.1SG-DAT bark-NFIN.NPST become-PST[3SG]

'{I was walking along the street when I saw a dog.} The (lit. your) dog started barking at me'.

Speaker comment on -Ø: "then it's some other dog, not clear which".

Example (18) shows that the topic marker *-en*[III] may also be used in bridging contexts. The first sentence introduces a stealing situation, the agent of which can then be referred to with a topical POSS2 marked NP in the second sentence. (POSS.3SG is also possible here, presumably, in a proper possessive function, marking a relationship between the thief and the computer.)

(66) muzej ewəλt kampjuter λoλəm-s-a.

musem from computer steal-PST-PASS[3SG]

muλχatəλ **λoλmaχ-en/-əλ** wəjt-s-a

yesterday   thief-POSS.2SG/-POSS.3SG   find-PST-PASS[3SG]

'A computer was stolen from the museum. Yesterday the thief was found'.

In case the thief is marked with POSS2[24], a continuation introducing another thief is impossible (67), which suggests that **the topic marker -en[III] has a uniqueness implication**.

(67) ...   muλχatəλ   **λoλmaχ-en**   wөjt-s-a

      ...   yesterday   thief-POSS.2SG find-PST-PASS[3SG]

      #tăm   χatλ   kim-mit   λoλmaχ-əλ   wөjt-s-a

      this   day   second-ORD thief-POSS.3SG   find-PST-PASS[3SG]

      '{A computer was stolen from the museum.} Yesterday, the thief was found. #Today, the second thief was found'.

An important difference between the associative -en[II] and the topical -en[III] is that **the latter does not agree in number with the addressee**. This is demonstrated in (68) which minimally differs from (65) in that the speaker in the context addresses a plural addressee, but -en [POSS.2SG] is still used, instead of the plural variant -ən [POSS.2NSG].

(68) **amp-en/#-ən**   χurət-ti   pit-əs

      dog-POSS.2SG/-POSS.2NSG bark-NFIN.NPST   become-PST[3SG]

      {A mother is telling her children.} '{I was walking along the street and I saw a dog.} The (lit. your (SG)) dog started barking at me'.

Importantly, the topic marker -en[III] is unavailable with both locally (i. e. in a given situation) globally (i. e. in a given cultural setting) unique referents. This is shown in (69) (again repeated from (51)) and (70) and in (71) respectively.

(69) **šajput-ɛm/-ew/#-en/#-∅**   sora   kawərm-əλ

      kettle-POSS.1SG/-POSS.1PL/-POSS.2SG quickly boil-NPST[3SG]

      {The speaker and their friend are sitting in the speaker's kitchen, tired after a bath. They just put the kettle on fire and are waiting for it to boil in silence. The speaker says:} 'The kettle is boiling quickly!'

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[24] With POSS.3SG marking such a continuation is possible, because the marker also has a partitive specific function, marking a referent that is a part of some contextually available set ('one of the thiefs'), see (Mikhailov 2020: §3.2.2).

In (70) the unique church of Kazym village cannot be marked with POSS2 with POSS.3SG marking available as there is an associative link between Vasya living in the village and the church standing in the same village. In (71) the preferred marking strategy is POSS.1PL, with POSS2 barred by some speakers and accepted by others, but never provided as the first reaction.

(70) was'a-jen   mănεm-a **cerkow-əλ/#-en/#-∅²⁵**   wan-əλt-əs-λe

V.-POSS.2SG   I-DAT   church-POSS.3SG/-POSS.2SG   see-CAUS-PST-3SG>SG

'{Me and Vasya were walking around Kazym village.} Vasya showed me the/his church'.

(71) kăt   χătəλ măr   śi   **χătλ-#(ew)/%-en**

two   sun   in   EMPH   sun-POSS.1PL/-POSS.2SG

păλəŋ   saj-ən   ăn   kăλ

rain.cloud   behind-LOC   NEG   be.visible[NPST.3SG]

'For two days already (our) sun hasn't been visible because of the clouds'.

In (Mikhailov (manuscript)) I hypothesized that semantically the topical -en^III must be similar to European strong definite articles, which are also restricted to anaphorically accessible NPs and are unavailable with globally unique referents but are different in being acceptable with locally unique referents (König 2018).

However, it isn't clear, (i) why in some cases topical -en^III marking is optional or the speakers disagree as to its possibility (as in (72) below and in (64) above) and (ii) why some POSS2 marking seems acceptable at least to some speakers with globally unique as in (71).

The example (72) again shows that at least in some cases the topical -en^III is not necessarily used with anaphorically accessible NPs (the church in the answer) and might be possible with anaphorically inaccessible but otherwise given in the context referents (which is indeed expected of strong / anaphoric articles (Arkoh, Matthewson 2013)).

(72) — χuta   **jεm**   **χot-(^OKen)**?

where   sacred   house-POSS.2SG

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²⁵ In (Mikhailov (manuscript)) the bare form was provided as an acceptable option, however, in a context where Vasya is explicitly said to live in Kazym speakers only accept the POSS.3SG marked form, see 4.2.

— **jɛm χot-OK(en)** woλ woš kʉtəp-ən

  sacred house-POSS.2SG be[NPST.3SG] village middle-LOC

'— Where's the (lit. your) church? — The (lit. your) church is in the middle of the village'.

Given the data of (Mikhailov (manuscript)) the topical -en[III] does not make a perfect match to European strong definite articles, so it seems reasonable to assume that the hypothesis is wrong and the inconsistent usage of POSS2 in the above examples is due to the marker there being not quite an anaphoric article and having some additional conditions of use, which are discussed in the next section.

5.2. Novel data

5.2.1. Explicit possessor

Example (73) (based on (65)) shows that using an explicit possessor with the topical -en[III] is impossible. Again showing that the marker used here is by no means a proper possessive.

(73) **(#năŋ) amp-en** ma pɛλ-am-a χurət-ti pit-əs

   your dog-POSS.2SG I at-POSS.1SG-DAT bark-NFIN.NPST become-PST[3SG]

   '{I was walking along the street when I saw a dog.} The (lit. your) dog started barking at me'.

   Speaker comment on *năŋ*: "it's another dog [than the one mentioned in the first sentence], it's your dog".

5.2.2. Topicality and subjecthood

We now turn to restrictions on the use of the topical -en[III].

In the examples from our field collection among approximately 35 tokens of (non-possessive) POSS2, only one appears on a non-subject NP, given in (74). All the others with the exception of the use with the filler word *ut-en* [thing-POSS.2SG] (see fn. 26) are found strictly on familiar subjects which are significant characters in the story. It has been proposed that in Northern Khanty and Ob-Ugric generally topicality is tied to subjecthood, so that topical referents are usually promoted to subjects, while non-topical subjects are demoted to oblique roles, and topical objects in the presence of a topical subject trigger object agreement on the verb (presumedly, due to movement to an Agr(eement with)O(bject) projection), see (Nikolaeva 2001, Kiss 2019). Examples in this section

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show that topical POSS2 marking is tied to topicality and subjecthood and, thus, is a much more restricted marker than a general anaphoric article (Schwarz 2009, 2013, Arkoh, Matthewson 2013).

This example comes from a text where the speaker describes how she and her grandfather used to fumigate their deers to drive away mosquitos. The use of POSS2 here is unusual as relatives are usually marked with the corresponding proper possessive and speakers generally forbid topical POSS2 use in such cases. The conditions for POSS2 use are entirely fulfilled in this context either, since the grandfather is not topical in this sentence, unlike all of the examples to be discussed below. An explanation for POSS2 marking in this example is provided in section 5.2.4.

(74) pɵsəŋ   wɛr-man   **tetuškaj-en**   piʎa   śi   jăŋ-s-ɛmən
      smoke   make-CVB   grandfather-POSS.2SG   with   ADD   go-PST-1DU
      'So we walked with the grandfather fumigating [them]'. (field text)

A similar example from elicitation data where a relative is POSS2 marked is given in (75) (repeated with adjustments from (48)). Two of the speakers I worked with allowed both the use of POSS2 and the expected use of the proper POSS.1PL in such cases, while another speaker always banned POSS2 uses when another possessive could be used. I believe that this instance of variation in judgements is a matter of pragmatic preference, as the latter speaker (unlike the former two) is a teacher of Khanty and as such might be biased toward normative language use.

(75) **ńawrɛm-ʎ-an/-aw**   puɬ-eʎ   at   mă-ʎ
      child-PL-POSS.2SG/-POSS.1PL   pot-POSS.3PL   OPT   give-NPST
      '{— How should we help you?} — Let the children give me the pot [uttered by the parent washing the dishes]'.

Returning to the corpus data, a typical instance of POSS2 is given in (76). To set the context for the discussion to follow, I summarize the text.

The example comes from a fairy-tale about a married couple — the husband Ikilɛ and the wife Imilɛ — who were rich but didn't have any flour to make bread. One day, when the husband leaves for hunting, the wife finds some flour and makes a bread that she won't so much. However, she treats the bread poorly and the bread runs away to find the husband in the forest, who treats the bread with care and the bread is happily eaten by

the husband. The story thus has three main characters all of which receive POSS2 marking upon becoming the acting characters of a given episode, which generally corresponds to standing in a subject position. At some point in the story the couple's dogs also play a role and receive POSS2 marking in subject position. Importantly, this condition on the use of POSS2 is more specific than the requirement of familiarity of anaphoric articles cross-linguistically (*e. g.* Arkoh, Matthewson 2013).

The speaker first describes how the husband goes hunting and fishing. And then she starts talking about the wife's chores with (76). Note that here the wife isn't marked with POSS.3SG as the other main characters spouse but is rather marker POSS2 as an acting main character of the story in subject position. In (77) when the bread has already been introduced into the story but is in an object position in the first mention of the sentence it is marked with POSS.3SG (which is discussed in 5.2.5). Then on the second mention in the subject position, it is marked POSS2 as a topical referent.

(76) **im-en**   juʌən   χotχari   λ´ʉχət-λ,
     wife-POSS.2SG   at.home   floor   wash-NPST[3SG]

     λɛtut   wɛr-əλ,   pɵsan-λ
     food   make-NPST[3SG]   do.laundry-NPST[3SG]

     'The wife washes the floors at home, makes food, does the laundry'. (field text)

(77) śãλta in   **ńań-əλ**   śi   wɛr-s-əλλe,   wɛr-s-əλλe,
     then now bread-POSS.3SG DEM   make-PST-3SG.SG   make-PST-3SG.SG

     pa   iməλtijən **ńań-en**   jămijewa nuχ   śi   ji-s,
     ADD finally   bread-POSS.2SG nicely   up   EMPH become-PST[SG]

     wʉrta   ji-s
     rosy   become-PST[3SG]

     'Now then she was running and running around the bread [lit. doing that which she did earlier to the bread] and, finally, the bread raised nicely and became rosy'. (field text)

Compare this to (78) in which the dogs introduced in the immediately preceding sentence are unmarked, even though they are familiar and topical. I speculate that the dogs don't receive POSS2 marking in this utterance, as it continues with the bread as the topic (cf. (79) and (80) in which the dogs **are** marked). Note also that the bread is unmarked as a complement of a postposition, receiving no POSS2 marking or POSS.3PL

marking (as associated with the dogs). At this point it is appropriate to speculate also that associative marking is restricted to associations with topical referents, such as the ones that could receive POSS2 marking. (And in the second part of the sentence, the bread **is** marked with POSS2 as it is in a subject position.)

(78) **amp-ət ńań**   jupijən kʉš   χɵχəλm-əs-t,   ńań-ije-n
      dog-PL bread   after   although run-PST-3PL   bread-DIM-POSS.2SG

      nɵməs-λ: ma muj-a   pa ut-en[26]
      think-NPST[3SG] I   what-DAT ADD thing-POSS.2SG

      amp-ət ewəλt χunta-λ-əm?
      dog-PL from   run.away-NPST-1SG

      {The bread runs away and Imilɛ chases him.} '{And she says to the dogs: bite him, bite him.}The dogs started running after the bread and bread thought: in fact, why am I running from the dogs?' (field text)

Note also that in the continuation of the bread's utterance, the dogs **are** marked with POSS2, which is due to the dogs' being topical. And similarly, consider (80) in which the dogs on the second mention are topical / in the subject position and, therefore, marked with POSS2.

(79) **amp-λ-an**   jăm   amp-ət
      dog-PL-POSS.2SG   good   dog-PL

      '{In fact, why am I running from the dogs?} The dogs are good dogs'. (field text)

(80) *aj   pʉl-ije   nuχ wʉ-s   wʉ-s-λe   pa śăλta amp-a*
      small piece-DIM up   take-PST[3SG] take-PST-3SG.SG ADD then   dog-DAT

      *wuśk-əs-λe   **amp-λ-an**   juλən śi   χăj-s-ət*
      throw-PST-3SG.SG   dog-PL-POSS.2SG   home   EMPH   stay-PST-3PL

      'He tore a small piece from himself, he took it and then he threw it to the dogs, the dogs stayed at home'. (field text)

Overall, it seems reasonable to propose that the relevant notion of topicality that conditions this use of POSS2 is that of aboutness in the sense of (Strawson 1964, Reinhart

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[26] This sort of POSS2 marking with the filler word *ut-en* [thing-POSS2] which is translated into Russian as the Russian filler expression *eto sam-oe* [DEM INTS-NOM.N] is found through the corpus. I expect that it is related to POSS2 marking with demonstratives, but I leave the exploration of such a link to another occasion.

1981, Nikolaeva 2001): "the aboutness relation holds between the referent of the topic expression and the proposition if the referent is assumed by the speaker to be a center of current interest about which the assertion is made" (Ibid.: 7). The POSS2 marked NP referent must be cognitively activated as in (Gundel et al. 1993), that is: "the referent is represented in short-term memory" (Ibid.: 278) — which in English is the necessary and sufficient cognitive status for the use of independent demonstrative pronouns *this* and *that* and for stressed personal pronouns.

Another commonly occurring use is at the end of a narrative with a noun summarizing the aforementioned story. For example, in (81) the speaker summarizes the fairy tale referring to it as *śi mońśen* 'this fairy tale' with a demonstrative. The use of a demonstrative here may be taken to create the necessary conditions for POSS2 marking. Since the fairy tale has not been previously mentioned, as a particular referent it is not necessarily activated, which is remedied by the use of the demonstrative. A similar example, coming from a text describing how the speaker's family used to catch capercaillies when they lived in a chum tent, is given in (82).

(81) **śi** **mońś-en** śit oʌəŋən ńań oʌəŋən
  DEM fairy_tale-POSS.2SG DEM about bread about
  ńań ʌɛwasa ut-ti ăn mos-ʌ
  bread vainly do-NFIN.NPST NEG need-NPST[3SG]
  'This fairy tale is about that, about bread, one shouldn't treat it poorly ...' (field text)

(82) śi **ropota-jen** jetšə-s
  DEM[27] work-POSS.2SG end-PST
  'That's it, the work's done'. (field text)

Based on these example, I analyze the topical POSS2 as involving, in addition to the uniqueness and givenness requirements proposed in (Schwarz 2009), the requirement that the NP referent be attended to by the interlocutors as proposed for the Bulu salient article by (Barlew 2014) based on the experimental psychological notion of salience as attention. Thus, I hardwire the activated cognitive status of (Gundel et al. 1993) into the semantics of the marker.

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[27] Note that here *śi* is analyzed not as an NP-internal demonstrative (cf. the preceding example) but as a free-standing demonstrative in this context translated as 'that's it', although both options seem appropriate in this context and don't make a difference for our discussion.

Importantly, Barlew argues that the salient article is different from all kinds of English definites, including definite descriptions with *the* (which only require uniqueness), demonstratives (which also require some sort of demonstration), and pronouns (which require maximum salience, but not descriptive uniqueness), as the salient article requires **descriptive uniqueness among salient discourse referents**. Some preliminary data relevant for a comparison of the Bulu marker with the Northern Khanty topic marker is given in the next section.

5.2.3. Local uniqueness and salience

In this section I give a preliminary comparison of the Northern Khanty topic marker to the Bulu salient article (Barlew 2014).

But before that it should be noted that contra (Mikhailov (manuscript)) locally unique referents can receive POSS2 marking in case they are topical / subjects as well (83).

(83) **wońśəmut-əŋ ńań-#(en)** šɛŋk epλ-əŋ
berry-PROP bread-POSS.2SG very taste-PROP
{At the dinner there's a berry pie on the table as well as other dishes.} 'The berry pie is very tasty'.

Compare this to (84) (repeated from (70)) in which the church is in an object position and POSS2 marking is barred.

(84) was'a-jen mănɛm-a **cerkow-əλ/#-en/#-∅** wan-əλt-əs-λe
V.-POSS.2SG I-DAT church-POSS.3SG/-POSS.2SG see-CAUS-PST-3SG>SG
'{Me and Vasya were walking around Kazym village.} Vasya showed me the/his church'.

Turning to the Bulu salient article, Barlew shows that the marker in question *tè* is restricted to salient discourse referents, *i. e.* those which are attended to by the addressee either due to their sensory prominence or due to them being the object of the addressees goals.

In (85) the book is a salient referent as its location in the given context is important to both interlocutors and the book is at the center of their attention. Compare this to (86) in which the speaker is talking to her teenage son to whom the book is not salient as it is not related to his goals.

(85) BULU (< BANTU)

kálàtà	**tè**	à	nə̀	ndʒáŋán
book	TE	PN₁	COP	missing

{Andung and Abondo have a special book that is a family heirloom passed down from Andung's mother. It has family genealogy written inside it. They always keep it on the nightstand beside their bed. One day when they come home, they find their house has been broken into. When they come to the nightstand, they see that the book is gone. They exchange a glance, and then Andung says:}'The book is missing'.

(86) **#kálàtà** **tè** à nə̀ ndʒáŋán

book	TE	PN₁	COP	missing

{Minimally different from (85), except that Andung is speaking to her teenage son, who does not care about genealogy or family heirlooms.} Intended: the book is missing. (adapted from Barlew 2014: 626)

For some of the speakers I consulted, the distribution of the topic marker *-en*[III] seems to be similarly restricted, although I note that in the following examples speakers' judgements varied somewhat, so it is necessary to reproduce these data with more speakers in the future.

Example (87) refers to a ball that the addressee, Vasya, is looking for and it is, therefore, salient to the addressee. Here POSS2 is the preferred form. In (88), on the other hand, Vasya is looking for whatever toy, and here one speaker (let us refer to them as speaker A for this section) still provided POSS2 in their translation, while another speaker (speaker B) judged POSS2 as infelicitous, because the addressee doesn't specifically look for the ball and the ball is not salient to them (see speaker comment).

(87) **m´ačok-#(en)** pet´aj-en-ən wɨ-s-i

ball-POSS.2SG	P.-POSS.2SG-LOC	take-PST-PASS[3SG]

{Both Petya and Vasya love playing with the only ball among all of the toys at the kindergarten. Vasya is looking for the ball in the box with the toys. The teacher tells him:} 'The ball was already taken by Petya'.

(88) **m´ačok-(%en)** pet´aj-en-ən wɨ-s-i

ball-POSS.2SG	P.-POSS.2SG-LOC	take-PST-PASS[3SG]

{Same as (87), but Vasya loves all the toys equally and is simply picking what to play with today.} 'The ball was already taken by Petya'.

Speaker B, who judged *-en* as # in this context and preferred *-ew* [POSS.1PL], comments on *-en*: "if he's looking for any toy, [-*en*] is bad".

Consider (89), which is minimally different from (87) in having two children looking for the ball. Here speaker B as well as one more speaker still used *-en* [POSS.2SG], which confirms that it is the topic marker *-en*III and not the associative possessive *-en*II which must be plural with a plural addressee. On the other hand, speaker A used *-ən* [POSS.2NSG] which must be the associative possessive in this context, that is, the speaker must have accommodated an associative relation between the ball and the two children looking for it[28].

(89) **mˊačok-en/%-ən**   petˊaj-en-ən   wʉ-s-i

     ball-POSS.2SG/-POSS.2NSG   P.-POSS.2SG-LOC   take-PST-PASS[3SG]

     {Same as (87), but it is Vasya and Katya who are looking for the ball together.}

     'The ball was already taken by Petya'.

Table 5 summarizes the three examples discussed above.

Example	Predictions w. r. t. the topic marker -*en*III after (Barlew 2014)	Speaker A	Speaker B
Boy looking for the ball (87)	+	+	+
Boy looking for any toy (88)	#	+	#
Children looking for the ball (89)	SG	PL	SG

Table 5. Judgements of two speakers for examples diagnostic of the topic marker -
*en*III*'s behavior as a salient article (Barlew 2014). '+' and green shading indicate that*
POSS.2SG is used in this example, # and red shading indicate that it is not used. SG and
PL refer to the choice between POSS.2SG and POSS.2NSG with a plural addressee.

Another example which further corroborates the current hypothesis is given in (90) and (91), which reproduce the Bulu examples with a stolen object. As predicted POSS2 is used in (90) where the speaker addresses her colleague, who also cares whether the

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[28] Note that it was also speaker A who used the associative possessor in 4.2.4, where the other two speakers preferred the proper possessive. Thus, it seems, that speaker A is consistently more free in using the associative possessive.

computer was stolen or not, and the bare form is used in (91) where the speaker addresses his teenage son for whom the computer is not salient.

(90) **kampjuter**   **putal-en**   λολəm-s-a

  computer   lump-POSS.2SG   steal-PST-PASS[3SG]

  {Vasya and Lena work in the museum. They have recently bought a new computer. One morning coming to work, they find the museum has been broken into. They hurry to the room where the computer stood. Lena says:} 'The computer was stolen'.

(91) **kampjuter**   **putal-(#en)**   λολəm-s-a

  computer   lump-POSS.2SG   steal-PST-PASS[3SG]

  {Same as (90) except that Vasya comes to work with his teenage son Petya as a punishment for misbehaving. Petya does not care about his father work-related matters. Vasya says:} 'The computer was stolen'.

It is important to note that the latter two examples were currently only collected with one speaker, so, as mentioned above, the argument in this section requires a broader investigation in the future with judgements from more speakers.

5.2.4. Use with familiar, but not activated referents

Another point of interspeaker variation is whether the topic marker *-en*[III] is available with familiar but not activated or topical referents.

In the text collection such referents are typically unmarked as in (92) where the Second World War which was mentioned in preceding utterances and is the unique war among the familiar discourse referents is unmarked.

(92) <a> śat´śaśi-λ-am   pa… aŋkśaś-em

  and paternal.grandfather-PL-POSS.1SG ADD maternal.grandfather-POSS.1SG

  jaj-əλ   piλa <sorok vtoroj got>-ən **vojnaj-a**   woχ-s-a

  elder.brother-POSS.3SG with forty second year-LOC war-DAT call-PST-PASS[3SG]

  {The speaker talks about her grandparents' reindeer before and after the war. They still had reindeer after the World War II.} 'And my paternal grandfather... my maternal grandfather was taken to the war with his elder brother in 1942'.

Another example is (93) in which the bark basket "khint" which was already mentioned is also unmarked.

(93) **χint** λăŋkər-ən   nuχ lăp jirt-λ-əmən pa   śi   šɵšəm-λ-əmən
khint shoulder-LOC up   tight tie-NPST-1DU ADD EMPH walk-NPST-1DU
'{We put the traps in a khint, take a snack, and go. We walk on foot. If we can, we walk on foot.} We tie the khint up on our shoulders and go on foot.'

In elicitation sessions, however, two speakers were consistently laxer as per the possibility of POSS2 marking in similar cases, as in (94) below. In this example the guard is only familiar, but not salient, but for these two speakers he is marked with POSS2.

(94) **axranik-en-a**   pasport-en   wanəλt-e
guard-POSS.2SG-DAT passport-POSS.2SG   show-IMP.SG.SG
{The parents enter the school. The mother says to the father:} 'Show your passport to the guard'.

These speakers also accepted POSS2 with familiar, but non-salient sun (while the other speakers only permitted POSS.1PL).

(95) kăt   χătλ măr śi   **χătλ-#(ew)/%-en**
two   sun   in   EMPH   sun-POSS.1PL/-POSS.2SG
păλəŋ   saj-ən   ăn   kăλ
rain.cloud   behind-LOC   NEG   be.visible[NPST.3SG]
'For two days already (our) sun hasn't been visible because of the clouds'.

I hypothesize that for speakers who allow for POSS2 marking with non-topical / non-salient familiar referents, the topic marker *-en*^{III} is drifting toward a more general anaphoric article, while for the other speakers it still strictly a topic marker.

Recall example (95) repeated from (74). I assume that the use of POSS2 in (96) is also due to the marker drifting toward a general anaphoric article in this speaker's idiolect, but this can only be confirmed when a field trip becomes possible as this speaker is not available for elicitation over videocalls.

(96) pɵsəŋ wɛr-man **tetuškaj-en**   piλa śi   jăŋ-s-ɛmən
smoke   make-CVB grandfather-POSS.2SG with ADD   go-PST-1DU.SG
'So we walked with the grandfather fumigating [them]'. (field text)

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Notably, for the two speakers who allow *-en*[III] with familiar referents it is still infelicitous with semantically unique, but non-familiar referents like the tallest tree in (97).

(97) **mɛt   kărś   wɵnś-(#en)**   mănɛm   sewr-a

most   tall   pine-POSS.2SG   I.DAT   cut.down-IMP[SG]

{The wife is scolding the husband. He says:} '{Tell me, what should I do so that you calm down.} — Cut the tallest tree down for me!'

For the purposes of the remainder of this paper I only take the uses with topical referents into account and leave the investigation of variation facts presented in this section for future work.

5.2.5. *How the topic marker competes with associative possessives*

Consider the following example provided to me by one of the speakers from conversation they had with their neighbor. In (98) the bear is marked with POSS.2SG as a familiar and topical referent. A special comment on its status as such is needed, since this particular bear wasn't introduced in the prior context.

The bear plays a central role in Ob-Ugric mythology (see Lukina 1990 and other sources on Ob-Ugric folklore), in one of the myths being presented as a son of the supreme god Num-Torum. This is also represented in Northern Khanty lexemes used to talk about the bear. For example, as in (98) the bear is referred to by *pʉpi puχ* 'bear boy/son' instead of simply *pʉpi* 'bear' which is considered wrong or offensive by the speakers I consulted[29]. I believe that this can be taken as evidence that the bear is usually conceptualized as a unique referent, regardless of the biological-naturalistic side of the matter, which is also corroborated by the fact that in Russian speech the speakers I consulted for the past four years only appear to talk of the bear in the singular[30].

Thus, in (98) is marked with POSS2 as a topical and familiar entity.

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[29] The act of hunting down a bear is also described using special lexicon, for example, *woχəλtəti* which generally means 'descend (smth.)' but is also used for to talk about hunting down a bear, instead of non-metaphorical verbs used with other animals (Solovar 2014, own field data).

[30] A similar use of POSS2 with an animal as a representative of their species in a generic context marked with POSS2 is found with birds in the texts available to me, *e. g.*:

(i) **lʉk-en**   sʉs-ən   kew   šʉk   λɛ-λ

capercaillie-POSS.2SG autumn-LOC   stone   piece   eat-NPST[3SG]

{The speaker tells about catching capercaillies in the autumn.} 'In the autumn the capercaillie eats little stones. {This is very good. He sees little stones [in the trap] and enters [the trap].}'

The analysis of such uses is left for another occasion.

(98) χutti wan-ən **pʉpi puχ-en** iśipa śoś-ijəλ-əs

somewhere near-LOC bear boy-POSS.2SG probably walk-FREQ-PST[3SG]

{The neighbor went out on a walk with their dog. The dog, who is usually friendly and kind, suddenly jumped toward the forest and started barking.} 'The bear was probably walking somewhere near here'.

In the next utterance, however, the omitted topical subject is the dog, and the bear is the object of a postposition. Here, the bear is marked with POSS.3SG, according to the speaker that provided this example, due to an associative relation with the dog as "the object that [the dog] found".

(99) aλ, **pʉpi puχ-əλ** pελ-a χurt-əs

perhaps bear boy-POSS.3SG at-DAT bark-PST[3SG]

'[The dog] was probably barking at the bear'.

Recall, that in 4.3 I proposed that the associative possessive is an entity-deriving operator which presupposes that the NP referent is the unique entity standing in a salient relation to the possessor supplied from the context. For the topic marker I will assume below that it is also an entity-deriving operator that presupposes descriptive uniqueness and salience (as proposed for the Bulu salient article by Barlew 2014). This means that in contexts where there is a salient relation with some salient referent, the associative possessive has a stronger presupposition than that of the topic marker and is preferred as such due to the pressure from *Maximize presupposition!*.

This is the reason for POSS.3SG in (99) and in the examples considered below.

In (100) (repeated from (70)) the unique church must receive associative marking as it stands in a 'be in the same village as' relation to another salient referent, namely, Vasya.

(100) was'a-jen mănɛm-a **cerkow-əλ/#-en/#-∅** wan-əλt-əs-λe

V.-POSS.2SG I-DAT church-POSS.3SG/-POSS.2SG see-CAUS-PST-3SG>SG

'{Me and Vasya were walking around Kazym village.} Vasya showed me the/his church'.

It is important, however, to restrict the availability of associative marking, so that it does not appear in all contexts where any such relation is conceivable.

Consider (101) (repeated from (76) coming from the runaway bread fairy tale) in which in an utterance immediately following a discussion of the husband's chores, his wife is not marked POSS.3SG, but is marked POSS2. It seems that when the topic marker and the associative possessive compete, the relation denoted by the latter has to not merely salient, but rather in focus as being referred to in the immediate utterance or perceivable from the immediate situation (as in the case of directives discussed in section 4).

(101) **im-en**   juλən   χotχari   λʹʉχət-λ,
      wife-POSS.2SG   at.home   floor   wash-NPST[3SG]

      λɛtut   wɛr-əλ,   pəsan-λ
      food   make-NPST[3SG]   do.laundry-NPST[3SG]

      'The wife washes the floors at home, makes food, does the laundry'. (field text)

Compare this to (102) is marked with POSS.3SG in an object position but is marked with POSS.2SG in the immediately following utterance. I assume that the relation of the bread to the wife is only in focus in the first sentence, while in the second sentence, as the wife is no longer topical, the relation also loses in salience, and there is no longer ground for preferring an associative possessive over the topical marker.

(102) śãλta in   **ńań-əλ**   śi   wɛr-s-əλλe,   wɛr-s-əλλe,
      then   now bread-POSS.3SG DEM   make-PST-3SG.SG   make-PST-3SG.SG

      pa   iməλtijən **ńań-en**   jămijewa nuχ   śi   ji-s,
      ADD   finally   bread-POSS.2SG nicely   up   EMPH   become-PST[SG]

      wʉrta   ji-s
      rosy   become-PST[3SG]

      'Now then she was running and running around the bread [lit. doing that which she did earlier to the bread] and, finally, the bread raised nicely and became rosy'. (field text)

I hope to test the generalization discussed in this section in an experimental setting in an offline fieldtrip when it becomes possible.

5.2.6. Donkey sentences

The last property of the topic marker that must be considered is the fact that it varies in reference in the presence of higher quantifier in the sentence. (Examples of this kind are known as "donkey sentences" in the literature, see the seminal work of Heim 1982

for an early dynamic semantic treatment and Elbourne 2013 for a situation semantic treatment, as well as references therein.)

In (103) the speaker says that every time they meet a dog, the dog barks at them. Upon second mention the dog is marked with POSS2 which does not preclude it from varying in reference with the higher quantifier 'each time' as shown by the possibility of the continuation implying that the dog is different at different times.

(103) kašəŋ   śos   amp   šiwaλə-t-ɛm-ən

every   hour   dog   see-NFIN.NPST-1SG-LOC

amp-en   ma   pɛλ-am-a   χurət-λ

dog-POSS.2SG   I   at-POSS.1SG-DAT   bark-NPST[3SG]

'Every time I meet a dog the dog barks at me. {Sometimes it is a big dog, sometimes it is a smaller dog.}'

Assuming that the topic marker *-en*[III] requires uniqueness and salience of discourse referent in a given situation, supplied by a situation variable introduced in the syntax by the topic marker, this behavior of the marked NP can be modelled through binding of the situation variable by an operator in the syntax which ensures that it covaries with the higher quantifier. I forego an explicit analysis of the marker's behavior in donkey sentences in this paper but see (Elbourne 2013) for a treatment of the English definite article's behavior along those lines.

5.3. Analysis

As discussed above, a system that is able to account for the behavior of the topic marker *-en*[III] in donkey sentences (as opposed to the proprial article *-en*[IV], see section 6.3) must additionally include relativization to situations, so I add a situation variable to the denotation of the marker given in this section. (The denotations of the proper possessive and the associative possessive must also be revised accordingly.) A situation pronoun must also be represented in the noun phrase introduced with *-en*[III] as proposed in (Schwarz 2009, Elbourne 2013).

The denotation of the topic marker *-en*[III] is given in (104) based on (Barlew 2014: 633).

(104) $\|$-*en*[III]$\|^{g,c} = \lambda P \lambda s: \exists !x[P(x)(s) \land sal(x, c)].\ \iota x[P(x)(s)]$

In prose, the topic marker takes the denotation of the noun phrase and a situation such that there exists only one individual among the salient discourse referents in the given situation that is in the extension of the noun phrase and returns that individual. (For a model-theoretic interpretation of salience, see Barlew 2014.)

Note that the topic marker does not have an additional semantic individual argument unlike the possessives discussed in section 4.3. Syntactically it also must not require an additional (possessor) NP in the structure, which accounts for the fact that unlike the proper and the associative possessives, the topic marker is always spelled-out as *-en* regardless of plurality of the addressee.

6. Proprial article -en^{IV}

6.1. Data from (Mikhailov (manuscript))

In (Mikhailov (manuscript)) I argued that when used with anthroponyms (human names)[31], POSS2 corresponds to a proprial article in the sense of (Muñoz (2019)). The motivation for this proposal comes from the following set of data.

POSS2 is generally obligatory with anthroponyms (105). And it appears regardless of their syntactic position / topicality (106) (repeated from (52)).

(105) **wɵntər-*(en)[32]** sewr-əs   tʉt   jʉχ

      A.-POSS.2SG   cleave-PST[3SG]   fire   wood

      'Andrej cleaved a log'.

(106) m´ačok-ən   **pet´aj-en-ən**   wu-s-i

      ball-POSS.2NSG P.-POSS.2SG-LOC   take-PST-PASS[3SG]

      {Vasya and Katya are looking for the ball they like to play with at the kindergarten. The teacher says:} 'The ball has already been taken by Petya'.

Patrick Muñoz (2019) discusses the semantics of proprial articles — dedicated articles for proper names, which are argued to be universally present either overtly,

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[31] With toponyms POSS2 marking is generally barred (also it is not attested in the field texts available to me), *e. g.*:

    (i) **maskwa-(#jen)-jən**   atəm   tɵrəm

        M.-POSS.2SG-LOC   bad   sky

        'In Moscow the weather is bad'.

[32] The presence of the proprial article in a speaker's idiolect is another dimension of interspeaker variation. One of the speakers I worked with allowed for bare anthroponyms in argumental positions, which was rejected by all the other speakers. Bare anthroponyms are also found in the texts recorded from that speaker.

expressed with a dedicated morpheme (Tagalog, Māori, Catalan, Icelandic, *etc.*) or syncretically with a definite article (modern Greek, some varieties of Portuguese; see the original paper for references), or covertly as argued for English.

The argument for a covert proprial article in English is based on the observation that proper names pass some of the crucial tests for the semantic type of predicates [$e \rightarrow t$]. For example, proper names occur in the vocative position, unlike NPs with determiners (107).

(107) a.   Dinner is ready, (*most) friends / (*the) guest / (*some) brothers.

b.   It's the economy, stupid.

c.   Ede, the pizza is ready. (adapted from Eckardt 2014: (1), (6), (15))

It would be quite counterintuitive if all expressions in vocative position were of type $e \rightarrow t$ with the exception of proper names which are usually assumed to be of type e.[33]

Muñoz develops an analysis in which the proprial article only combines with unmodified proper names (of type $e \rightarrow t$) to yield the individual that bears that name. Naturally, this only happens in argument positions, since only in argument positions is a proper name required to be of type e.

It is predicted that if a language has an overt proprial article, it will be missing in non-referring non-argument positions. This prediction is borne out in my Northern Khanty data.

In (108) with an anthroponym in vocative position POSS2 marking is impossible. In (109) it is barred in predicative position. And in (110) it is again impossible in a "name-in-a-name-giving" position.

(108) **maša-(*jen)**,   ow-en   pʉnš-e

M.-POSS.2SG   door-POSS.2SG   open-IMP.SG.SG

'Masha, open the door!'

(109) ma   λɵχs-ɛm   năm-əλ   **l´oša /   *l´ošaj-en**

I   friend-POSS.1SG   name-POSS.3SG   L.   /   L.-POSS.2SG

---

[33] Regine Eckardt actually maintains this latter assumption introducing a type-shifting operation which allows proper names to be predicates in vocative position (Eckardt 2014: 227). However, this is clearly a stipulation and — as Muñoz shows — the view of proper names as predicates is superior in accounting for the data of languages with proprial articles, as well as for English.

'My friend's name is Liosha'.

(110) ma λɵχs-ɛm   λʉwət   nɛmət-s-əλλe   **miśa-ja/*-jen-a**
my friend-POSS.1SG 3SG.ACC name-PST-3SG.SG m.-DAT/-POSS.2SG-DAT
{A baby was born into my friend's family recently.} 'My friend named him Misha'.

Furthermore, just like the topic marker *-en*[III] the proprial article *-en*[IV] does not depend in number-features on the plurality of the addressee (cell B4 in table 4). Thus, in (111) with a plural addressee *-ən* [POSS.2NSG] is impossible and *-en* [POSS.2SG] must be used instead.

(111) ńawrɛm-ət, nin   **wɵntər-en-ən/*-ən-ən**   λawəλ-a-jəti
child-PL,   you.PL A.-POSS.2SG-LOC/-POSS.2NSG-LOC baby.sit[NPST]-PASS-2PL
{Andrej is a caretaker in the kindergarten. The parents are going away for the weekend and they tell their children:} 'Children, Andrej will look after you'.

In (Mikhailov (manuscript)) the requirement of an antecedent was considered a property distinguishing the topic marker *-en*[III] from the proprial article *-en*[IV] (cells C3 and C4 in table 4). However, as discussed in section 5.2 the topic marker is not really restricted to anaphorically given NPs but is rather restricted to NPs with unique salient discourse referents in the subject / topic position. While it seems reasonable to assume that proper name referents are usually at least familiar (if not salient), as shown in (106) the proprial article use of POSS2 has no positional restrictions unlike the topic marker *-en*[III].

One important diagnostic for a proprial article, as shown by Muñoz (2019), is that a proprial article-marked NP does not vary in reference when a higher quantifier is present in the sentence, unlike definite article *the*-marked NPs (112)

(112) a. Smith always cheats. (necessarily the same Smith in all circumstances)
b. The Smith always cheats. (possibly distinct Smiths in distinct circumstances; adapted from Ibid.: 7)

As shown below, this prediction is born out for Northern Khanty, which provides another argument for distinguishing the proprial article *-en*[IV] from the topic marker *-en*[III].

6.2. Novel data

6.2.1. Explicit possessors

Turning to novel data, I first consider the explicit possessor diagnostic which again shows that with proper names it is not the proper possessive *-en*[I] that is used but some other marker.

Example (113) shows that in the presence of an explicit possessor, POSS2 marking on a proper name is interpreted as a proper possessive, which is not the case if no explicit possessor is present.

(113) **(#năŋ)**   **wɵntər-en**   sewr-əs   tʉt   jʉχ

      you   A.-POSS.2SG   cleave-PST[3SG] fire   wood

      '(#Your) Andrej cleaved a log'.

6.2.2. Donkey sentences

Recall that in 5.2.6, it was shown that the topic marker *-en*[III] may vary in reference when a higher quantifier is present in the sentence (114) (repeated from (103)).

(114) kašəŋ   śos   amp   šiwaλə-t-ɛm-ən

      every   hour   dog   see-NFIN.NPST-1SG-LOC

      amp-en   ma   pɛλ-am-a   χurət-λ

      dog-POSS.2SG I   at-POSS.1SG-DAT   bark-NPST[3SG]

      'Every time I meet a dog the dog barks at me. {Sometimes it is a big dog, sometimes it is a smaller dog.}'

The proprial article, on the other hand, does not vary in reference in a similar configuration. Example (115) is set in a context, which requires that the proper name receive different reference for each year. A POSS2-marked NP is infelicitous in such a context with the speakers commenting "then it's the same Vasya each year / some particular Vasya"[34].

(115) kašəŋ   oλ   mojλəpsi   wʉjλ´   **was´a /**   **#was´aj-en**

      every   year   present   take[NPST.3SG] V.   /   V.-POSS.2SG

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[34] The limitations of the other elicitation data presented in this paper apply here as well and this example must be collected with more speakers in the future.

'{Every year we give a present to the 4 year student who gets the best grades.}
Every year the present is taken by a Vasya. Last year it was Vasya Tas'manow and
this year it's Vasya Tarlin'.

Example (116) similarly shows that in order to take narrow scope with respect to
negation a proper name has to be unmarked.

(116) ma   **was´a** / **#was´aj-en**   ănt   wɵ-λ-əm
      I   V.   / V.-POSS.2SG   NEG   know-NPST-1SG

'I don't know any Vasya'.

6.3. Analysis

The crucial feature of the analysis in (Muñoz 2019) is that the proprial article binds
the intensional argument[35] of the function in the denotation of the NP it combines with,
so that the argument cannot be bound by a higher operator, and the proprial article-marked
NP cannot co-vary in reference with a higher quantifier.

The denotation of the proprial article is given in (117). It includes a domain
restriction which essentially ensures that article combines only with name-bearing
properties. For a specific proposal regarding the notion of name-bearing properties and
of an index being conventionally allowed to map onto some referent, see the original
paper. The crucial part for us is that the intensional world/situation argument of the
property denoted by the proper name is not available for binding by a higher operator,
which ensures that the proper name is rigid in reference.

(117) $\|\text{-}en^{\text{IV}}{}_i\|^{g,c} = \lambda P_{[[v \to e] \to [s \to [e \to t]]]}$: $\forall g$', s, x[P(g')(s)(x) $\leftrightarrow$ i is conventionally allowed
to map to x on some assignment in s]. g(i)

In prose, the proprial article is a function which takes the intension[36] of a proper
name and maps it to the individual that the index on the proprial article is mapped onto
by the given assignment, just in case the intension is a name-bearing property.

7. Summary and outlook

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[35] Which is a world in Muñoz's system, but for the purpose of comparability with the analysis for
the topic marker *-en*[III] is taken to be a situation in the current paper.

[36] It also important for this proposal that the proprial article takes the **intension** of the proper name
which is easily realized by shifting the proper name denotation into a function that also takes the usual
parameters of interpretation as arguments.

This paper argued for a radical polysemy account of the extended uses of the Northern Khanty POSS2 markers — *-en* [POSS.2SG] and *-ən* [POSS.2NSG] (the latter only relevant for the **possessive** markers considered) — whereby each of the extended uses is said to correspond to a separate marker. Building on my work from last year (Mikhailov (manuscript)), I revised some of the arguments for such an account provided there and added further properties which form the basis for distinguishing the four markers realized as POSS2. These include: the proper possessive *-en*[I], the associative possessive *-en*[II], the topic marker *-en*[III], and the proprial article *-en*[IV].

The differences between the four markers are summarized in table 6 below which is based on table 4 with several significant revisions and additions highlighted in bold.

The novel contributions of this paper are as follows.

The explicit possessor diagnostic introduced in this work was applied to all of the four markers showing that only the proper possessive allows for such. The most crucial contribution of this diagnostic was to the revision of the second marker — the associative possessive *-en*[II]. Based on the unavailability of overt possessors with POSS2 in this use as well as with other possessive morphemes, it was concluded that the associative possessive usually expressing heavily context-dependent relations and restricted to unique referents has the full possessive paradigm and is not restricted to POSS2 as was assumed in (Mikhailov (manuscript)) (see section 4).

The proper possessive, on the other hand, trivially allows for an explicit possessor and does not imply uniqueness which leads to the non-trivial conclusion that Northern Khanty grammar does not have the entity-deriving IOTA type-shift proposed for English in (Coppock, Beaver 2015; section 3). Furthermore, it was found that the marker does have an existential presupposition (section 3.2.3) and is semantically restricted in a fashion similar to Karvovskaya's (2018) idiosyncratic possessive strategies. It was thus proposed in section 4.3 that the proper possessive corresponds to an underlying POSS operator which differs from the semantically restricted MaxSpec operator of (Ibid.) in having an existential presupposition. The associative possessive, on the other hand, was analyzed as the operator ASSOC, which is based on the unrestricted MinSpec operator of (Ibid.) with the addition of a uniqueness presupposition and a syntactic requirement that the possessor NP be phonologically null which models its ban on overt possessors.

For the topic marker -*en*^{III} field text data were consulted for the first time. These data led to the discovery of the marker's restriction to topical salient subjects (section 5.2.2), which is more specific than the restriction to anaphorically-given referents of (Mikhailov (manuscript)) and which distinguishes this marker from the other three. Here the salient article hypothesis proposed for -*en*^{II} in (Mikhailov (manuscript)) and rejected in the current work was appealed to once again for -*en*^{III}. In section 5.2.3 I presented tentative data corroborating this hypothesis based on a comparison with the Bulu salient article analyzed in (Barlew 2014). In this section I also noted that some speakers seem laxer in their use of -*en*^{III} which is hypothesized to be due to the marker evolving into a general anaphoric article in their idiolects. In section 5.2.5 I argued that the topic marker appears to be restricted to subjects as in other positions it competes and loses to the associative possessive, due to the latter having a stronger presupposition. Section 5.2.6 presented the first piece of a new argument in favor of distinguishing the topic marker from the proprial article -*en*^{IV}, which is based on the fact that only the latter varies in reference in the presence of a higher quantifier.

The most important contribution of section 6 was the confirmation of the hypothesis that -*en*^{IV} is a proprial article as it is rigid in reference unlike the topic marker -*en*^{III}.

	1. PROPER POSSESSIVE -*en*^{I}	2. ASSOCIATIVE POSSESSIVE -*en*^{II}	3. TOPIC MARKER -*en*^{III}	4. PROPRIAL ARTICLE -*en*^{IV}
A. Competes with -*ew* [poss.1pl]	Yes	**Yes**	No	No
B. Agrees with the addressee in number	Yes	Yes	No	No
C. Allows for an explicit possessor	**Yes**	**No**	**No**	**No**
D. Has uniqueness inferences	**No**	Yes	Yes	—
E. Is restricted to topical subjects	**No**	**No**	**Yes**	**No**

F. Varies in reference in the presence of a higher quantifier	—	—	**Yes**	**No**

*Table 6. Properties distinguishing the four Northern Khanty markers with the exponent -en. Based on table 4 with significant revisions. "Yes" means that this marker has the given property, "No" means that the marker doesn't have the property, "—" means that the property is irrelevant. Novel properties, revised cells, and significantly revised markers are given in **bold**.*

To my knowledge the explicit possessor diagnostic for distinguishing proper possessives from extended ones has not been proposed in the literature on extended possessive marking before. Unless some additional assumptions are evoked, this diagnostic refutes both the associative and the relational polysemy accounts of extended possessive marking (discussed in contrast to the current radical polysemy account in section 2) as in those accounts the unavailability of overt possessors in extended uses is completely unpredictable, while in the present account it follows naturally from the semantics of the third and fourth markers and only requires a simple assumption in the case of the second marker.

The diagnostics used in this work and the arguments pursued can be straightforwardly put to use in investigations of extended possessive marking beyond the Kazym dialect of Northern Khanty.

It is important to note that the current study is only an initial step toward a proper understanding of possession and determinacy of (the Kazym dialect of) Northern Khanty. The data consulted in this work is restricted and some interspeaker variation was found in it. In the future I hope to also collect experimental data, as well as provide an explicit treatment of the data discussed here with proper attention to syntax and other important factors which were ignored given the limited scope of this work.

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